

MANGALORE UNIVERSITY

Revised
Curriculum and Scheme of Examinations

**B.Com. - Computer
Applications (Vocational) Degree
Programme**

**Choice Based Credit System (CBCS),
2019-2020 onwards**

MANGALORE UNIVERSITY
B.Com. - Computer Applications (Vocational) Degree Programme
Curriculum and Scheme of Examinations

T- Theory P - Practical, CC- Co-Curricular, EC – Extra-curricular

I / II/III/IV Semesters

Courses Group	Courses	No. of Courses T/P	Instruction Hours/Week	Duration of Exam(hrs)	Marks			Credits
					IA	Exam	Total	
Group 1	2 Commerce courses	1T	1x4	1x3	1x20	1x80	1x100	1x2
		1T	1x6	1x3	1x30	1x120	1x150	1x3
	Computer Application (Vocational Course)	2T	2 x 4	2 x 3	2 x 20	2 x 80	2x100	2x2
		1P	1 x 4	1 x 3	1 x 10	1 x 40	1x 50	1x1
Group 2	One course from 4 Electives	1T	1 x 2	1 x 2	1 x 10	1 x 40	1 x 50	1x1 =1
Group 3	2 Languages	2L	2 x 4	2 x 3	2 x 20	2 x 80	2 x 100	2 x 2 =4
	Elective Foundation	1T	1 x 2	1 x 2	1 x 10	1 x 40	1 x 50	1x1 =1
Group 4	CC & EC	1T	1 x 2	1 x 2	1 x 50	-	1 x 50	1x1=1
Total Semester Credits								17

Group 2: Elective Courses:

i) Discipline Supportive ii). Expanded scope. ii.) Skill development iv) Another Discipline/Domain

V Semester

+	Particulars	No. of courses T/P	Instruction Hours/Week	Duration of Exam(hrs)	Marks			Credits
					IA	Exam	Total	
Group I	4 Commerce courses	4T	4x5	4x3	4x30	4x120	4x150	4x3
	Computer Application	1T	1 x 5	1 x 3	1 x 30	1 x120	1x150	1x3
		1T	1 x 4	1 x 3	1 x 20	2 x80	1x100	1x2
		1P	1 x 3	1 x 3	1 x 10	1 x 40	1x 50	1x1

VI Semester

Courses Group	Particulars	No. of courses T/P	Instruction Hours/Week	Duration of Exam(hrs)	Marks			Credits
					IA	Exam	Total	
Group I	4 Commerce courses	4T	4x5	4x3	4x30	4x120	4x150	4x3
	Computer Application (Vocational Course)	2 T	2 x 4	2 x 3	2 x 20	2 x80	2x100	2x2
		1 Project	1 x 4	-	1 x 20	1 x 80	1x100	1x2

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I SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC131	Information Technology	4	3	20	80	100	2
	BCMCAC132	Problem Solving with C	4	3	20	80	100	2
	BCMCAP133	Office Automation and C Lab	4	3	10	40	50	1
II	BCMCACE134 BCMCACE135	E1: Computer Network E2: Open Source Software	2	2	10	40	50	1
		Total	14	11	60	240	300	6

II SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC181	Operating System	4	3	20	80	100	2
	BCMCAC182	Desktop Publishing	4	3	20	80	100	2
	BCMCAP183	OS and DTP Lab	4	3	10	40	50	1
II	BCMCACE184 BCMCACE185	E1: Data Mining with R E2: Business Statistics with R	2	2	10	40	50	1
		Total	14	11	60	240	300	6

III SEMESTER

Courses Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC231	Java Programming	4	3	20	80	100	2
	BCMCAC232	DBMS	4	3	20	80	100	2
	BCMCAP233	Java and DBMS Lab	4	3	10	40	50	1
II	BCMCACE234 BCMCACE235	E1: Python Programming E2: Multimedia Applications	2	2	10	40	50	1
		Total	14	11	60	240	300	6

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IV SEMESTER

Courses Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC281	Web Application development	4	3	20	80	100	2
	BCMCAC282	Computerized Accounting	4	3	20	80	100	2
	BCMCAP283	Web Application and Tally Lab	4	3	10	40	50	1
II	BCMCAOE284	E1: IT Fundamentals	2	2	10	40	50	1
	BCMCAOE285	E2: Internet Technologies						
		Total	14	11	60	240	300	6

V SEMESTER

Courses Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC331	VB.NET Programming	05	03	30	120	150	3
	BCMCAC332	E1: Computer Graphics and Animation	04	03	20	80	100	2
	BCMCAC333	E2: Android Application						
	BCMCAC334	E3: Programming for Analytics						
	BCMCAP 335 BCMCAP 336 BCMCAP 337	E1: VB and Computer Graphics Lab / E2: VB and Android Application Lab / E3: VB and Programming for Analytics Lab	03	03	10	40	50	1
		Total	12	09	60	240	300	6

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VI SEMESTER

Courses Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC381	Software Engineering	04	3	20	80	100	2
	BCMCAC382	E1: Software Testing	04	3	20	80	100	2
	BCMCAC383	E2: E-Commerce						
	BCMCAC384	E3: Information Security and Cyber Laws						
	BCMCAC385	Project	04	-	20	80	100	2
		Total	12	06	60	240	300	6

Total Marks :1800

Total number of Credits: 36

Common Scheme of Practical Examinations for I semester to VI

The practical examination in the concerned subject specified in the I Semester to IV Semester shall be conducted for 40 marks. There shall be two main components: problem solving and viva-voce components. There shall be two main problems from the single domain/multiple domain subjects chosen for practical components. And Viva- Voce component shall have to access both the problem solving/Analytical thinking approach and the programming skills.

Sl.No.	Details		Allocated Marks for one Problem	2 Problems
I.	Problem Solving Components ----- 2 Problems * 15			
	i.	Problem solving with Programs Detail Descriptions	05	10
	ii.	Compiling Code and Debugging	05	10
	iii.	Execution and Testing	05	10
	iv.	Record	--	05
II.	Viva- Voce Examination----- 5 Marks			
	ii	Viva - Voce (Question and Answer)	--	05
Total Marks				40

B.Com.-Computer Applications(Vocational Programme)

2019-2020

PREFACE

Preamble: Due to Globalization of education and economy, UGC has long back identified the necessity to align higher education with the emerging needs of the economy so as to make the current Indian Higher Education System more relevant and career-oriented with focus on quality and excellence and also to ensure that the graduates of higher education system have adequate knowledge and skills for employment and entrepreneurship. It is envisaged that professionally qualified graduates with a sound knowledge of their core disciplines and expertise in a concerned skill will have more openings in service, industry and self-employment sectors. Demand and scope for such professionally trained graduates are visible in the applied fields of almost all basic/core disciplines and faculties in the current changing global scenario and is likely to increase in the future. The higher education system has to incorporate the requirements of various industries in its curriculum, in an innovative and flexible manner while developing a holistic and well-groomed graduate. The scheme was designed to ensure that graduates who pass out after completing these courses would have knowledge, skills and aptitude for gainful employment in the wage sector in general and self-employment in particular.

The UGC initiated a major programme of Vocationalisation at undergraduate level during VIII Plan (1994-95). The scheme was designed to ensure that graduates who pass out after completing these courses would have knowledge, skills and aptitude for gainful employment in the wage sector in general and self-employment in particular. Vocationalisation of Bachelor of Commerce with the introduction of Computer Application as vocational course at the first-year degree was proposed during that time.

Programme Objectives(PO):

PO1: Impart advanced learning to students in the discipline of Commerce, specifically with the application of software technology for professional requirements, merging the academic domains of Commerce and Computer Applications

PO2: To impart central knowledge and skills to the students in emerging areas of commerce like accounting, auditing, finance, marketing, HR, company laws, taxation etc with computing skills for effective domain enrichment

PO3: To groom students with desired competence in commerce education and research with computing leverage.

PO4: To strengthen theoretical and applied aspects of commerce for preparing the students for higher education and research.

PO5: To equip the students with necessary skill sets pertaining to computing principles, software technologies and business practices in software solutions essential for gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge.

PO6: To impart demonstrable knowledge, skills and values in order to support students' eventual progression to higher learning and gainful career with resilient value system.

Programme Outcome(PO)

The Commerce graduates should be able to:

PO1: Apply the knowledge of commerce and computers to obtain constructive solutions to complex business & management problems.

PO2: Understand the concepts of key areas in computer science and apply latest technologies to solve problems in the areas of computer applications in business and commerce

PO3: Design solutions for Socio-economic, commerce and business problems and plan case study, processes to meet the specifications with consideration for sustainable development.

PO4: Use modern computing models and tools to conduct investigations of complex economic, business and management problems including analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Understand digital ethics - what can be made possible by digital technology and what is ethically desirable, in order to be successful leaders in the business world

PO6: Use digital edge in order to function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings, communicate effectively with the business community & IT professionals and with society at large.

PO7: Demonstrate knowledge and understanding of Commerce, Management & Software engineering principles and apply these to one's own work, as a member and leader in a team.

PO8: Recognize the need for and have the preparation and ability to engage in independent and life – long learning in the broadest context of technological change.

Programme Specific Outcome(PSO)

After completion of Bachelor of Commerce in Computer Applications (B.Com-CA) Programme students are able to:

PSO1: Gain foundation and incremental knowledge in different areas of Commerce.

PSO2: Develop basic understanding of conceptual and functional knowledge of software commonly used in academic and professional environments.

PSO3: Acquire the skills of applying principles and techniques of Computers and Software technologies in modelling solutions to problems in Commerce, Business and Management

PSO4: Develop right attitude for working effectively and efficiently in Commerce and business environment with computing edge.

PSO5: Work in teams with enhanced communication, inter-personal skills and be capable of making decisions at personal and professional level.

PSO6: Provide technical support and computing leverages for improved communication in Office and Business management.

PSO7: Position themselves as potential candidates for employment in functional areas like Accounting, Taxation, Banking, Insurance, Marketing, Corporate law, Entrepreneurship and Software Application and Development.

PSO8: Pursue their career in industry, teaching and research with an inclination towards lifelong learning and acquiring contemporary knowledge and skills

Prospects of Higher Education:

After completion of Bachelor of Commerce in Computer Applications (B.Com-CA) Programme students are able to pursue (indicative):

Master of Commerce (M.Com), Master of Commerce in Computer Applications (M.Com-CA), Master of Business Administration (MBA), Master of Business Administration (M.B.A-Tourism And Hospitality Management), Chartered Accountancy (CA), Business Accounting and Taxation (BAT), Certified Management Accountant(CMA), Master of Computer Applications (MCA), Master of International Business (MIB), Master of Finance and Accounting (MFA), Certified Public Accounting (CPA), Association of Chartered Certified Accountants (ACCA), Chartered Financial Analyst (CFA), Company Secretary (CS), Certified Industrial Accountant (CIA), Tally Financial Accounting Certification, Diploma in E-Commerce, Post graduate Diploma in Computer Applications (PGDCA), Cisco Certified Network Associate (CCNA), Mobile App Development, Web Programming/application development (PHP Frameworks, Ruby, and Python), User Interface (UI)/User Experience (UX) Development Frameworks (HTML, CSS, Bootstrap etc.), Project Management Professional Certification (PMP), Database administration (DBA), Software Quality Testing (SQT), Digital Marketing (Digital Technology Platforms), DevOps, Amazon Web Services (AWS), Advanced Java Frameworks etc.

Career Prospects:

After completion of Bachelor of Commerce in Computer Applications (B.Com-CA) Programme students are able to pursue the following careers (indicative):

Chartered Account/ Cost & Work Accountant, Company Secretary, Auditors, Tax Consultant, Economist, Budget Analysts, Government Jobs, Administrative Jobs, Human Resource Executive, Banker, Stock Broker, Lawyer, Teacher, Export Import Manager, Finance Consultant, Insurance Consultant, Event Manager, Travel Agent / Travel Manager, Book Keepers, Market Researcher, Entrepreneur, Hotel Management, Book Keepers, BPO / KPO Executive, Web Developer, Hardware Technician, Software Developer, Computer Programmer, Computer Operator, Mobile Application Developer, CAD Application Support Technician, Graphics Designer, Computer-Laboratory Technician etc.

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	BCMCAC132	Problem Solving with C	4	3	20	80	100	2
	BCMCAP133	Office Automation and C Lab	4	3	10	40	50	1
II	BCMCACE134 BCMCACE135	E1: Computer Network E2: Open Source Software	2	2	10	40	50	1
		Total	14	11	60	240	300	6

**GROUP-I
COURSE-1****BCMCAC131: Information Technology****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives:**

- To make the students understand and learn the basics of computer for its effective use in day to day life.

Course Outcomes:

- Be able to apply knowledge of computing analyze a problem, and identify and define the computing requirements appropriate to its solution
- Be able to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- Be able to effectively integrate IT based solutions into the user environment

UNIT-I**12 Hrs.**

Introduction to Computers: Introduction, Characteristics computers, Evolution computers Generation of Computers, Classification of computers, the computer system, Application of computers. **Number system:** Introduction, Number system, Conversion between number bases, Arithmetic system, signed and unsigned numbers, concept of overflow, Binary coding. **Computer Architecture:** Introduction, Central processing unit, main memory unit, interconnection of units, cache, communication between various units of a computer system. **Primary memory:** Introduction, memory representation, memory hierarchy, Random access memory, Types of RAM, Read-only memory, Types of ROM.

UNIT-II**12 Hrs.**

Secondary Storage: Introduction, classification, magnetic tape, magnetic disk, Optical disk, Magneto-optical disk, Memory stick, Universal serial bus, Mass storage devices. **Input devices:** Introduction, Types of input devices, Optical character recognition, Optical Mark Recognition, Magnetic ink character recognition, Bar code reader, **Output devices:** Introduction, Types of output, Classification of output devices, Terminals.

UNIT-III**12 Hrs.**

Computer Program: Introduction, algorithm, flowchart. **Computer languages:** Introduction, Evolution of programming languages, classification of programming languages, generation of programming languages, Features of a good programming language, selection of a programming language. **Computer software:** Introduction, software definition, relationship between software and hardware, software categories, terminology software **Network basics:** Computer networks, Network topologies, Network devices.

UNIT-IV**12 Hrs.**

Internet basics: Introduction, Evolution, Basic internet terms, getting connected to internet, internet Applications, **Working with Application Software, Productivity software:** Word processing program, Spreadsheet program, presentation program, **Database and DBMS:** working with database, RDBMS

Text Books:

1. ITL Education Solutions Limited, **Introduction to Information Technology**, Pearson Education India; 2 edition, 2012.
2. Peter Norton, **Introduction to Computers**, 7th edition, Tata McGraw Hill Publication, 2017 (Unit - IV).

GROUP-I
COURSE-2
Theory/Week: 4 Hrs
Credits: 2

BCMCAC132: Problem Solving with C

48 hours

I.A: 20

Exam: 80

Course Objectives:

- To develop understanding about programming principles/concepts - functional, logic and also learn skills of problem solving and implementation of solution

Course outcomes:

- To apply programming knowledge to create solutions to challenging problems, including specifying, designing, implementing and validating solutions for new problems.

UNIT-I

12 Hrs.

Introduction: Overview of C Program, Importance of C-Program, Basic structure of a C-program, Execution Style of C-Program. **Constants, Variables & Data types:** Features of C language, Character set, C token, Keywords & identifiers, Constants, Variables, data types, Declaration of variables, assigning values to variables, defining symbolic constants. **Operators and Expression:** Arithmetic, Relational, logical, assignment, increment & decrement, conditional, bit wise & special operators, evaluation of expressions, Precedence of arithmetic operators, type conversions in expressions, operator precedence & Associativity, built in mathematical functions. **Managing Input and Output operations:** Reading & writing a character, Formatted input and output.

UNIT-II

12 Hrs.

Decision Making and Branching: Decision making with if statement, simple if statement, the if else statement, nesting of if ... else statements, the else if ladder, the switch statement, the ?: operator, the go to statement. **Decision making and looping:** The while statement, the do statement, for statement, exit, break, jumps in loops. **Arrays:** Declaration, initialization & access of one dimensional & two-dimensional arrays. Programs using one and two dimensional arrays. : Adding multiplying, transposing matrices, sorting and searching arrays.

UNIT-III

12 Hrs.

Handling of character strings: Declaring & initializing string variables, reading strings from terminal, writing strings to screen, Arithmetic operations on characters, putting strings together, comparison of two strings, string handling functions, table of strings. **User defined functions:** Need for user defined functions, Declaring, defining and calling C functions return values & their types, Categories of functions: With/without arguments, with/without return values, recursion, functions with arrays, the scope, visibility & lifetime of variables.

UNIT-IV

12 Hrs.

Structures and union: Structure definition, giving values to members, structure initialization, comparison of structure variables, arrays of structures, arrays within structures, structures within structures, structures & functions, unions, size of structures, bit fields. **Pointers:** Understanding pointers, accessing the address of a variable, declaring & initializing pointers, accessing a variable through its pointer, pointer expression, pointer increments & scale factor, pointers & arrays, Passing pointer variables as function arguments. **The Preprocessor:** Macro substitution, file inclusion, compiler control directives, command line arguments & illustrative programs. **File Management in C:** Introduction, defining and opening a file, closing a file, I/O operations on files, error handling during I/O operations.

Text Books:

1. E. Balagurusamy, **Programming in ANSI C**, McGraw Hill Education India Private Limited; Seventh edition, (2017)
2. .M. T. Somashekara, D. S. Guru, K. S. Manjunatha, **Problem Solving with C**, PHI Learning Pvt. Ltd.; Second edition, 2018

Reference Books:

1. Hanly, **Problem Solving and Program Design in C**, Pearson Education India; 7 edition, 2013
2. Satish Jain, **Programming & Problem Solving Through C Language**, BPB Publications, 2012

Practical-I	BCMCAP 133: OFFICE AUTOMATION and C LAB	48 Hours
Practical/Week: 4 Hrs Credits: 1	Exercises in MS-Office Package and C programming	I.A: 10 Exam: 40

**GROUP-II
COURSE-1****BCMCAE 134-E1: Computer Networks****24 hours****Theory/Week: 2 Hrs****I.A: 10****Credits: 1****Exam: 40****Course Objectives:**

- Introduce basics of data communications and network architecture, network layer control and protocols
- Be familiar with internetworking technologies and Web technologies

Course outcomes:

Acquire knowledge about

- basics, components of Network, Internet and Web technology;
- basics of Internet technology, such as http and the World Wide Web, HTML, and JavaScripts;
- WWW pages to serve as front-end to client/server, Internet applications;

UNIT-I**12 Hrs.**

Computer Networks: Introduction to computer network, data communication, components of data communication, data transmission mode, data communication measurement, LAN, MAN, WAN, wireless LAN, internet, intranet, extranet. Network Models: Client/ server network and Peer-to-peer network, OSI, TCP/IP, layers and functionalities. **Transmission Media:** Introduction, Guided Media: Twisted pair, Coaxial cable, Optical fiber. Unguided media: Microwave, Radio frequency propagation, Satellite.

LAN Topologies: Ring, bus, star, mesh and tree topologies.

UNIT-II**12 Hrs.**

Network Devices: NIC, repeaters, hub, bridge, switch, gateway and router. Internet Terms: Web page, Home page, website, internet browsers, URL, Hypertext, ISP, Web server, download and upload, online and offline. Internet Applications: www, telnet, ftp, e-mail, social networks, search engines, Video Conferencing, E-Commerce, M-Commerce, VOIP, blogs. **Introduction to Web Design:** Introduction to hypertext markup language (html) Document type definition, creating web pages, lists, hyperlinks, tables, web forms, inserting images, frames, hosting options and domain name registration. Customized Features: Cascading style sheet (CSS) for text formatting and other manipulations. JavaScript Fundamentals: Data types and variables, functions, methods and events, controlling program flow, JavaScript object model, built-in objects and operators.

Text Books:

1. Andrew S. Tanenbaum, David J. Wetherall, **Computer Networks**, PHI, 2011
2. D.R. Brooks, **An Introduction to HTML and Javascript for Scientists and Engineers**, Springer , 2011

Reference Books:

1. A. Forouzan, **Data Communication and Networking**, TMH, 2017
2. **HTML A Beginner's Guide**, Tata McGraw-Hill Education, 2009
3. J. A. Ramalho, **Learn Advanced HTML 4.0 with DHTML**, BPB Publications, 2017

**GROUP-II
COURSE-2****BCMCACE 135-E2: Open Source Software****24 hours****Theory/Week: 2 Hrs****I.A: 10****Credits: 1****Exam: 40****Course Objectives:**

Help students

- Understand concepts, strategies, and methodologies related to open source software development.
- Understand the business, economy, societal and intellectual property issues of open source software.

Course outcomes:

Upon successful completion of the course the student will be able to:

- Be familiar with open source software products and development tools currently available on the market.
- Be able to utilize open source software for developing a variety of software applications, particularly Web applications.

UNIT-I**12 Hrs.**

The philosophy of OSS, commercial software vs OSS, free software vs freeware. The Linux operating system, GPL, LGPL and other licenses. Category of OSS Application Software, Study of Commercial Application software vs OSS, Open Office, GAMBAS, GIMP etc.

UNIT-II**12 Hrs.**

Software Development Using Open Source and Free Software Licenses: Introduction, Models of Open Source and Free Software Development, Forking, Choosing an Open Source or Free Software License, Drafting Open Source Licenses

Text Books:

1. Andrew St. Laurent, **Understanding Open Source and Free Software Licensing** – O'Reilly Media, 2004

Reference Books:

1. P. Rizwan Ahmed, **Open Source software**, Margham Publications, 2015
2. Ashish Gavande, **Understanding Free and Open Source**, 2017

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II SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC181	Operating System	4	3	20	80	100	2
	BCMCAC182	Desktop Publishing	4	3	20	80	100	2
	BCMCAP183	OS and DTP Lab	4	3	10	40	50	1
II	BCMCACE184	E1: Data Mining with R	2	2	10	40	50	1
	BCMCACE185	E2: Business Statistics with R						
		Total	14	11	60	240	300	6

**GROUP-I
COURSE-3****BCMCAC181: Operating System****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives:**

- To make students understand the purpose, role, structure, functions, application of operating systems
- Understand services provided by operating systems

Course Outcomes:

- Analyze the structure of OS and basic architectural components involved in design
- Analyze the various resource management techniques
- Interpret the mechanisms adopted for file sharing
- conceptualize the components involved in designing a contemporary OS
- To be familiar with various types of operating systems

UNIT-I**12 Hrs.**

Introduction: Operating system, Mainframe systems, Desktop Systems, Multi-processor Systems, Distributed Systems, Cluster systems, Real Time Systems, Handheld Systems, Future Migration, Computing Environment. **Operating System Structures:** System Components, Operating System Services, System Calls, System structures. **Process Management:** Process concept, Process Scheduling, Operations on process, Cooperative Process, Inter process Communication. **Threads:** Overview, Multithreading Models.

UNIT-II**12 Hrs.**

CPU Scheduling: Basic concepts, Scheduling criteria, Scheduling algorithms, multiple processor scheduling. **Process Synchronization:** Background, the critical section Problems, Synchronization, Semaphore, Classic problems synchronization hardware, Critical region Monitor, Semaphore. **Deadlocks:** System model, deadlock characterization, Methods for handling deadlocks, Deadlock prevention, Deadlock avoidance, Deadlock detection.

UNIT-III**12 Hrs.**

Memory Management: Background, Swapping, contiguous Memory allocations, Paging, segmentation, segmentation with paging, **Virtual Memory:** Background, demand paging, process creation, page replacement, allocation of frames and thrashing. **File Management:** File concept, Access methods, Directory structure, File system Mounting, File sharing, Protection.

UNIT-IV**12 Hrs.**

Linux: An introduction, reason for its popularity, Linux file system, login and logout. **Linux commands:** Command format, Directory oriented command, wild card characters, File oriented commands, File Access Permissions, Process oriented commands, Background processing, Communication oriented commands, General purpose commands, Pipe and Filters related commands, vi editor, Shell programming, System administration.

Text Books:

1. Silberschartz, Galvin and Gagne, **Operating Systems Concepts**, 8th Edition, John Wiley & sons, Pvt. Ltd.2008
2. B Mohamed Ibrahim, **Linux: A Practical Approach**, Laxmi Publications; First edition, ,2016
- 3.

Reference Books:

1. Pramod Chandra P. Bhatt, **An Introduction to Operating Systems: Concepts and Practice (GNU/ Linux)**, Prentice Hall India Learning Private Limited; Fourth edition, 2013
2. Richard Blum, Christine Bresnahan, **Linux Command Line and Shell Scripting Bible**, Third edition, Wiley, 2015.
3. Sobell, **Practical Guide to Linux Commands Editor**, Pearson Education India; 3 edition, 2013.

**GROUP-I
COURSE-4****BCMCAC 182: Desktop Publishing****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives:**

- Use strategies to obtain and evaluate print and digital information from a variety of electronic resources and in a variety of electronic formats.
- Identify the tasks and use appropriate software and documentation to create specific projects in desktop publishing
- Create and present publication project using and describing the principles and skills necessary for its creation.
- Evaluate projects according to criteria defined in technology application standards for desktop publishing

Course Outcomes:

- Gain basic understanding of the field of desktop publishing
- Acquire skills of preparing projects for publication which include layout and design
- Learn both the technical and aesthetic aspects of text, image manipulation and integration
- Learn using design as a means of communication, along with using tools to implement effective design strategies

UNIT-I**12 Hrs.**

Introduction to InDesign: Introduction to the Workspace • Getting to Know InDesign • Setting Up a Document and Working with Pages • Working with Objects • Flowing Text • Editing Text • Working with Typography • Working with Color • Working with Styles • Importing and Modifying Graphics • Creating Tables • Working with Transparency • Printing and Exporting • Creating Adobe PDF Documents with Form Fields • Exporting for E-Readers • Working with Long Document.

UNIT-II**12 Hrs.**

Introduction to CorelDraw: • Getting started with Corel Draw Introduction to Corel Draw Features of Corel Draw Corel Draw Interface Tool Box Moving from Adobe Illustrator to Corel Draw Common Tasks • Drawing and Coloring Introduction Selecting Objects Creating Basic Shapes Reshaping Objects Organising objects Applying color fills and Outlines • Mastering with Text Introduction Text Tool Artistic and paragraph text Formatting Text Embedding Objects into text Wrapping Text around Object Linking Text to Objects • Applying Effects Introduction Power of Blends Distortion Contour Effects Envelopes Lens effects Transparency Creating Depth Effects Power Clips • Working with Bitmap Commands Introduction Working with Bitmaps.

UNIT-III**12 Hrs.**

Introduction to Photoshop: Zoom and navigate through a photo. Crop, straighten horizon lines and rotate., Adjust the image for levels and color. Change modes from RGB to grayscale and create duotones, Dodge and burn specific areas of a photo, Use selection tools to further adjust and enhance the image, Use the clone tool to repair and manipulate the image, Use filters to change the image in artistic and unreal ways.

UNIT-IV**12 Hrs.**

Getting Started with Flash Professional CS6, Working with Graphics, Working with Symbols and Instances, Timelines and Animation, Creating Interactive Navigation, working with Text.

Text Books:

1. Ramesh Bangia, **Learning Desk Top Publishing (DTP)**, Khanna Book Publishing Co. (P) Ltd.; 1 edition, 2016.
2. Satish Jain, **BPB DTP Course**, BPB, 2014
3. Satish Jain, **Adobe Flash Professional CS6 Training Guide** Paperback, First edition, BPB Publications, 2016

Reference Books:

1. Kogent Learning Solutions Inc., **InDesign CS6 in Simple Steps**, Dreamtech Press, 2012
2. Kogent Learning Solutions Inc., **Photoshop CS6 in Simple Steps**, Dreamtech Press, 2012 Kogent Learning Solutions Inc., "Flash CS6 in Simple Steps", First Edition, Dreamtech Press, 2013.
3. Kogent Learning Solutions Inc., **CorelDRAW X7 in Simple Steps**, Dreamtech Press, 2014.

Practical-II	BCMCAP 183: Linux Lab	48 Hours
Practical/Week:42 Hrs Credits: 1	Lab Exercises in Linux and DTP Packages	I.A: 10 Exam: 40

**GROUP-II
COURSE-3****BCMCACE 184-E1: Data Mining with R****24 hours****Theory/Week: 2****I.A: 10****Hrs, Credits: 1****Exam: 40****Course Objectives:**

Help students

- Learn the basic concepts of R: the data frame and data manipulation
- Discover powerful tools for data preparation and data cleansing
- Visually find patterns in data
- Work with complex data sets and understand how to process data sets
- Get to know how object-oriented programming is done in R
- Explore graphs and the statistical measure in graphs

Course outcomes:

Upon successful completion of the course the student will gain:

- Ability to identify the characteristics of datasets
- Ability to select and implement data mining techniques in R suitable for the applications under consideration.
- Ability to recognize and implement various ways of selecting suitable model parameter for different machine learning techniques.

UNIT-I**12 Hrs.**

Introduction to Data Mining and R: A brief introduction to Data Mining, Main tasks and objectives, Illustrative case studies, A brief introduction to R and Rstudio, Basic concepts of the R language.

Data Munging: Presentation of the first case study, Importing data into R, Data summarization, Examples and exercises in R. Data Visualization and Reporting: Data visualization, Examples and exercises in R, Reporting, Dynamic reports and presentations in R using knitr

UNIT-II**12 Hrs.**

Predictive Analytics: Introduction to predictive modelling, Classification and regression tasks, Evaluation metrics, Linear discriminants and linear regression, classification and regression trees, Support vector machines, Ensembles and Random forests, Model evaluation strategies, Reliability of estimates

Model Evaluation and Selection: Experimental methods for performance estimation, Cross validation, Holdout, Bootstrap, The performance Estimation package, Illustrations in R, Statistical significance of the observed differences, Illustrative case studies and hands on practice

Text Books:

1. G. K. Gupta, **Introduction to Data Mining with Case Studies**, 3rd Edition, PHI Yanchang Zhao, 2016
2. Yonghua Cen, **Data Mining Applications with R**, 1st Edition, Academic Press, 2013
3. Pang-Ning Tan, Michael Steinbach, Vipin Kumar, **Introduction to Data Mining**, Pearson, 2013

Reference Books:

1. M Ramakrishna Murthy, **Introduction to Data Mining and Soft Computing Techniques**, Laxmi Publications Pvt Ltd, 2017.
2. Paul Teetor, **R Cookbook: Proven Recipes for Data Analysis, Statistics, and Graphics**, O'reilly Cookbooks, 2011
3. Garrett Grolemond, Hadley Wickham, **Hands-On Programming with R: Write Your Own Functions and Simulations**, 1st Edition, O'reilly, 2014

**GROUP-II
COURSE-4****BCMCACE 185-E2: Business Statistics with R****24 hours****Theory/Week: 2 Hrs****I.A: 10****Credits: 1****Exam: 40****Course Objectives:**

Help students

- Learn the basic concepts of R: the data frame and data manipulation
- Discover powerful tools for data preparation and data cleansing
- Visually find patterns in data
- Work with complex data sets and understand how to process data sets
- Get to know how object-oriented programming is done in R
- Explore graphs and the statistical measure in graphs

Course outcomes:

Upon successful completion of the course student will be able to:

- Gain motivation for exploring R for statistical applications
- Access online resources for R and import new function packages
- Import, review, manipulate and summarize data-sets in R

UNIT-I**12 Hrs.**

Introduction, how to run R, R Sessions and Functions, Basic Math, Variables, Data Types, Vectors, Conclusion, Advanced Data Structures, Data Frames, Lists, Matrices, Arrays, Classes. R Programming Structures, Control Statements, Loops, – Looping Over Nonvector Sets,- If-Else, Arithmetic and Boolean Operators and values, Default Values for Argument, Return Values, Deciding Whether to explicitly call return- Returning Complex Objects, Functions are Objective, No Pointers in R, Recursion

Doing Math and Simulation in R, Math Function, Extended Example Calculating Probability-Cumulative Sums and Products-Minima and Maxima- Calculus, Functions Fir Statistical Distribution, Sorting, Linear Algebra Operation on Vectors and Matrices, Extended Example: Vector cross Product- Extended Example: Finding Stationary Distribution of Markov Chains, Set Operation, Input /output, Accessing the Keyboard and Monitor, Reading and writer Files

UNIT-II**12 Hrs**

Graphics, Creating Graphs, The Workhorse of R Base Graphics, the plot() Function – Customizing Graphs, Saving Graphs to Files. Probability Distributions, Normal Distribution- Binomial Distribution- Poisson Distributions Other Distribution, Basic Statistics, Correlation and Covariance, T-Tests,-ANOVA.

Linear Models, Simple Linear Regression, -Multiple Regression Generalized Linear Models, Logistic Regression, – Poisson Regression- other Generalized Linear Models-Survival Analysis, Nonlinear Models, Splines- Decision- Random Forests,

Text Books:

1. A K Verma, **The Art of R Programming**, Cengage Learning
2. Lander, R for Everyone, Addison-Wesley Professional. , 2017
3. Mark van der Loo, Edwin de Jonge, **Learning RStudio for R Statistical Computing**, Packt Publishing Limited, 2012

Reference Books:

1. Paul Teetor, **R Cookbook: Proven Recipes for Data Analysis, Statistics, and Graphics**, O'reilly Cookbooks, 2011
2. Garrett Golemund, Hadley Wickham, **Hands-On Programming with R: Write Your Own Functions and Simulations**, 1st Edition, O'reilly , 2014

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III SEMESTER

Courses Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC231	Java Programming	4	3	20	80	100	2
	BCMCAC232	DBMS	4	3	20	80	100	2
	BCMCAP233	Java and DBMS Lab	4	3	10	40	50	1
II	BCMCACE234	E1: Python Programming	2	2	10	40	50	1
	BCMCACE235	E2: Multimedia Applications						
		Total	14	11	60	240	300	6

**GROUP-I
COURSE-5****BCMCAC 231: Java Programming****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives:**

- To introduce basic Java language syntax and semantics to write programs in JAVA.
- To enable understand the fundamentals of object-oriented programming in Java
- Create, Debug and test a software application using the Java programming language.

Course Outcomes:

On successful completion of this course the student should be able to:

- Create Java programs that solve simple business problems.
- Validate user input, Perform a test plan to validate a Java program and Document a Java program.

UNIT-I**12 Hrs.**

Java Evolution: Java history, Java features, How Java differs from C and C++, Hardware and Software requirements, Java support systems, Java environment. **Overview of Java Language:** Introduction, Simple Java Program, More of Java, An application with two classes, Java program structure, Java Tokens, Java Statements, Implementing a Java Program, Java Virtual Machine, Command line arguments. **Constants, Variables and Data Types:** Introduction, Constants, variables, data types, Declaration of variables, giving values to variables, Scope of variables, Standard default values. **Operators:** Introduction, Arithmetic, Relational, Logical, Assignment, Increment & decrement, conditional, Bitwise operators, special operators: **Expressions:** Arithmetic expressions, Evaluation of expressions, Precedence of arithmetic operators, Type conversions in expressions, operator precedence and associativity, **Mathematical functions.**

UNIT-II**12 Hrs.**

Decision making and branching: Introduction, Decision making with If statements, simple IF statement, Nesting of IFELSE statements. ELSE.....if.....ladder, the switch statement, the ?: operator **Decision making and Looping:** Introduction, The while statement, THE Do statement, the For statement, Jumps in Loops, Labeled Loops. **Classes objects and methods:** Introduction, Defining a Class, Adding Variables Adding methods, Creating Objects, Accessing Class members, Constructors, Methods Overloading, Static Members, Nesting of Methods, Inheritance, Overriding Methods, Final variables and Methods, Final classes, Finalizer Methods, Abstract Methods and Classes, Visibility Control. Arrays, Strings and Vectors. **Arrays:** One - Dimensional Arrays, Creating an Array, Two Dimensional Arrays, Strings, Vectors, Wrapper Classes.

UNIT-III**12 Hrs.**

Interfaces: Multiple Inheritance: Introduction, Defining Interfaces, Extending Interfaces, Implementing Interfaces, Accessing Interface Variables. **Packages:** putting classes together: Introduction, Java, API Packages, Using System Packages, Naming Conventions, Creating Packages, accessing a Package, using a Package, adding a class to a Package, Hiding classes.

UNIT-IV**12 Hrs.**

Multithreaded Programming: Introduction, Creating Threads, Extending the Thread Class, Stopping and Blocking a Thread, Life Cycle of a Thread, Using Thread Methods, Thread Exceptions, Thread Priority, Synchronization, Implementing the 'Runnable' Interface. **Managing Errors and Exceptions:** Introduction, Types of Errors, Exceptions, Syntax of Exception Handling Code, Multiple Catch Statements, Using Finally Statement, throwing our own Exceptions, Using Exceptions for Debugging

Text Books:

1. E Balaguruswamy, **Programming with Java A primer**, 5th edition, Tata McGraw Hill Publishing Company Limited, 2017.

Reference Books:

1. Yashavant Kanetkar, **Let us JAVA**, 3rd Edition, BPB, 2017.
2. Herbert Schildt, **The Complete Reference Java**, Ninth edition, McGraw Hill Education, 2017.

**GROUP-I
COURSE-6****Theory/Week: 4 Hrs****Credits: 2****BCMCAC 232: DBMS Concepts****48 hours****I.A: 20****Exam: 80****Course Objectives:**

- Learn and practice data modelling using the entity-relationship and developing database designs.
- Understand the use of Structured Query Language (SQL) and learn SQL syntax.
- Apply normalization techniques to normalize the database
- Understand the needs of database processing and learn techniques of developing program interfaces to a database

Course Outcomes:

The student will be able:

- To describe data models and schemas in DBMS
- To understand the features of database management systems and Relational database.
- To Demonstrate an understanding of the relational data model and use SQL.
- To understand the functional dependencies and design of the database and use SQL solutions to a broad range of query and data update problems.

UNIT-I**12 Hrs.**

Database Systems: Database System Concepts and Architecture, Database Systems versus File Systems. Data Abstraction, Data independence, Schemas and Instances, Data models, Database Languages, Database Users, DBA. Structure of Database Systems. **Data Modelling:** E-R model, Entity types, sets, Attributes, Keys, Relationships, Relationship Types, Roles, and Structural Constraints, Weak Entity sets, E-R Diagrams. Different types of database models and their advantages and disadvantages.

UNIT-II**12 Hrs.**

Basic structure of Oracle System: Database Structure and its manipulation in Oracle, Storage organization in Oracle Creation of Database: Creating, changing and dropping the tables. Integrity Constraints specification, maintaining reference integrity constraints, Data insertion, Deletion and modification. Querying the database: Information retrieval using SELECT statement, various features of SELECT statement, Aggregate functions, ORDER BY clause, working with expressions and sub queries handling of multiple tables. Views: Creation of views.

UNIT-III**12 Hrs.**

PL/SQL Basics: Introduction, character set, reserve words, Block structure, Data types, Conditional statements, looping statements, procedures, functions.

UNIT-IV**12 Hrs.**

Cursors: Implicit and explicit cursors, cursor attributes, triggers, packages. Exceptions SQL PLUS concepts: Reports and form design issues.

Text Books:

1. Silberschatz and Korth, **Database System Concepts**, 6th Edition, McGraw Hill Publication, 2010
2. Elmasri and Navathe, **Fundamentals of Database Systems**, 7th edition, Pearson Education Asia Publication, 2016
3. Ivan Bay Ross, **SQL, PL/SQL the Programming Language of Oracle**, 4th Edition, BPB Publications, 2009

Reference Books:

1. P.S. Deshpande, **SQL & PL/SQL for Oracle 11g**, Black Book Dreamtech Press, 2011.
2. Michael McLaughlin, **Oracle Database 11g PL/SQL Programming**, McGraw Hill Education; 1 edition, 2017.

Practical-III	BCMCAP 233: Java and DBMS Lab	48 hours
Practical/Week: 4 Hrs Credits: 2	Exercises in Java Language and DBMS	I.A: 10 Exam: 40

**GROUP-II
COURSE-5****BCMCACE 234-E1: Python Programming****24 hours****Theory/Week: 2 Hrs****IA: 10****Credits: 1****Exam: 40****Course Objectives:**

- introduce programming using the Python programming language with emphasis common algorithms and programming principles utilizing standard library distributed with Python.

Course outcomes:

- Be skilled at creating, debugging and testing a software application using the Python programming language.

UNIT-I**12 Hrs.**

Planning the Computer Program: Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation. Techniques of Problem Solving: Flowcharting, decision table, algorithms, Structured programming concepts, Programming methodologies viz. top-down and bottom-up programming. Overview of Programming: Structure of a Python Program, Elements of Python Introduction to Python: Python Interpreter, Using Python as calculator, Python shell, Indentation. Atoms, Identifiers and keywords, Literals, Strings, Operators (Arithmetic operator, Relational operator, Logical or Boolean operator, Assignment, Operator, Ternary operator, Bit wise operator, Increment or Decrement operator). Creating Python Programs: Input and Output Statements, Control statements (Branching, Looping, Conditional Statement, Exit function, Difference between break, continue and pass.), Defining Functions, default arguments, Errors and Exceptions

UNIT-II**12 Hrs.**

Iteration and Recursion: Conditional execution, Alternative execution, Nested conditionals, The return statement, Recursion, Stack diagrams for recursive functions, Multiple assignment, The while statement, Tables, Two-dimensional tables. Strings and Lists: String as a compound data type, Length, Traversal and the for loop, String slices, String comparison, A find function, Looping and counting, List values, Accessing elements, List length, List membership, Lists and for loops, List operations, List deletion. Cloning lists, Nested lists. Object Oriented Programming: Introduction to Classes, Objects and Methods, Standard Libraries. Data Structures: Arrays, list, set, stacks and queues. Searching and Sorting: Linear and Binary Search, Bubble, Selection and Insertion sorting.

Text Books:

1. Ch Satynarayana, M Radhika Mani, and B N Jagadeesh, Python Programming, Universities Press, 2018.
1. Timothy A Budd, **Exploring Python**, TMH, 2009
2. Allen Downey, Jeffrey Elkner, Chris Meyers, **How to think like a computer scientist: learning with Python**, 1st Edition – Freely available online, 2015

Reference Books:

1. Yuxi (Hayden) Liu, **Python Machine Learning by Example**, Packt Publishing Limited, 2017
2. Narasimha Karumanchi, **Data Structures and Algorithmic Thinking with Python: Data Structure and Algorithmic Puzzles**, Career Monk Publications, 2015

**GROUP-II
COURSE-6**

BCMCACE 235-E2: Multimedia and Applications

24 hours

Theory/Week: 2 Hrs

I.A: 10

Credits: 1

Exam: 40

Course Objectives:

- introduce basic knowledge and skills needed for development of multimedia systems and applications using available hardware and software tools.

Course outcomes:

- Apply acquired knowledge in the field of multimedia in practice and independently continue to expand knowledge in this field.

UNIT-I

12 Hrs.

Multimedia: Introduction to multimedia, components, uses of multimedia, multimedia applications, virtual reality. Text: Fonts & Faces, Using Text in Multimedia, Font Editing & Design Tools, Hypermedia & Hypertext. Images: Still Images – bitmaps, vector drawing, 3D drawing & rendering, natural light & colors, computerized colors, color palettes, image file formats. Sound: Digital Audio, MIDI Audio, MIDI vs Digital Audio, Audio File Formats.

UNIT-II

12 Hrs.

Video: How video works, analog video, digital video, video file formats, video shooting and editing. Animation: Principle of animations, animation techniques, animation file formats. Internet and Multimedia: www and HTML, multimedia on the web – web servers, web browsers, web page makers and site builders. Making Multimedia: Stages of a multimedia project, Requirements to make good multimedia, Multimedia Hardware - Macintosh and Windows production Platforms, Hardware peripherals - Connections, Memory and storage devices, Multimedia software and Authoring tools

Text Books:

1. Tay Vaughan, **Multimedia: Making it work**, TMH, Eighth edition, 2006
2. Ralf Steinmetz and Klara Naharstedt, **Multimedia: Computing, Communications Applications**, Pearson, 2012

Reference Books:

1. Keyes, **Multimedia Handbook**, TMH, 1997
2. K. Andleigh and K. Thakkar, **Multimedia System Design**, PHI, 1996

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IV SEMESTER

Courses Group	Course Code	Course	Instruction Hours/ Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC281	Web Application development	4	3	20	80	100	2
	BCMCAC282	Computerized Accounting	4	3	20	80	100	2
	BCMCAP283	Web Application and Tally Lab	4	3	10	40	50	1
II	BCMCAOE284 BCMCAOE285	E1: IT Fundamentals E2: Internet Technologies	2	2	10	40	50	1
		Total	14	11	60	240	300	6

**GROUP-I
COURSE-7****BCMCAC281: Web Application Development****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives:**

- To provide in-depth understanding of the tools and technologies necessary for Web application design and development.
- To make the students understand client side scripting like HTML, JavaScript and server side scripting like servlets, ASPs and database interfacing.

Course Outcomes:

- Have a sound knowledge of Web Application Terminologies, Internet Tools and web services.
- Select and apply markup languages for processing, identifying, and presenting information in web pages.
- Use scripting languages and web services to add interactive components to web pages.
- Design and implement websites with good aesthetic sense of designing
- Design to be reusable the software components in a variety of different environments.

UNIT-I**12 Hrs.**

Internet Basics, Introduction to HTML - List - Creating Table - Linking document Frames - Graphics to HTML Doc - Style sheet - Style sheet basic - Add style to document - Creating Style sheet rules - Style sheet properties - Font - Text - List - Color and background color - Box - Display properties.

UNIT-II**12 Hrs.**

Introduction to JavaScript - Advantage of JavaScript - JavaScript Syntax – Data type - Variable - Array - Operator and Expression - Looping Constructor - Function - Dialog box.

UNIT-III**12 Hrs.**

JavaScript document object model - Introduction - Object in HTML - Event Handling - Window Object - Document object - Browser Object - Form Object - Navigator object Screen object - Build in Object – User defined object - Cookies

UNIT-IV**12 Hrs.**

ASP. NET Language Structure - Page Structure - Page event, Properties & Compiler Directives. HTML server controls - Anchor, Tables, Forms and Files. Basic Web server Controls- Label, Textbox, Button, Image, Links, Check & Radio button, Hyperlink. Data List Web Server Controls - Check box list, Radio button list, Drop down list, List box, Data grid, Repeater.

Text Books:

1. Laura Lemay, Rafe Colburn, Jennifer Kyrnin, **Mastering HTML, CSS & Javascript Web Publishing**, BPB Publications; First edition, 2016.

Reference Books:

1. Kogent Learning Solutions Inc., **Web Technologies: HTML, JAVASCRIPT, PHP, JAVA, JSP, ASP.NET, XML and Ajax, Black Book**, Dreamtech Press, 2009.
2. DT Editorial Services, **HTML 5 Black Book (Covers CSS3, JavaScript, XML, XHTML, AJAX, PHP, jQuery)**, 2 Edition, Dreamtech Press, 2016
3. Dani Akash, **JavaScript by Example**, Packt Publishing Limited, 2017.
4. Satish Jain, **Web Designing and Development: Training Guide**, BPB Publication; First edition, 2015.
5. Hirdesh Bhardwaj, **Web Designing**, Pothi.com; 1 edition, 2016.

GROUP-I
COURSE-8
Theory/Week: 4 Hrs
Credits: 2

BCMCAC 282: Computerized Accounting

48 hours

I.A: 20

Exam: 80

Course Objectives:

Help students to acquire

- understanding of basic concepts of accounting in respect of revenue, expense, assets, liability and equity
- competency to enter accounting transactions in the accounting software and generate different accounting reports/documents.
- Abilities to make cost analysis reports, profit & loss accounts, balance sheets, and cash flow statements etc.
- skills in maintaining accounting records, provides in-depth exposure to accounts receivable/ accounts payable, payroll and inventory modules.

Course Outcomes:

- Apply skills in Computerized Accounting for maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger package

UNIT-I

12 Hrs.

COMPUTERIZED ACCOUNTING: Introduction–Importance–Application –Advantages and disadvantages – Difference between Manual Accounting and Computerized Accounting – Features of Accounting packages – Creation of Company–Groups–Ledgers, Pre-defined vouchers - Displaying - Altering – Deleting of vouchers, ledger and company.- Reports: Account Books – Registers - Statement of Accounts - Bank Reconciliation Statement - Day Book – Cash and Bank Books-Final Accounts of Sole Traders: Trail Balance - Profit and Loss Account - Balance Sheet.

UNIT-II

12 Hrs.

ACCOUNTS WITH INVENTORY: Creation of Company with inventory and stock – Creation of Groups - Stock categories - Stock items – Godowns - Units of Measure - Inventory Vouchers - Pure Inventory Vouchers - Creating purchase order & Sales order – Invoicing - Display of inventory reports & statements. FINAL ACCOUNTS OF BUSINESS ORGANISATIONS: Preparation of Final Accounts for Nonprofit Organizations-Partnership firms - Corporate companies - Bank Accounts.

UNIT-III

12 Hrs.

COST AND MANAGEMENT ACCOUNTING: Preparation of Stores Ledgers – Job costing - Common size statement - Funds Flow Statement - Cash Flow Statement - Ratio Analysis

UNIT-IV

12 Hrs.

TAX ACCOUNTING: GOODS AND SERVICE TAX (GST), Create Company and Activate GST in Company Level, Creating Master and Set GST Rates, Creating Tax Ledgers, Transferring Tax Credits of VAT Excise and Service Tax to GST, Recording GST Sales and Printing Invoices, Recording GST Interstate Sales and Printing Invoices, Recording an Advance to Supplier under GST, Recording GST Local Purchase, Recording GST Interstate

Text Books:

1. SIA Experts, **Computerised Accounting**, SIA Publishers & Distributors Pvt Ltd, 2018
2. Yadagiri M., Srinivas G., **Computerized Accounting**, Jain Book Agency, 1st edition, 2008
3. Francis Princy, **Computerized Accounting Tally-9**, Kalyani Publications, 2014
4. Tally Education Pvt Ltd, **GST Using Tally.ERP 9 Release 6.1**, Sahaj Enterprises; 1 Edition, 2017.

Reference Books:

1. Parag Joshi, **Tally.ERP 9 with GST with Solved Problems**, Dnyansankool Prakashan; 1st edition, 2017.
2. Asok K. Nadhan, **Tally ERP 9 Training Guide**, BPB Publications; Fourth edition, 2018.
3. Rajesh Chheda, **Learn Tally.ERP 9 with GST and E-Way Bill**, Ane Books; 3 edition, 2018.
4. Yogesh Patel, **Free Accounting with Free Software**, Skylark Publications (UK); First edition, 2011

Practical-IV	BCMCAP 283: Web Application and Tally ERP Lab	48 hours
Practical/Week: 4 Hrs Credits: 1	Exercises on Web Applications and Tally package	I.A: 10 Exam: 40

**GROUP-II
COURSE-7****BCMCAOE 284-E1: IT Fundamentals****24 hours****Theory/Week: 2 Hrs****I.A: 10****Credits: 1****Exam: 40****Course Objectives:**

- To make the students understand and learn the basics of computer for its effective use in day to day life.

Course outcomes:

- Be able to apply knowledge of computing analyze a problem, and identify and define the computing requirements appropriate to its solution
- Be able to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- Be able to effectively integrate IT based solutions into the user environment

UNIT-I**12 Hrs.**

Introduction: Introduction to logical organization of computer, input and output devices (with connections and practical demo), keyboard, mouse, joystick, scanner, OCR, OMR, monitor, printer, plotter, primary memory, secondary memory, auxiliary memory. User Interface: Operating system as user interface, system tools, utility programs Database: Introduction to database, relational data model, Entity types, entity set, attribute and key, relationships, relation types, SQL queries: select, from, where, order

UNIT-II**12 Hrs.**

Networks: Definition of network, classification of network, LAN, MAN, WAN, distinction among the networks, Guided Media: Twisted pair, Coaxial cable, and Optical fiber. Unguided media: Microwave, Radio frequency propagation, Satellite, LAN Topologies: Ring, bus, star, mesh and tree topologies. Internet Applications: Internet as a global network, Search Engine, Online education, Internet utilities – email, online banking, reservations etc. Use of Computers in Education and Research: Data analysis, Heterogeneous storage, e-Library, Google Scholar, Domain specific packages such as SPSS, SciLab, Mathematica etc.

Text Books:

1. ITL Education Solutions Limited, **Introduction to Information Technology**, Pearson Education India; 2 edition, 2012.
2. Peter Norton, **Introduction to Computers**, 7th edition, Tata McGraw Hill Publication, 2017

Reference Books:

1. Anitha Goel, **Computer Fundamentals**, Pearson Education, 2010
2. Sanjay Saxena, **A First Course in Computers** 2003 Edition, 3rd Edition, Vikas Publishing House Pvt Limited, 2009

**GROUP-II
COURSE-8****BCMCAOE 285 -E2: Internet Technologies****24 hours****Theory/Week: 2 Hrs****I.A: 10****Credits: 1****Exam: 40****Course Objectives:****Help students**

- Learn basics, components of Network, Internet and Web technology;
- Learn basics of Internet technology, such as http and the World Wide Web, HTML, and JavaScripts;
- create WWW pages to serve as front-end to client/server, Internet applications;

Course outcomes:

- Be skilled, at a beginners' level, at analyzing and designing Internet applications; implement the design using the client/server model; testing and documenting the solutions developed.

UNIT-I**12 Hrs.**

Computer Networks: Introduction to computer network, LAN, MAN, WAN, wireless LAN, internet, intranet, extranet. Network Models: Client/ server network and Peer-to-peer network, OSI, TCP/IP, layers and functionalities. Internet Applications: Internet as a global network, Search Engine, Online education, Internet utilities – email, online banking, reservations etc. Use of Computers in Education and Research: Data analysis, Heterogeneous storage, e-Library, Google Scholar, Domain specific packages such as SPSS, SciLab, Mathematica etc. Internet Terms: Web page, Home page, website, internet browsers, URL, Hypertext, ISP, Web server, download and upload, online and offline. Internet Applications: www, telnet, ftp, e-mail, social networks, search engines, Video Conferencing, e-Commerce, m-Commerce, VOIP, blogs.

UNIT-II**12 Hrs.**

Introduction to Web Design: Introduction to hypertext markup language (html) Document type definition, creating web pages, lists, hyperlinks, tables, web forms, inserting images, frames, hosting options and domain name registration. Customized Features: Cascading Style Sheet (CSS) for text formatting and other manipulations. JavaScript Fundamentals: Data types and variables, functions, methods and events, controlling program flow, JavaScript object model, built-in objects and operators.

Text Books:

1. Andrew S. Tanenbaum, David J. Wetherall, **Computer Networks**, PHI, 1999.
2. D.R. Brooks, **An Introduction to HTML and Javascript for Scientists and Engineers**, Springer, 20007.
3. Laura Lemay, Rafe Colburn, Jennifer Kyrnin, **Mastering HTML, CSS & Javascript Web Publishing**, BPB, 2016

Reference Books:

1. B. A. Forouzan, **Data Communication and Networking**, TMH, 2007
2. Thomas Powell, **HTML & CSS: The Complete Reference**, Fifth Edition, McGraw Hill Education, 2017
3. William Fischer, **HTML: QuickStart Guide - Creating an Effective Website (HTML, CSS, Javascript)**, Createspace Independent Publishing Platform, 2016

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V SEMESTER

Courses Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC331	VB.NET Programming	05	3	30	120	150	3
	BCMCAC332	E1: Computer Graphics and Animation	04	3	20	80	100	2
	BCMCAC333	E2: Android Application						
	BCMCAC334	E3: Programming for Analytics						
	BCMCAP 335 BCMCAP 336 BCMCAP 337	E1: VB and Computer Graphics Lab / E2: VB and Android Application Lab / E3: VB and Programming for Analytics Lab	03	3	10	40	50	1
		Total	12	09	60	240	300	6

**GROUP-I
COURSE-9****Theory/Week: 5 Hrs****Credits: 2****BCMCAC 331: VB.NET Programming****60 hours****I.A: 20****Exam: 80****Course Objectives:**

- Enable students to gain knowledge in the basic concepts of object-oriented programming and programming with Windows and use skills to develop modern software programs using Visual Basic.

Course Outcomes:

After completion of the course, students are expected to:

- have developed the ability to design and develop interactive applications using the object-oriented principles
- be able to effectively develop applications with full functionality and a graphical user interface using Visual Basic
- have the capability of analysing and finding suitable and effective solutions to Windows based applications

UNIT-I**15 Hrs.**

Introduction: Introduction to .Net, .Net Architecture, Features of .Net, Advantages of .Net, .Net Base Class Library, Overview of .Net Framework, languages and the .NET Framework, The structure of a .NET Application, Compilation and Execution of a .NET Application, .Net Framework Class Library, VB .Net Enhancements. **Introduction to Visual Basic.Net IDE:** Creating a project, Types of project in .Net, Exploring and coding a project, Solution explorer, toolbox, properties window, Output window, Object Browser.

UNIT-II**15 Hrs**

Object Oriented Features: Classes and Objects, Access Specifiers: Private, Public and Protected, Building Classes, Reusability, Constructors, Destructor, Inheritance, Overloading, Overriding, Polymorphism. **VB.Net Programming Language:** Variables, Comments, Data Types, Working with Data Structures – Arrays, Array Lists, Enumerations, Constants, Structures; Introduction to procedures & functions, calling procedures, argument passing mechanisms, scope of variable. **Control Flow Statements:** Conditional statement, Loops, Nesting of Loops. Exception Handling(using : Try-catch, Multiple catch, Finally, Resume next)

UNIT-III**15 Hrs.**

GUI Programming: Introduction to Window Applications, Using Form – Common Controls, Properties, Methods and Events. Interacting with controls – Windows Form, Textbox, Rich Text Box, Label, Button, Listbox, Combobox, Checkbox, Picture Box, Radio Button, Panel, Scroll Bar, Timer, ListView, TreeView, Toolbar, Status Bar. Progress Bar, Date time Picker, Month Calender, Track Bar, Splitter, Link Label, Group Box, Tooltip, Menustrip, Check List Box. **Dialog Controls:** PageSetupDialog, PrintDialog, PrintPreviewDialog, PrintPreviewControl, PrintDocument, OpenFileDialog, SaveFileDialog. **Multiple Document Interface:** Creating and Using MDI applications, CreatingDialogBox, Adding and removing Controls at runtime.

UNIT-IV**15 Hrs**

Error Handling in Windows Forms: Types of Validation: Data validation, Field Level validation, Using the Error Provider class: Public Properties of ErrProvider objects, Public methods of Error Provider class, Performing Data Validation in Controls, Handling Mouse Events, Handling Keyboard Events. **Working With Database:** Data Access with ADO.net, The ODBC architecture, OLE DB, ActiveX Data Objects (ADO), ADO Object Model, Connection Object, Recordset Object, ADO.NET Data Providers, Connected Data Access, Connecting to a SQL Server Data Provider : Using OLEDB Provider, Using Commands, Using Data Reader, Disconnected Data Sets, Data Adapters, Creating the Data Set manually, Using XML Data, Working with DataBase, Queries, Creating the Database, Adding, Deleting & Updating Records.

Text Book:

1. Steven Holzner, **Visual Basic.Net Programming Black Book**, Dreamtech Press, 2005

Reference Books:

2. Neetu, Pabreja, Dr. Kavita Narwal, **Learning Visual Basic.Net Programming (front end design tool)**, Galgotia Publishing Company, 2017.
3. Jeremy Shapiro, **Visual Basic(R).Net: The Complete Reference**, McGraw Hill Education; 1 edition, 2017.

**GROUP-I
COURSE-10****BCMCAC 332- E1: Graphics and Animation Application 48 hours****Theory/Week: 5 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives:**

Enable students to

- understand the structure of modern computer graphics systems, the basic principles of implementing graphics primitives, and familiarity with key algorithms
- learn design and problem-solving skills with application packages

Course Outcomes:

- Apply skills in computer graphics and animation in design and development of simple projects

UNIT-I**12 Hrs**

Introduction to Computer Graphics: Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, RandomScan Display Processor, LCD Displays. **Scan Conversion:** Digital Differential Analyzer (DDA) algorithm, Bresenham's Line drawing algorithm. Bresenham's method of Circle drawing **Two-dimensional Transformations:** Transformations and Matrices, Transformation Conventions, 2D Transformations, Homogeneous Coordinates and Matrix Representation of 2D Transformations, Translations and Homogeneous Coordinates, Rotation, Reflection, Scaling, Combined Transformation, Transformation of Points, Transformation of the Unit Square, Solid Body Transformations, Rotation about an Arbitrary Point, Reflection through an Arbitrary Line, A Geometric Interpretation of Homogeneous Coordinates, The Window-to-Viewport Transformations. **Three-dimensional Transformations:** Three-dimensional Scaling, Three-dimensional Shearing, Three-dimensional Rotation, Three-dimensional Reflection, Three-dimensional Translation, Multiple Transformation, Rotation about an Arbitrary Axis in Space, **Computer Animation:** Principles of Animation, Key framing, Deformations, Character Animation, Physics-based Animation, Procedural Techniques, Groups of Objects. Image Manipulation and Storage: What is an Image? Digital image file formats, Image compression standard – JPEG, Image Processing – Digital image enhancement, contrast stretching, Histogram Equalization, Smoothing and Median Filtering.

UNIT-II**12 Hrs.**

Photoshop: Getting started with Photoshop, Opening an Existing File, The Photoshop Program Window, Screen Modes, Saving Files, Reverting Files, Closing Files, Preferences, Working With Images: Vector and bitmap Images, Image Size, Image Resolution, Editing Images, Opening Files created in Illustrator or Freehand, color Modes, Setting a current Foreground and Background Colors, File Formats, Making Selection, The Grow and Similar Commands, Moving a Portion of an Image, Editing Selections, Copying a Selection in to another Image, Filling a Selection, Transforming selections, Painting, Drawing and Retouching Tools: The Painting Tools, The Drawing tools, The Retouching Tools., Layers Palette, Working with Layers, , Layer Effects Type, Creating Type, Type Tool, Moving the Text, Creating Paragraph Type, Resizing a bounding Box, Changing the Type settings, Converting the Point Type to Paragraph Type, Converting Type Layers to Standard Layers, Type Making Filters: The Filter Menu, Filter Gallery, Extract Filter, Liquify Filter, Vanishing Point Filter, Artistic Filters, Blur Filters, Brush Stroke Filters, Distort Filters, Noise Filters, Pixelate Filters, Lighting Effects, Difference Clouds, Sharpen Filters, Sketch Filters, Stylize Filters, Other Filters

UNIT-III

12 Hrs.

Introduction to Illustrator: Introduction - Interface - window/palettes/menus Bitmap vs vector graphics, resolution/print theory, Drawing basics: New documents - document setup, Basic shapes - rectangles/ellipses, Viewing - preview/outline, Object stacking order: Selecting and modifying shapes, Colour - fills and strokes, Selections - Selection and Direct select tools, Magic Wand and Lasso selections, Simple drawing - Shaper tool - 'predictive' drawing, Pencil tool - freehand drawing, Paintbrush and Blob brush tools, Eraser/Scissors/Knife, Curvature tool - simple, smooth, more accurate shapes, Drawing - pen tool - Drawing with the pen tool, Modify shapes - cut, join, align, Alignment/smart guides, Drawing using guides, drawing over a template. Transformations - Free transform tool, Cutting/joining paths, Fills and textures - Colour theory - RGB/CMYK, Colours - creating, editing, sharing Spot colours - Pantone, Creating Patterns Creating Gradients, Libraries - sharing/accessing various elements throughout Illustrator and CC

Transformations - Free Transform tool, Scale, rotates, reflect and shear tools, repeating transformations, Editing - Grouping/Locking/Visibility, Isolation mode, Edit colours - edit colours throughout a graphic, Symbols - Symbols - updateable graphics, Modifying symbols, Layers Introduction to layers, controlling layers - viewing/locking/printing, Saving and file formats - Saving - file types - ai, eps, pdf... Exporting - file types, Preferences Configuring preferences - units, increments, grids/guides, interface...

New art boards Artboard tool - rotating/moving/resizing, Styling Brushes art/scatter/calligraphic/bristle/ pattern, Effects - Applying editable effects as bitmap or vector Type, Type characteristics - size/leading/tracking... Point and area type tools Importing type Threading text boxes Text wrap, Touch type tool - adjust individual letters Clipping masks- Masking objects - draw inside and Clipping Masks

UNIT-IV

12 Hrs.

Introduction to Flash: Introduction to 2D animation using Flash, 2. Vector graphics, Flash layout & interface, 3. Shapes & objects, 4. Transformation tools, 5. Colors, palettes, text, 6. Frame , key frames, layering, 7. Sounds & video, 8. Shape tween, symbols, 9. Motion tween, masking, 10. Character design & character animation 11. Action script 12. Publishing & exporting flash files 13. Project work

Text Books:

1. Ashish Shah & Kiran Gurbani, **Computer Graphics and Animation**, Himalaya Publishing House, 2018
2. Kogent Learning Solutions Inc., **Flash CS6 in Simple Steps**, Dreamtech Press, 2013

Reference Books:

1. M.C. Trivedi, **Computer Graphics & Animation**, Jaico Publishing House, 2009.
2. Saish Jain, **Photoshop CS6 Training Guide**, BPB Publications, 2014
3. William Heldman, **Adobe Flash Professional CS6 Essentials**, John Wiley, 2012

**GROUP-I
COURSE-11****BCMCAC 333: E2: Android Programming****48 hours****Theory/Week: 5 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives**

A student will learn the basics of Android platform and understand

- practical approach to Android mobile application development
- Writing simple GUI applications, using built-in widgets and components, working with the database to store data locally.
- The purpose different development tools for Android, design a graphical user interface, integrate an application with pre-existing third-party libraries, access location-based services
- **Course Outcomes:**
- Apply the skills for creating, deploying Android applications, with particular emphasis on software engineering topics including software architecture, software process, usability, and deployment.
- To use the knowledge of android architecture and the tools for developing android applications

UNIT-I**12 Hrs.**

Introduction Android : Android Versions, Features of Android, Architecture of Android Obtaining the Required Tools, Android SDK, Installing the Android SDK Tools Configuring the Android SDK Manager – Eclipse, Android Development Tools (ADT), Creating Android Virtual Devices (AVDs), Creating Your First Android Application – Types of Android Application, Anatomy of an Android Application.

UNIT-II**12 Hrs.**

Activities, Fragments and Intents: Understanding Activities, Creating Activities, Linking Activities Using Intents, Resolving Intent Filter Collision, Returning Results from an Intent, Passing Data Using an Intent Object, Fragments, Adding Fragments Dynamically, Life Cycle of a Fragment, Interactions between Fragments, Calling Built-In Applications Using Intents, Understanding the Intent Object, Using Intent Filters – Adding Categories, Displaying Notifications.

UNIT-III**12 Hrs.**

Android User Interface: Understanding the Components of a Screen, Adapting to Display Orientation Managing Changes to Screen Orientation, Utilizing the Action Bar, Creating the User Interface Programmatically, Listening for UI Notifications, Designing Your User Interface With Views, Using Basic Views, Using Picker Views, Using List Views to Display Long Lists, Understanding Specialized Fragments – Displaying Pictures And Menus With Views, Using Image Views to Display Pictures – Using Menus with Views, Additional Views.

UNIT-IV**12 Hrs.**

Databases, Content Providers and Messaging: Saving and Loading User Preferences, Persisting Data to Files, Creating and Using Databases, Content Providers, Sharing Data in Android, Using a Content Provider, Creating Your Own Content Providers, Using the Content Provider – Messaging, SMS Messaging, Sending E,mail, Location Based Services, Networking and Android Services: Location Based Services, Displaying Maps, Getting Location Data, Monitoring a Location, Project - Building a Location Tracker, Networking, Consuming Web Services Using HTTP, Consuming JSON Services, Sockets Programming Developing. Android Services, Creating Your Own Services, Establishing Communication between a Service and an Activity, Binding Activities to Services, Understanding Threading, Publishing Android Applications, Preparing for Publishing, Deploying APK Files.

Text Books:

1. Wei - Meng Lee, **Beginning Android 4 Application Development**, John Wiley & Sons, Inc. 2016
2. Reto Meier, **Professional Android 4 Application Development**, John Wiley & Sons, Inc. 2016

Reference Books:

1. John Horton, **Android Programming for Beginners**, Packt Publishing Limited 2015
2. J. F. DiMarzio, **Beginning Android Programming with Android Studio**, 4ed, Wiley 2016

**GROUP-I
COURSE-12****BCMCAC 334: E3: Programming for Analytics****48 hours****Theory/Week: 5 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives**

A student will learn the basics of Programming for Data Analytics

- Practical approaches to SQL, SAS, R and Python programming
- Provide exposure to advanced data analytics in the IT industries

Course Outcomes:

- Students can enrich their basic data analytics skills as hand on experience

UNIT-I**12 Hrs.**

Introduction: Database Management Systems: Definition, Characteristics of DBMS, Architecture & Security, Types of Data Models, Concepts and constraints of RDBMS, Introduction to Structured Query Language, MySQL Installer, and Download sample Database, Loading Sample Database.

UNIT-II**12 Hrs.**

Introduction: Database Management Systems: Definition, Characteristics of DBMS, Architecture & Security, Types of Data Models, Concepts and constraints of RDBMS, Introduction to Structured Query Language, MySQL Installer, Download sample Database, Loading Sample Database.

UNIT-III**12 Hrs.**

Basics of SAS : Introduction to SAS, Installation of SAS university Edition, prerequisites for data analysis using SAS, SAS Architecture, Data Types, Formats and Informats, SAS coding- Data step and proc step, Libraries, Importing external data, Reading and Manipulating Data, Functions, Data Transformations, Conditional Statements.

UNIT-IV**12 Hrs.**

Python: Basics of Python: Installation of Anaconda Navigator, Data types – string, tuples, set, lists, dictionary, Arrays. Spyder, Importing and Exporting Files, Data Manipulation, Descriptive **Statistics and Documentation with Jupyter. R Programming:** Basics of R, Installation of R studio, Vectors, Matrices, Data types, Importing files, Writing files, Merging Files, Data Manipulation, Creation and Deletion of New Variables, Sorting of Data, Functions, Graphical Presentation and Descriptive Statistics.

Text Books:

1. Dye , MYSQL in a nutshell. O' Reilly, 2008
2. Delwiche and Slaughter, SAS: The little SAS Book. SAS Institute, 2012
3. McKinney Python for Data Analysis. O' Reilly, 2017
4. Golemund. R : Hands-on Programming; Garrett, O' Reilly, 2014

Reference Books:

1. DuBois, MySQL cookbook. O' Reilly, 2014
2. Hemedinger & McDaniel, SAS for dummies. Wiley, 2010
3. Madhavan, Mastering Python for Data Science. Packt, 2015
4. Paul. (2011). R: R Cookbook. O' Reilly, 2011

Group-I Practical-V	BCMCAP 335- E1: VB and Computer Graphics Lab / BCMCAP 336- E2: VB and Android Application Lab / BCMCAP 337-E3: VB and Programming for Analytics Lab	36 hours
Practical/Week: 3 Hrs Credits: 1	Exercises on Elective chosen Lab	I.A: 10 Exam: 40

MANGALORE UNIVERSITY
B.Com- Computer Applications (Vocational) Degree Programme
Curriculum and Scheme of Examinations

VI SEMESTER

Courses Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCMCAC381	Software Engineering	04	3	20	80	100	2
	BCMCAC382	E1: Software Testing	04	3	20	80	100	2
	BCMCAC383	E2: E-Commerce						
	BCMCAC384	E3: Information Security and Cyber Laws						
	BCMCAC385	Project	04	-	20	80	100	2
		Total	12	06	60	240	300	6

**GROUP-I
COURSE-12****BCMCAC 381: Software Engineering****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives:**

- To enable the student in understanding the basic theory of software engineering, and to apply these basic theoretical principles to a software development project.

Course outcomes:

- Ability to gather and specify requirements of the software projects.
- Ability to analyze software requirements with existing tools
- Able to differentiate different testing methodologies
- Able to understand and apply the basic project management practices in real life projects
- Ability to work in a team as well as independently on software projects

UNIT-I**12 Hrs.**

Introduction: The Software Problem, Software Engineering Problem, The Software Engineering Approach. **Software Processes:** Software Process, Characteristics of a Software Process, Software Development Process, Waterfall Model, Prototyping, Iterative Enhancement, Spiral Model, Project Management Process, Phases of management process, Metrics, Measurement, and Models, Software Configuration Management Process, Configuration Identification, Change control, Status accounting and auditing, Process Management Process, Building estimation models, Process Improvement and maturity.

UNIT-II**12 Hrs.**

Software Requirements Analysis and Specification: Software Requirements, Need for SRS, Requirement process, Problem Analysis, Analysis Issues, Informal Approach, Structured Analysis, Prototyping, Requirements Specification, Characteristics of an SRS, Components of an SRS, Specification Languages, Structure of a Requirements Document, Validation, Requirement Reviews. **Preliminary Design :** Design Principles, Module-Level Concepts, Design Notation and Specification, Data Flow Diagrams, Structured Design Methodology, Verification.

UNIT-III**12 Hrs.**

Detailed Design : Module specification, Specifying functional module, Detailed design, PDL, Logic/Algorithm Design, Verification, Design Walkthroughs, Critical Design Reviews, Consistency checkers. **Coding :** Programming Practice, Top-Down and Bottom-Up, Structured Programming, Information Hiding, Programming Style, Internal Documentation, Verification, Code Reading, Static Analysis, Symbolic Execution, Proving Correctness, Code Inspections or Reviews, Unit Testing

UNIT-IV**12 Hrs.**

Testing and Maintenance: Testing Fundamentals, Error, Fault, and Failure, Test Oracles, Top-Down and Bottom-Up Approaches, Test Cases and Test Criteria, Psychology of Testing, Functional Testing, Equivalence class partitioning, Boundary value analysis, Cause-effect graphing, Structural Testing, Control flow based criteria, Data flow based testing, Preventive and Corrective Maintenance activities

Text Books:

1. Pankaj Jalote, **Software Engineering: A Precise Approach**, Wiley, 2010.

Reference Books:

1. Roger Pressman, **Software Engineering: A Practitioner's Approach**, McGraw Hill Education, 7 edition, 2017.

**GROUP-I
COURSE-13****BCMCAC 382-E1: Software Testing****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives**

- To enable a clear understanding and knowledge of the foundations, techniques, and tools in the area of software testing and its practice in the industry

Course Outcomes

- A student will be able to plan, develop, and execute an automated test plan.
-

UNIT-I**12 Hrs.**

Software Testing Introduction, Nature of errors, Testing principles & Testing fundamentals, Debugging Approaches to Testing - I White Box Testing, Black Box Testing, Gray Box Testing, Unit Testing Integration- Top-down, Bottom up Big Bang Sandwich

UNIT-II**12 Hrs.**

Testing for Specialized Environments Testing GUI's, Testing of Client/Server Architectures, Testing Documentation and Help Facilities, Testing for Real Time Systems

UNIT-III**12 Hrs.**

Software Testing Strategies & Software metrics Validation Testing, System Testing, verification, Performance Testing, Regression Testing, Agile testing, Acceptance testing, Smoke Testing, Load Testing, Introduction, Basic Metrics, Complexity Metrics

UNIT-IV**12 Hrs.**

Specialized Testing & Testing Tools (Introduction) Test Case Design, Junit, Apache, Winrunner, Loadrunner, Rational Robot, Selenium, JMeter

Text Books:

1. Baris Beizerm, **Software Testing techniques**, Dreamtech, Second edition
2. Roger Pressman, **Software Engineering: A Practitioner's Approach**, McGraw Hill Education, 7 edition, 2017.
3. Dr. K.V.K.K. Prasad, **Software Testing Tools**, Dreamtech
4. Paul C. Jorgensen, **Software Testing: A Craftsman's Approach**, CRC Press; Fourth Edition, 2014.

Reference Books:

1. Michal Young Mauro Pezze, **Software Testing and Analysis: Process, Principles and Techniques**, Wiley
2. Prasad Raghavendra, **Learning Selenium Testing Tools**, Packt Publishing Limited, Third Edition
3. Satya Avasarala, **Selenium Web Driver Practical Guide**, Packt Publishing Limited
4. Bayo Erinle, **Performance Testing with JMeter 3**, Third Edition, Packt Publishing Limited 2017

**GROUP-I
COURSE-14****BCMCAC 383-E2: E-Commerce****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives**

- Introduce concepts and principles E-commerce, modern technologies used to simplify business and banking processes through e-commerce, virtual transactions, provision of E-commerce services, infrastructure, frameworks of web based and mobile systems for E-Commerce applications

Course Outcomes

At the end of the course the students will be fully aware of:

- the principles and practice of Electronic Commerce
- the components, functions and roles of the Electronic Commerce environment.
- client/server infrastructure, E-Commerce payment systems.

UNIT-I**12 Hrs.**

INTRODUCTION TO E-COMMERCE: Benefits; impact of e-commerce; classification of ecommerce; application of e-commerce technology; business models; framework of e-commerce.; business to business; business to customer; customer to customer; advantages and disadvantages of ecommerce; electronic commerce environment and opportunities: back ground – the electronic commerce environment – electronic market place technologies.

UNIT-II**12 Hrs.****NETWORK INFRASTRUCTURE OF E-COMMERCE:**

Network infrastructure to ecommerce & internet; LAN; ethernet (IEEE 802.3); WAN; internet; tcp/ip reference model; domain names; internet industry structure; FTP applications; protocols required for ecommerce; HTTP; CGI 3; firewalls; securing web service; secure payment system transaction security (SET); cryptology; digital signatures

UNIT-III**12 Hrs.**

ELECTRONIC PAYMENT SYSTEM and EDI: Introduction to electronic cash and electronic payment schemes – internet monetary payment; different models; framework; prepaid and post-paid payment model and security requirements – payment and purchase order process – online electronic cash. Search tools: directories; search engines; Meta search engines. EDI & E-content: Business Trade Cycle; EDI; EDI Fact, Electronic content.

UNIT-IV**12 Hrs.**

E-BUSSINESS: Business requirements – concepts; payment processing. launching your e-business- marketing an e-business; public relations; consumer communication; news groups & forums; exchanging links; web rings; e-business back end systems; business record maintenance; back up procedures and disaster recovery plans.

M-COMMERCE, ADVERTISING: Introduction to mobile commerce; framework; applications; design methodology and advantages; future trends in m-commerce. Supply chain management in e-commerce. Internet Advertising; Models of Internet advertising; sponsoring content; Corporate Website; Weaknesses in Internet advertising; web auctions. E-retailing; Role of retailing in E-commerce; E-marketing and advertising.

Text Books:

1. Dave Chaffey, **E-business and E-commerce Management**, Pearson Education, 2009

Reference Books:

1. Kalakota, Ravi, Whinston Andrew B, **E-Commerce-A Manager's guide**, Addison Wesley, 1997.
2. David Whiteley, **E-Commerce: Strategy, Technologies and Applications**, 1st Edition, TMH, 2017
3. Pandey, Saurabh Shukla, **E-Commerce & Mobile Commerce Technologies**, S. Chand, 2015

**GROUP-I
COURSE-15****BCMCAC 383-E3: Information Security and Cyber
Laws****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Course Objectives**

- Students will learn the basics of Information Security, anatomy of information Security attacks, their countermeasures and fundamentals of Cyber Law

Course Outcomes

- Develop an understanding of principal concepts, major issues, technologies and basic approaches in information security, security policies, Cyber Laws for Information security

UNIT-I**12 Hrs.**

Introduction to Information Systems and Security: Information Systems, Types of IS, Development of IS, Introduction to Information Security, Need for Information Security, Threats to Information Systems, Information Assurance, Cyber Security

UNIT-II**12 Hrs.**

Introduction to Application Security and Counter Measures: Introduction to Application Security, Data Security Considerations, Security Technologies, Security Threats, Security Threats to E-Commerce, E-Cash and Electronic Payment System, Credit/Debit/Smart Cards, Digital Signature, Cryptography and Encryption

UNIT-III**12 Hrs.**

Introduction to Security Measures: Secure Information System Development, Application Development Security, Information Security Governance and Risk Management, Security Architecture and Design, Security Issues in Hardware, Data Storage, and Downloadable Devices, Physical Security of IT Assets, Backup Security Measures

UNIT-IV**12 Hrs.**

Introduction to Security Policies and Cyber Laws: Need for an Information Security Policy, Information Security Standards – ISO, Introducing Various Security Policies and Their Review Process, Introduction to Indian Cyber Law, Objective and Scope of the IT Act, 2000, Intellectual Property Issues, Overview of Intellectual-Property-Related Legislation in India, Patent, Copyright, Law Related to Semiconductor Layout and Design, Software License

Text Books:

- Surya Prakash Tripathi, **Introduction to Information Security and Cyber Laws**, Wiley, 2014

Reference Books:

- Michael Whitman, Herbert Mattord, **Principles of Information Security**, Cengage Learning Custom Publishing; 6th edition, 2017.

GROUP-I COURSE-16	BCMCAC 384: Project	48 Hours
Theory/Week: 4 Hrs Credits: 2	Project Work - 4 hrs per week	I A: 20 Exam: 80

CA353: Project

PROJECT GUIDELINES

Preamble: Project work has been made a part of the course to give students exposure in development of quality software solution. The primary emphasis of the project work is to understand and gain the knowledge of the principles of software engineering practices. As such, during the development of the project students shall involve themselves in all the stages of the software development life cycle (SDLC) like requirements analysis, systems design, software development/coding, testing and documentation, with an overall emphasis on the development of reliable software systems. Since, the project work spans over the entire final semester, the students shall be advised to take up projects for solving problems of software industry or any research organization or the real-life problems suggested by the faculty in-charge of Project work in the institutions. Topics thus selected, should be complex and large enough to justify as the course project. The project should be genuine and original in nature and should not be copied from anywhere else.

GENERAL GUIDELINES TO THE INSTITUTIONS

Calendar of Project Work shall be announced before the commencement of the Sixth semester. Calendar shall contain tentative schedules on submission of Project proposals, Project Acceptance, Project Synopsis, Problem Analysis document, System Design, Detailed Design, coding and testing, final report, internal assessment exams (at least two), Viva/Voce etc.

Students shall undertake projects with real life problems (that has direct relevance in day- to-day activities or to knowledge extension) either in their colleges or in industry/research and development laboratories/software companies as recommended by the faculty in-charge of project work in the institutions. If a student intends to do industry project, the faculty in- charge shall ensure that the projects are genuine and original in nature.

There shall be not more than three members in a Project team.

At least two internal assessment exams shall be conducted to evaluate the progress made by the students at different stages of project work. Such exams may include written tests, presentations, work demonstration, group discussion, viva-voce etc. so as to objectively assess the understanding gained by the students in course of their project work.

GUIDELINES TO EXAMINERS REGARDING PROJECT VIVA-VOCE

External and internal Examiners shall together conduct project viva-voce objectively. To begin with, the finer details about various points contained in the scheme of valuation may be conclusively agreed upon through mutual consultation. During project evaluation, a student shall present his/her work through live demonstration of the software application developed as a part of project. The students shall be enabled to present their work in entirety. The primary objective of project evaluation shall be to assess the extent of

effort that was put in to meet the objectives of the project and also to gauge the understanding gained by the students in course of their project works.

While evaluating Project Reports, examiners shall scrutinize whether Software Development Life Cycle (SDLC) principles have been consistently followed in the project work and the same are documented well in the Reports. However, the relative and overall emphasis of these principles to a particular problem domain chosen may be considered so that project evaluations remain fair and objective.

The following is the scheme of valuation:

Sl.No.	Details		Allocated Marks
I.	Report- Max Marks : 60		
	i.	Requirements Analysis	20
	ii.	Systems design/detailed design	15
	iii.	Coding	15
	iv.	Testing and documentation	05
	v.	Other mandatory documents and information	05
II.	Demonstration/ Presentation/Viva - Max. Marks : 20		
	i	Demonstration	10
	ii	Viva - voce (Question and Answer)	10
Total Marks			80

FORMAT OF PROJECT SYNOPSIS

1. The project proposal (Synopsis) should contain the following details:
2. Title of the Project.
3. Introduction and objectives of the Project.
4. Project Category (Database/Web Application/ Client-server/Networking/ Multimedia/ gaming etc.).
5. Tools / Platform, Hardware and Software Requirement specifications.
6. Analysis (DFDs at least up to second level, ER Diagrams/ Class Diagrams, Database Design etc. as per the project requirements).
7. A complete structure which includes:
8. Number of modules and their description to provide an estimation of the student's effort on the project, Data Structures as per the project requirements for all the modules, Process logic of each module, Testing process to be used, Reports generation (Mention tentative content of report).
9. Whether Industry Defined/Client Defined/User Defined Project? Mention the type. Mention the Name and Address of the Industry/Client.
10. Limitation of the project.
11. Future scope and further enhancement of the project.



ಕ್ರಮಾಂಕ/No. :MU/ACC/CR.10/2018-19/A8

ಕುಲಸಚಿವರ ಕಛೇರಿ

ಮಂಗಳಗಂಗೋತ್ರಿ - 574 199

Office of the Registrar
Mangalagangothri - 574 199

ದಿನಾಂಕ/Date:25.01.2021

NOTIFICATION

Sub: Modified syllabus of III semester elective course (BSCMTCE 233) of Mathematics a core course for B.Sc degree programme under Choice Based Credit System-reg

Ref: Decision of the Academic Council meeting held on 23.12.2020 vide Agenda No: 2:17(2020-21)

Pursuant to the above, the Modified syllabus of III semester elective course skill development Techniques in Algebra & Calculus (BSCMTCE 233) of Mathematics, a core course for B.Sc degree programme under Choice Based Credit System, which was approved by the Academic Council meeting held on 23.12.2020, is hereby notified for implementation with effect from the academic year 2020-21.

Copy of the Syllabus shall be downloaded from the Mangalore University Website.
www.mangaloreuniversity.ac.in

REGISTRAR.

To:

- 1) The Principals of the Colleges Concerned.
- 2) The Registrar (Evaluation), Mangalore University.
- 3) Dr.Kishori P. Narayankar, Chairperson, UG BOS in Mathematics, and Department of Mathematics, Mangalore University.
- 4) The Assistant Registrar, Superintendents, Academic Section, O/o the Registrar, Mangalore University.
- 5) The Director, DUIMS, Mangalore University – with a request to publish in the Website.
- 6) Guard File.

MANGALORE



UNIVERSITY

**Mathematics Syllabus for B. Sc. Choice Based Credit System
Programme from the academic year 2019-20
(Semester Scheme)**

Preamble:

The Mathematics syllabus for B. Sc. (Credit Based Semester System) in use at present was introduced from the academic year 2014-15. As per the directions and guidelines of the University Grants Commission, and also with instructions from the Higher Education Council of Government of Karnataka, the Mangalore University has recently framed the regulations governing the Choice Based Credit System for the undergraduate graduate degree programmes so as to enable its programmes to be on par with global standards. Hence the following revised and restructured syllabus for the Mathematics as an optional subject in B.Sc. Choice Based Credit System programme has been prepared as per the new regulations of the University, by modifying the earlier syllabus, including Lab components and introducing new text and reference books. The Board observed that many universities in Karnataka have included Lab components in Mathematics subject of their B.Sc. programmes. The following new syllabus for Mathematics as an optional subject in the B.Sc.(Choice Based Credit System) of Mangalore University, framed by the U.G.B.O.S., has also taken into consideration the syllabus recommended by the UGC curriculum development committee and syllabi of other Universities of Karnataka. The syllabus is meant to be introduced from the academic year 2019-20.

Aims and objectives of introducing new syllabus

- To give greater exposure to the syllabus through open electives
- To improve the perspective of students on mathematics as per modern requirement
- To develop a spirit of inquiry and scientific temper in the student
- To initiate students to enjoy mathematics, pose and solve meaningful problems, to use abstraction to perceive relationships and structure and to understand the basic structure of mathematics
- To make learning process student-friendly
- To foster experimental, problem-oriented and discovery learning of mathematics
- To orient students towards relating mathematics applications
- To improve retention of mathematical concepts in the student
- To enable the teacher to demonstrate, explain and reinforce abstract mathematical ideas by using concrete objects, models, charts, graphs, pictures, posters with the help of FOSS tools on a computer
- To provide scope for greater involvement of both the mind and the hand
- To help the student build interest and confidence in learning the subject

CHOICE BASED CREDIT SYSTEM
COURSE PATTERN AND SCHEME OF EXAMINATION

CORE SUBJECT: MATHEMATICS

		Particulars	Instruction Hours/Week	Duration of Exams	Marks			Credits
					IA	Exam	Total	
I Semester B.Sc.								
Group I Core Subject	Theory BSCMTC131	Course I	4	3	20	80	100	2
	Practical BSCMTP132	Lab I	3	3	10	40	50	1
Group II Core Elective	Theory BSCMTCE133	Course A	2	2	10	40	50	1*
Total number of Credits for Core Subject in I Semester: 04								
II Semester B.Sc.								
Group I Core Subject	Theory BSCMTC181	Course II	4	3	20	80	100	2
	Practical BSCMTP182	Lab II	3	3	10	40	50	1
Group II Core Elective	Theory BSCMTCE183	Course B	2	2	10	40	50	1*
Total number of Credits for Core Subject in II Semester: 04								
III Semester B.Sc.								
Group I Core Subject	Theory BSCMTC231	Course III	4	3	20	80	100	2
	Practical BSCMTP232	Lab III	3	3	10	40	50	1
Group II Core Elective	Theory BSCMTCE233	Course C	2	2	10	40	50	1*
Total number of Credits for Core Subject in III Semester: 04								
IV Semester B.Sc.								
Group I Core Subject	Theory BSCMTC281	Course IV	4	3	20	80	100	2
	Practical BSCMTP282	Lab IV	3	3	10	40	50	1
Group II Open Elective	Theory BSCMTOE283	Course D	2	2	10	40	50	1*
Total number of Credits for Core Subject in IV Semester: 04								
V Semester B.Sc.								
Group I Core Subject	Theory BSCMTC331	Course V	3	3	20	80	100	2
	Theory BSCMTC332 BSCMTC333	Course VI(a)/ Course VI(b)	3	3	20	80	100	2
	Practical BSCMTP334	Lab V	4	3	10	40	50	2
Total number of Credits for Core Subject in V Semester: 06								
VI Semester B.Sc.								
Group I Core Subject	Theory BSCMTC381	Course VII	3	3	20	80	100	2
	Theory BSCMTC382 BSCMTC383 BSCMTC384	Course VIII(a)/ Course VIII(b)/ Course VIII(c)	3	3	20	80	100	2
	Practical BSCMTP385	Lab VI	4	3	10	40	50	2
Total number of Credits for Core Subject in VI Semester: 06								
Total number of Credits for Core Subject in I-VI Semesters: 28								

*Credits for Elective Courses will be considered for the entire B.Sc. Programme

Note:

1. Group I: For 5th and 6th semesters, Course V and Course VII respectively are compulsory Courses. In the 5th semester, a student has to choose one of the special Courses either VI(a) or VI(b). In the 6th semester, a student has to choose one of the special Courses from VIII(a), VIII(b), and VIII(c).
2. Group II: The student can opt any one of the elective courses (Course A to D) in each semester (I - IV). The core elective courses A, B and C can be taken by B Sc. students studying Mathematics, as one of the core elective subjects in group II. The open elective course D is for students of other streams in group II.

Group I

I Semester

BSCMTC131	Course I: Calculus and Analytical Geometry	2 Credits (48 Hours, 4 hours/week)
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Unit I (12 Hours)

(Recapitulation: Increasing decreasing functions, critical points, local extrema). Rolle's Theorem, The mean value theorem. Concavity, Points of inflection, Second derivative test for concavity, Second derivatives test for local extrema, Asymptotes (horizontal, vertical and oblique), Sketching curves $y = f(x)$, Applied Optimization Problems.

Unit II (12 Hours)

Integration: Upper and Lower Riemann sums, Limits of Riemann sums, definite integrals, Integrable and non-integrable functions, Area under the graph of a non-negative function, Average value of a continuous function, Mean value theorem for definite integrals, Fundamental theorem of calculus (Part 1 and 2).

Derivation of reduction formulae for $\int \sin^n x \, dx$, $\int \cos^n x \, dx$, $\int \tan^n x \, dx$, $\int \log^n x \, dx$, $\int \sec^n x \, dx$, $\int \sin^n x \cos^m x \, dx$, etc. Evaluation of integrals using reduction formulae.

Unit III (12 Hours)

Functions of several variables: Domain, Range, Interior points, Boundary points, Closed, Open, Bounded and unbounded regions in the plane, Level curves and Level surfaces. Limits and Continuity, Two-Path tests for non-existence of limits, Partial derivatives, Implicit partial differentiation, Partial derivatives and continuity, Higher order partial derivatives, Mixed derivative theorem, Differentiability, Chain rule for differentiation.

Unit IV (12 Hours)

Conic sections : Conic sections and Quadratic equations (Recapitulation: Standard forms of equations of conics), Asymptotes of Hyperbolas and graphing, Shifting conic sections, Classifying conic sections by eccentricity, Quadratic equations and Rotations - The cross product term, Angle of rotation, Removal of cross product term, Discriminant test.

References

- [1] Maurice D. Weir, George B. Thomas, Jr., Joel Hass, Frank R. Giordano, *Thomas' Calculus*, 11th Ed., Pearson, 2008.

[2] Louis Leithold, *Calculus with Analytic Geometry*, 5th Ed., Harper and Row International, 1986.

[3] George B. Thomas and Ross L. Finney, *Calculus and Analytic Geometry*, Addison-Wesley, 1992.

[4] Joseph Edwards, *Integral Calculus for Beginners*, Arihant Publishers, 2016 (original 1896).

BSCMTP132	Lab I	1 Credit
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Practicals for I Semester
Practicals: Lab I

Mathematics practicals with Free and Open Source Software (FOSS) tools for computer programs

- 1) Introduction to Scilab.
 - 2) Introduction to Maxima.
 - 3) Commands for plotting functions in Scilab/Maxima.
 - 4) Plotting of standard Cartesian curves using Scilab/Maxima-I.
 - 5) Plotting of standard Cartesian curves using Scilab/Maxima-II.
 - 6) Continuous and discontinuous functions using Scilab/Maxima.
 - 7) Left hand and right hand limits using Scilab /Maxima.
 - 8) Differentiability using Scilab/ Maxima.
 - 9) Techniques of Integration in SciLab/Maxima.
 - 10) Maxima commands for reduction formula with or without limits.
 - 11) Solutions of optimization problems.
 - 12) Integration of functions.
 - 13) Obtaining partial derivative of some standard functions.
 - 14) Conic sections, Rotation of Conics.
- Note:** The above list may be changed annually with the approval of the BOS in UG (Mathematics).

II Semester

BSCMTC181	Course II: Number Theory and Calculus	2 Credits (48 Hours, 4 hours/week)
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Unit I (12 Hours)

Number Theory: Division Algorithm, The Greatest Common Divisor (g.c.d), Euclidean Algorithm, Diophantine Equations, Fundamental Theorem of Arithmetic.
The Theory of Congruences, Basic Properties of Congruences, Binary and Decimal Representation of Integers.

Unit II (12 Hours)

Number Theory: Linear Congruences and The Chinese Remainder Theorem, Fermat’s Theorem, Wilson’s Theorem, Quadratic Congruence.
Euler’s Phi-Function, Euler’s Theorem, Some Properties of Phi-Function.

Unit III (12 Hours)

Calculus: Cauchy’s Mean Value Theorem, Indeterminate Forms (all types), L’Hospital’s Rules (First form and stronger form), Taylor Series, Maclaurin’s series.
Vector Calculus: Directional Derivatives, Gradient of Functions of Two or Three Variables, Properties of Directional Derivatives, Gradients and Tangents to Level Curves, Level Surfaces, Tangent Planes and Normal Lines to Level Surfaces.

Unit IV (12 Hours)

Polar coordinates: Relating Cartesian and Polar Equations, Graphing in Polar Coordinates, Symmetry, Test for Symmetry, Slope of Curves. Areas and Lengths in Polar Coordinates: Area in the Plane, Area Between the Curves, Length of a Polar Curve.
Multiple Integrals: Doubles Integrals over Rectangles, Double Integrals as Volume, The Fubini’s Theorem (First Form), Double Integrals over Bounded Non-rectangular Regions, Fubini’s Theorem (Stronger Form), Finding Limits of Integration, Properties of Double Integrals. Reversing the Order of Integration.

References

[1] David M. Burton., *Elementary Number Theory*, 7th Ed., McGraw Hill, 2011.

[2] Gareth A. Jones and J. Marry Jones, *Elementary Number Theory*, Springer, 1998.

[3] Maurice D. Weir, George B. Thomas, Jr., Joel Hass, Frank R. Giordano, *Thomas’ Calculus*, 11th Ed., Pearson, 2008.

[4] Louis Leithold, *Calculus with Analytic Geometry*, 5th Ed., Harper and Row International, 1986.

BSCMTP182	Lab II	1 Credit
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Practicals for II Semester

Practicals: Lab II

Mathematics practicals with Free and Open Source Software (FOSS) tools for computer programs

- 1) Euclidean Algorithm.
- 2) Divisibility tests.
- 3) Solving system of congruences.
- 4) Euler's Phi-function.
- 5) Plotting polar curves.
- 6) Plotting standard parametric curves.
- 7) Evaluation of indeterminate forms.
- 8) Verification of Cauchy's mean value theorem.
- 9) n th derivatives.
- 10) Evaluation of limits by L'Hospital's rule.
- 11) Finding Taylor/Maclaurin series.
- 12) Evaluation of the double integral with variable limits.
- 13) Level curves and level surfaces.
- 14) To demonstrate the physical interpretation of gradient, divergence and curl.

Note: The above list may be changed annually with the approval of the BOS in UG (Mathematics).

III Semester

BSCMTC231	Course III: Sequences, Series and Differential Equations	2 Credits (48 Hours, 4 hours/week)
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Unit I (12 Hours)

Sequences: Functions, Sequences, The range, Bounds of a sequence, Convergence of sequences, Some theorems, Limit points of a sequence, Convergent sequences, Non-convergent sequences, Cauchy's general principle of convergence, Algebra of sequences, Some important Theorems, Monotonic sequences, Subsequences.

Unit II (12 Hours)

Infinite Series: A necessary condition for convergence, Cauchy's general principle of convergence for series, Some preliminary theorems, Positive term series, Geometric series, A comparison test, Comparison tests for positive term series (first and second type), Cauchy root test, D'Alembert's test, Raabe's test, Logarithmic test, Integral test, Cauchy's integral test,

Alternating series, Absolute convergence, Conditional Convergence.

Unit III (12 Hours)

Differential Equations: (Recapitulation of Variable separable and homogeneous equations, Linear equation of order one). Exact equations, Integrating factors found by inspection, The determination of integrating factors, Bernoulli’s equation, Co-efficients linear in the two variables.

Applications: Velocity of escape from the earth, Newton’s law of cooling, Simple chemical conversions, Orthogonal trajectories - rectangular co-ordinates, Orthogonal trajectories - polar co-ordinates.

Unit IV (12 Hours)

Differential Equations: Linear equation with constant coefficients: Definition, operator D , complementary function of a linear equation with constant coefficients, Particular integral, General method of finding particular integral, Special methods for finding particular integral when RHS of the non-homogeneous differential equation is of the form: e^{ax} , $\cos ax$, $\sin ax$, x^m . Linear equations with variable coefficients. Special methods to solve any second order equation: (i) Reduction to normal form, (ii) Change of independent variable, (iii) Reduction of order, (iv) Variation of parameters.

References

[1] S.C Mallik, *Principles of Real Analysis*, New Age International Publications, 2008.

[2] Maurice D. Weir, George B. Thomas, Jr., Joel Hass, Frank R. Giordano, *Thomas’ Calculus*, 11th Ed., Pearson, 2008.

[3] Donald R. Sherbert and Robert G. Bartle, *Introduction to Real Analysis*, 4th Ed., John Wiley & sons, 2011.

[4] Ajith Kumar and S. Kumaresan, *A Basic Course in Real Analysis*, CRC Press, 2014.

[5] Earl D Rainville and Philip E Bedient, *A Short Course in Differential Equations*, Macmillan Ltd., 4th Ed., 1969.

[6] Narayanan and Manicavachagom Pillay, *Differential Equations*, Viswanathan (Printers and Publisher) PVT Ltd., 1991.

[7] William E. Boyce, Richard C. DiPrima, *Elementary Differential Equations*, 10th Ed., Wiley Publishers, 2012.

BSCMTP232	Lab III	1 Credit
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Practicals for III Semester
Practicals: Lab III

Mathematics practicals with Free and Open Source Software (FOSS) tools for computer programs

- 1) Illustration of convergent, divergent and oscillatory sequences.
- 2) Illustration of convergent, divergent and oscillatory series.

- 3) Programs to find the sum of the series.
- 4) Using Cauchy's criterion to determine convergence of a sequence (simple examples).
- 5) Using Cauchy's criterion on the sequence of partial sums of the series to determine convergence of a series.
- 6) Testing the convergence of binomial, exponential and logarithmic series and finding the sum.
- 7) Solution of Differential equation and plotting the solution - I.
- 8) Solution of Differential equation and plotting the solution - II.
- 9) Solution of Differential equation and plotting the solution - III.
- 10) Solution of Differential equation and plotting the solution - IV.
- 11) Solution of Differential equation and plotting the solution - V.
- 12) Solution of Differential equation and plotting the solution - VI.
- 13) Determination and Plotting of Orthogonal trajectories.
- 14) Applications of differential equations.

Note: The above list may be changed annually with the approval of the BOS in UG (Mathematics).

IV Semester

BSCMTC281	Course IV: Algebra and Complex Analysis	2 Credits (48 Hours, 4 hours/week)
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Unit I (12 Hours)

Group Theory: Binary Operations, Associativity, Commutativity, Examples for Binary Operations, Definition of a Group, Examples, Right inverse, Left inverse, Some properties, Abelian and Non-abelian groups, Laws of exponents, Subgroups, Intersection of subgroups, Centralizer of an element, Normalizer of a subgroup, Product of subgroups, Order of products of subgroups, Cyclic groups, Properties, Number of generators.

Unit II (12 Hours)

Group Theory: Permutation groups, Transpositions, Cycles, Cayley's theorem. Cosets, Lagrange's theorem, Index of a subgroup, Homomorphism, Kernel of a homomorphism, Properties of homomorphic images of groups, Isomorphism, Automorphisms, Normal subgroups, Quotient groups, First isomorphism theorem.

Unit III (12 Hours)

Complex Analysis: (Recapitulation of algebra of Complex numbers.) Polar and Exponential Forms, Powers and roots, Functions of a Complex variable, Limits, Continuity, Differentiability, Cauchy Riemann Equations, Analytic functions, Entire functions.

Unit IV (12 Hours)

Complex Analysis: Harmonic functions, Elementary functions: Exponential function, Trigonometric functions, Hyperbolic functions and Logarithmic functions.

References

[1]

N. S Gopalakrishnan, *University Algebra*, 3rd Ed., New Age International Publications, 2015.

[2]

G. D. Birkoff and S MacLane, *A brief Survey of Modern Algebra*, 2nd Ed., IBH Publishing Company, Bombay, 1967.

[3]

Joseph Gallian, *Contemporary Abstract Algebra*, Narosa, 1999.

[4]

I. N. Herstein, *Topics In Algebra*, 2nd Ed., Wiley Publishers, 1975.

[5]

James Ward Brown, Ruel V. Churchill, *Complex Variables and Applications*, 8th Ed., Mc Graw Hill Publications, 2009.

[6]

H.S. Kasana, *Complex variables theory and applications*, 2nd Ed., PHI Learning Pvt Ltd., New Delhi, 2005.

BSCMTP282	Lab IV	1 Credit
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Practicals for IV Semester

Practicals: Lab IV

- Mathematics practicals with Free and Open Source Software (FOSS) tools for computer programs

 - Verifying whether given operation is binary or not.
 - To find identity element of a group.
 - To find inverse element of a group.
 - Finding all possible subgroups of a finite group.
 - Examples to verify Lagrange’s theorem.
 - Examples for finding left and right coset and finding the index of a group.
 - Finding generators of a cyclic group and computation of quotient group.
 - Determination of center and all possible normal subgroups of groups.
 - Some problems on Cauchy-Riemann equations (Cartesian and polar form).
 - Implementation of methods of constructing analytic functions(simple examples).
 - Illustrating orthogonality of the surfaces obtained from the real and imaginary parts of an analytic function.
 - Verifying real and imaginary parts of an analytic function being harmonic (in polar coordinates).
 - Illustrating the angle preserving property of simple entire functions such as z^2 , $\exp(z)$, etc.,
 - Showing n th roots of unity is a group and plotting them on the unit circle.
 - Branches of the multiple valued functions: \sqrt{z} and $\log z$.

Note: The above list may be changed annually with the approval of the BOS in UG (Mathematics).

V Semester

BSCMTC331	Course V: Algebra and Laplace Transforms (Compulsory Course)	2 Credits (36 Hours, 3 hours/week)
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Unit I (12 Hours)

Rings and Fields: Rings, unit element, commutative ring, Properties. Zero divisors, Integral domains (finite and infinite), Fields (finite and infinite).

Vector spaces: Vector spaces, Subspaces, Linear span, Sum of subspaces, Direct sum of subspaces, Linear dependence and independence, Bases, Generating sets, Minimal generating sets, Maximal linearly independent sets, Dimension.

Unit II (12 Hours)

Vector spaces: Extending a linearly independent set to a basis, Extracting a basis from a generating set, Dimensions and bases of subspaces. Inner product spaces, Schwarz inequality, Orthonormal sets, Gram Schmidt's orthogonalization process, Orthogonal complement of a subspace.

Unit III (12 Hours)

Laplace transforms: Transforms of elementary functions, Transforms of derivatives, Derivatives of the transforms of the gamma function, Periodic functions.

Inverse transforms: A step function, Convolution theorem, Simple initial value problems, Spring problems.

References

- [1] N. S Gopalakrishnan, *University Algebra*, 3rd Ed., New Age International Publications, 2015.
- [2] G. D. Birkoff and S MacLane, *A brief Survey of Modern Algebra*, 2nd Ed., IBH Publishing Company, Bombay, 1967
- [3] Joseph Gallian, *Contemporary Abstract Algebra*, Narosa, 1999
- [4] I. N. Herstein, *Topics In Algebra*, 2nd Ed., Wiley Publishers, 1975.
- [5] Earl D Rainville and Philip E Bedient, *A Short Course in Differential Equations*, Macmillan Ltd., 4th Ed., 1969.
- [6] Erwin Kreyszig, *Advanced Engineering Mathematics*, 8th Ed., Wiley Eastern, 2011.

BSCMTC332	Course VI(a): Graph Theory (Special Course)	2 Credits (36 Hours, 3 hours/week)
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Unit I (12 Hours)

Definition of graph and examples, incidence and degree, subgraphs, isomorphism, complement of a graph, operation on graphs. Walks, trails and paths, connectedness and components, cut-points and bridges, blocks.

Unit II (12 Hours)

Eulerian graphs, Konigsburg bridge problem, Hamiltonian graphs. Trees, characteristics of

trees, center of a tree. Planarity of Graphs.

Unit III (12 Hours)

Colourability, chromatic number, Chromatic Polynomial, five-colour theorem, four-colour problem. Matrix associated with graphs: Incidence matrix, Adjacency matrix.

References

[1] S. Arumugam and S. Ramachandran, *Invitation to graph theory*, Scitech Publications (India) Pvt. Ltd., 2013.

[2] Narsingh Deo, *Graph Theory with Applications to Engineering and Computer Science*, PHI Learning Private Limited, 2004.

[3] Douglas B. West, *Introduction to Graph Theory*, Pearson, 2017.

[4] K.Chandrasekhara Rao, *Discrete Mathematics*, Narosa Publishing House, 2012.

[5] John Clark, D.A. Holton, *A first look at Graph Theory*, World Scientific, 1991.

[6] Robin J Wilson, *Introduction to Graph Theory*, 5th Ed., Pearson, 2010.

BSCMTC333	Course VI(b): Discrete Mathematics (Special Course)	2 Credits (36 Hours, 3 hours/week)
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Unit I (12 Hours)

Graphs and Planar Graphs: Introduction, Basic terminology, Multigraphs and Weighted graphs, Digraphs and relations, Representation of graphs, Operations on graphs, Paths and circuits, Eulerian paths and circuits, Hamiltonian paths and circuits, Planar graphs, Graph colouring.

Unit II (12 Hours)

Trees and Cut-sets: Trees, Rooted trees, Path lengths in rooted trees, Prefix codes, Spanning trees and cut-sets, Minimum spanning trees; Kruskal’s Algorithm, Prim’s algorithm, Shortest path Alogrithms.

Unit III (12 Hours)

Discrete numeric functions and Generating functions: Introduction, Manipulation of numeric functions, Asymptotic behavior of numeric functions, Generating functions.

Recurrence relations and Recursive Algorithms: Introduction, Recurrence relations, Linear recurrence relations with constant coefficients, Homogeneous solutions, Particular solutions.

References

[1] C. L. Liu and D P Mohapatra, *Elements of Discrete Mathematics - A Computer Oriented Approach*, 4th Ed., Tata Macgraw Hill Publishers, 2013.

[2] J. P. Trembley and R. Manohar, *Discrete Mathematical Structures with Applications to Computer Science*, Tata Magraw Hill Publishers, 1975.

[3] K. Chandrasekhara Rao, *Discrete Mathematics*, Narosa Publishing House, 2012.

[4] Swapan Kumar Sarkar, *A Text Book of Discrete Mathematics*, S Chand and Company, New Delhi, 2008.

[5] J. K. Truss, *Discrete Mathematics for Computer Scientists*, Addison Wesley, 1999.

BSCMTP334	Lab V	2 Credits
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Practicals for V Semester
Practicals: Lab V

Mathematics practicals with Free and Open Source Software (FOSS) tools for computer programs

- 1) Examples on different types of rings.
- 2) Finding zero divisors and units in finite rings.
- 3) Examples of integral domains and fields, and construction of finite fields.
- 4) Vector space, subspace – illustrative examples.
- 5) Examples on linear dependence and independence of vectors.
- 6) Generating sets, Basis and Dimension – illustrative examples.
- 7) Finding an orthonormal basis from given basis of an real inner product space.
- 8) Implementing Gram-Schmidt’s orthogonalization process.
- 9) Finding orthogonal complements of subspaces in inner product sapces.
- 10) Finding the Laplace transforms of some standard functions.
- 11) Functions of Class-A and Properties of gamma function.
- 12) Finding the inverse Laplace transform of simple functions.
- 13) Implementing Laplace transform method of solving ordinary linear differential equations of first and second order with constant coefficient.
- 14) Solving spring problems.

Note: The above list may be changed annually with the approval of the BOS in UG (Mathematics).

VI Semester

BSCMTC381	Course VII: Numerical Analysis (Compulsory Course)	2 Credits (36 Hours, 3 hours/week)
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Unit I (12 Hours)

Errors in Computation: Accuracy of numbers, Errors, Useful rules for estimating errors, Error propagations, Error in the approximation of a function. Errors in a series approximation. Solutions of Algebraic and Transcendental Equations: Initial approximation, Bisection method, Regula-falsi method, Iteration method, Newton-Raphson method. Solution of linear homogeneous equations: Direct Methods - Gauss elimination method,

Gauss-Jordan method. Iterative methods of solution - Jacobi's iteration method, Gauss-Seidel iteration method.

Unit II (12 Hours)

Finite differences: Introduction, Finite differences, differences of a polynomial, to find one or more missing terms. Interpolation: Introduction, Newton's forward interpolation formula, Newton's backward interpolation formula, Interpolation with unequal intervals, Lagrange's interpolation formula. Divided differences: Newton's divided difference formula, Inverse interpolation. Numerical differentiation - Formulae for derivatives using forward difference, and backward difference formulae, Maximum and minimum values of a tabulated function.

Unit III (12 Hours)

Numerical integration: General formula, Trapezoidal rule, Simpson's 1/3 - rule, Simpson's 3/8 - rule.
 Numerical Solution of Ordinary Differential Equations: Introduction, Solution by Taylor's series method, Picard's method, Euler's method, Modified Euler's method, Runge-Kutta Methods, Predictor-Corrector Methods - Adam's Bashforth Method.

References

[1] S. S. Sastry, *Introductory Methods of Numerical Analysis*, 4th Ed., PHI Learning Pvt Ltd., 2009.

[2] Dr. B .S. Grewal, *Numerical methods in Engineering and Science with Programs in C, C + +*, 9th Ed., Khanna Publications, New Delhi, 2010.

[3] T. Veerarajan and T. Ramachandran, *Numerical Methods*, Sigma series, Tata McGraw-Hill Education, 2007.

[4] Erwin Kreyszig, *Advanced Engineering Mathematics*, 8th Ed., Wiley Eastern, 2011.

[5] Abhishek Gupta, *Numerical Methods using MATLAB*, Apress, 2015.

BSCMTC382	Course VIII(a): Linear Algebra (Special Course)	2 Credits (36 Hours, 3 hours/week)
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Unit I (12 Hours)

Linear transformations : Kernel, Isomorphism of any n -dimensional space and \mathbb{F}^n , Quotient space, Dimension of quotient space, Vector space structure of $L(V, V')$.
 Matrices and linear transformations: Idempotent, Nilpotent, Diagonal, Triangular, Singular, Non-singular matrices, Matrix of a linear transformation, Isomorphism between $L(V, V')$ and $M_{mn}(\mathbb{F})$, Relation between matrices of a linear transformation with respect to two different bases, Rank of a matrix.

Unit II (12 Hours)

Matrices: Elementary row and column operations, Row reduced echelon form of a matrix, Finding rank of a matrix and inverse of a non-singular matrix by row reducing, Rank and nullity of linear transformations and matrices.
 Linear equations: Homogeneous and non-homogeneous equations, Testing consistency and

solving a system of linear equations.

Unit III (12 Hours)

Minimal Polynomial of a matrix, Minimal polynomial of a Linear transformation, Characteristic roots and characteristic vectors, Cayley Hamilton theorem and applications.

References

[1] N. S Gopalakrishnan, *University Algebra*, 3rd edition, New Age International Publications, 2015.

[2] G. D. Birkoff and S MacLane, *A brief Survey of Modern Algebra*, 2nd Ed, IBH Publishing Company, Bombay, 1967.

[3] Stephen H. Friedberg, Arnold J. Insel, Lawrence E. Spence, *Linear Algebra*, 4th Ed., Prentice - Hall of India Pvt. Ltd., New Delhi, 2004.

[4] Joseph A. Gallian, *Contemporary Abstract Algebra*, 4th Ed., Narosa Publishing House, New Delhi, 1999.

[5] Gilbert Strang, *Linear Algebra and its Applications*, Thomson, 2007

[6] S. Kumaresan, *Linear Algebra- A Geometric Approach*, Prentice Hall of India, 1999

BSCMTC383	Course VIII(b): Linear Programming (Special Course)	2 Credits (36 Hours, 3 hours/week)
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Unit I (12 Hours)

Mathematical formulation of the problem, Graphical method of solving LPP, Simplex algorithm, Non canonical LPP.

Unit II (12 Hours)

Duality equation, Duality theorem, Dual non-canonical LPP, Matrix games, Two Persons Zero sum Matrix game, The Von Neumann Minimax theorem.

Unit III (12 Hours)

Transportation problems: The balanced Transportation Problem, Vogel Advance start Method, Transportation algorithm, Unbalanced Transportation problem.

Assignment problem: The Hungarian Algorithm, Network-Flow problem, The Max-Flow Min-Cut theorems, The Maximal flow algorithm.

References

[1] P. M. Karak, *Linear programming and theory of games*, New central book agency (P) ltd., 2012.

[2] James K. Strayer, *Linear Programming and its Applications*, Springer-Verlag, 1989.

[3] Mokhtar S. Bazaraa, John J. Jarvis and Hanif D. Sherali, *Linear Programming and Network Flows*, 2nd Ed., John Wiley and Sons, India, 2004.

[4] F. S. Hillier and G. J. Lieberman, *Introduction to Operations Research - Concepts and Cases*, 9th Ed., Tata McGraw Hill, 2010.

[5] Hamdy A. Taha, *Operations Research - An Introduction*, 9th Ed., Prentice - Hall, 2010.

BSCMTC384	Course VIII(c): Partial Differential Equations (Special Course)	2 Credits (36 Hours, 3 hours/week)
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Unit I (12 Hours)

Total Differential Equations: Total Differential forms and Total Differential equations and solutions.

Unit II (12 Hours)

Partial Differential Equations of the First Order: Classification of Integrals, Derivation (Origin) of Partial Differential Equations, Lagrange’s Method of Solving the Linear Equations, Charpit’s Method, Special types of first order equations.

Unit III (12 Hours)

Higher Order Partial Differential Equations: Origin of the second order differential Equations, Classification of Second Order Partial Differential Equations, Linear Partial Differential Equations with constant Coefficients.

References

[1] I. N. Snedon, *Elements of Partial Differential Equations*, Dover Publications, Mineola, New york, 2006.

[2] Narayanan and Manicavachagom Pillay, *Differential Equations*, Viswanathan (Printers and Publisher) PVT Ltd. 1991.

[3] K. Sankara Rao, *Introduction to Partial Differential Equations*, 3rd Ed., PHI, 2010.

[4] T. Amarnath, *An Elementary Course in Partial Differential Equations*, Narosa, 1997.

[5] M D Raisinghania, *Advanced Differential Equations, Revised Edition*, S Chand & Company Ltd., 2018.

[6] Shepley L Ross, *Differential Equations*, 3rd Ed., Wiley India (P.)Ltd., 1984.

BSCMTP385	Lab VI	2 Credits
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Practicals for VI Semester

Practicals: Lab VI

Mathematics practicals with Free and Open Source Software (FOSS) tools for computer programs

1. Solving algebraic equation (Bisection method and Regula-Falsi).

2. Solving algebraic equation (Iteration and Newton-Raphson methods).

3. Solving system of equations (Jacobi and Gauss-Seidel methods).
4. Interpolations with equal intervals.
5. Interpolations with unequal intervals.
6. Derivatives using forward difference formulae
7. Derivatives using backward difference formulae.
8. Extreme values of tabulated functions.
9. Integrals using Trapezoidal rule, Simpson's 1/3 rule, and Simpson's 3/8 rule.
10. Solving ordinary differential equations by Picard's method.
11. Solving ordinary differential equations by Taylor's series method.
12. Solving ordinary differential equations by Euler's method and modified Euler's method.
13. Solving ordinary differential equations by Runge-Kutta Method.
14. Solving ordinary differential equations by Adam's Bashforth Method.

Note: The above list may be changed annually with the approval of the BOS in UG (Mathematics).

Group II

BSCMTCE133	Core Elective - A : Functions and Applications	1 Credit (24 Hours, 2 hours/week)
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Unit I (12 Hours)

Straight line: Straight line in economics, Break-Even point, System of straight lines, Effect of a Tax or Subsidy.

Parabola: Parabola in economics, The non-linear model.

Rectangular hyperbola: Rectangular hyperbola in economics.

Circle: Circle in economics.

Inequalities and absolute values: Properties of inequalities, Linear inequality in one variable, Absolute values. Applications in economics.

Unit II (12 Hours)

Derivatives of functions: Economic applications, Demand function, Price demand, income demand, Cross demand, Law of supply, Revenue functions, Short-run production function, Short-run cost function, Relation between marginal product and marginal cost.

The maxima and minima of functions: Applications of maxima and minima of functions in economics and business.

References

[1] R S Bharadwaj, *Mathematics for Economics and Business*, 2nd Ed., Excel Books, 2007.

[2] M Ragahvacahri, *Mathematics for Management : an introduction*, Tata McGraw-Hill, 1980.

[3] Teresa Bradley, *Essential Methematics for Economics and Business*, 2nd Ed., Wiley India Publishers, 2008.

[4] Frank Werner and Yuri N. Sotskov, *Mathematics of Economics and Business*, Taylor & Francis, 2006.

BSCMTCE183	Core Elective - B : Vector Calculus	1 Credit (24 Hours, 2 hours/week)
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Unit I (12 Hours)

Vector functions, Limits, Continuity, Derivative, Differentiation Rules, Integrals of vector functions, Modeling Projectile Motion, Arc length, Unit Tangent Vector, Curvature, Unit Normal Vector, Torsion, Unit Binormal vector.

Unit II (12 Hours)

Integration of Vector functions: Line Integrals, Vector fields, Gradient fields, Work, Circulation, Flux, Path independence, Potential Functions, Conservative fields, Exact Differential Forms, Green’s Theorem, Surface Area, Surface Integrals, Parameterized surfaces, Stokes’ Theorem, The Divergence Theorem.

References

[1] Maurice D. Weir, George B. Thomas, Jr., Joel Hass, Frank R. Giordano, *Thomas’ Calculus*, 11th Ed., Pearson, 2008.

[2] Shanthi Narayan and P. K. Mittal, *A Text book of Vector Calculus*, S Chand & Company PVT. Ltd., 2014.

[3] Paul C. Matthews, *Vector Calculus*, 1st ed., Springer-Verlag Publishers, 1998.

[4] Murray R Spigel and Seymour Lipschutz, *Vector Analysis*, 2nd Ed., Schaum’s Outline, McGrew Hill Publishers, 2009.

BSCMTCE233	Core Elective - C : Skill Development Techniques in Algebra and Calculus	1 Credit (24 Hours, 2 hours/week)
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Unit I (12 Hours)

Real number system, properties, order, Inequalities, Relations, binary operations, axioms of binary operations, Group definition Examples, Short answer problems.

Unit II (12 Hours)

Derivatives, Applications of derivatives, increasing and decreasing functions, critical number, maxima, minima, Curvature and poles, short answer problems.

References

[1] Rashmi Gupta and Suraj Ssingh, *A Complete Resource Mannual - Mathematics - M.Sc. Entrance Examination*, Unique Publishers, 2017.

[2] Amit Rastogi and Vicky Sain, *Post graduate Entrance Exam Mathematics*, Arihant Publications, 2016.

[3] R. Gupta, *Mathematics for Higer Level Competitive Examinations*, Ramesh Publications, 2016.

[4] Lloyd. R. Jaisingh and Frank Ayres, *Abstract Algebra*, 2nd Ed., Schaum outlines, Macgraw Hill Publications, 2003.

BSCMTOE283	Open Elective - D : Applications of Basic Arithmetics	1 Credit (24 Hours, 2 hours/week)
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(For other Streams)

Unit I (12 Hours)

Number System, Decimal Fractions, Simplifications, Average, Problems on numbers, Problems on ages.

Unit II (12 Hours)

Concepts of Time and distance, Related problems, technique for problems related to Time and Work, Situations in Boats and Streams, velocity related problems, Simple problems on trains and other moving objects, different types of problems in Calendar, number of days, dates etc., Positions of hour hand and minute hand in Clocks, related problems.

References

[1] R. S. Agarwal, *Quantitative Aptitude*, S. Chand & company Pvt. Ltd., 2014.

[2] A. Balaraju, *Mental ability*, S M V Publishers, Kolar, 2015.

[3] B. S. Sijwalii and Indu Sijwali, *Verbal and Analytical Reasoning*, Arihant Publishers, 2014.

[4] H. S. Hall and F. H. Stevens, *An Elementary Course of Mathematics*, Macmillan and Co. Ltd., 1899.

Question Paper Patterns

Group I - Optional: For B.Sc. Mathematics

Theory

For I /II / III/ IV Semesters

End Semester Exam 80 marks + Internal Assessment 20 marks = 100 Total marks

End Semester Exam

Duration: 3 hours

Max. Marks: 80

PART -A	
I. Answer any 10 questions ($10 \times 2 = 20$)	
Question Number	Unit Number
1 to 7	Unit - 1, 2
8 to 14	Unit - 3, 4
PART -B	
II. Answer any 6 questions ($6 \times 5 = 30$)	
Question Number	Unit Number
1 to 9	Unit - 1, 2
PART -C	
III. Answer any 6 questions ($6 \times 5 = 30$)	
Question Number	Unit Number
10 to 18	Unit - 3, 4

For V/VI Semesters

Duration: 3 hours

Max. Marks: 80

PART -A	
I. Answer any 10 questions ($10 \times 2 = 20$)	
Question Number	Unit Number
1 to 14	Unit - 1, 2, 3
PART -B	
II. Answer any 12 questions ($12 \times 5 = 60$)	
Question Number	Unit Number
1 to 18	Unit - 1, 2, 3

Internal assessment: Internal assessment marks should be based on two tests of 90 minutes duration each.

Practicals

For I /II / III/ IV Semesters

End Semester Practical Exam 40 marks + Lab Internal Assessment 10 marks = 50 Total marks

End Semester Practical Exam: Question paper for each Lab exam of 2 hour duration shall contain TWO questions on lab programmes which are to be executed.

Lab Internal assessment: Lab internal assessment marks should be based on two lab tests of 90 minutes duration each.

For V/VI Semesters

End Semester Practical Exam 80 marks +Lab Internal Assessment 20 marks =100 Total marks

End Semester Practical Exam: Question paper for each Lab exam of 3 hour duration shall contain THREE questions on lab programmes which are to be executed.

Lab Internal assessment: Lab internal assessment marks should be based on two lab tests of 2 hours duration each.

Group II - General Electives
For Core/Open Electives A, B, C, D

End Semester Exam 40 marks + Internal Assessment 10 marks = 50 Total marks

Duration: 2 hours

Max. Marks: 40

PART -A	
I. Answer any 5 questions ($5 \times 2 = 10$)	
Question Number	Unit Number
1 to 4	Unit -1
5 to 8	Unit -2
PART -B	
II. Answer any 3 questions ($3 \times 5 = 15$)	
Question Number	Unit Number
1 to 5	Unit -1
III. Answer any 3 questions ($3 \times 5 = 15$)	
6 to 10	Unit -2

Internal assessment: Internal assessment marks should be based on two tests of 60 minutes duration each.

MANGALORE UNIVERSITY
Dept. of Studies and Research in Commerce
CHOICE BASED CREDIT SYSTEM
(Revised Syllabus for the academic year 2019-20)
M.Com Course Structure
Minimum Credits Required for M.Com Degree

I to IV Semester	Hard Core Course (HC)		Soft Core Course (SC)		Open Elective Course (OE)		Total	
	No. of Papers	Credits	No. of Papers	Credits	No. of Papers	Credits	No. of Papers	Credits
	11	44	09	36	02	06	22	86

Minimum credits to be registered by a student in a normal phase to successfully complete M.Com Degree in four semesters

Semesters	Hard Core Course		Soft Core Course		Open Elective Course		Total	
	No. of Papers	Credits	No. of Papers	Credits	No. of Papers	Credits	No. of Papers	Credits
I	03	12	02	08	-	-	05	20
II	03	12	02	08	01	03	06	23
III	03	12	02	08	01	03	06	23
IV	02	08	03	12	-	-	05	20
Total	11	44	09	36	02	06	22	86

1st SEMESTER M.COM*

Subject Code	Title of the Course	HC/ SC/ OE	Number of Credits				Prescribed Marks			Duration of the semester end Exam
			L	T	P	Total	IA	End Semester Marks	Total Marks	In Hours
CMS401	Management Theory and Practice	SC	3	2	-	4	30	70	100	3
CMS402	Business Economics	SC	3	2	-	4	30	70	100	3
CMS403	Innovation in Business	SC	3	2	-	4	30	70	100	3
CMH404	Business Statistics	HC	3	2	-	4	30	70	100	3
CMH405	Management Science	HC	3	2	-	4	30	70	100	3
CMH406	Advanced Financial Accounting	HC	3	2	-	4	30	70	100	3

***NOTE: Any two soft core courses or soft core papers shall be selected by the students out of three soft core courses available, at the time of commencement of Ist semester. The department council and affiliated college will announce at the time of beginning of the Ist semester which two soft core papers shall be offered during first semester depending upon the availability of faculty and the demand for the soft core courses. The minimum number of students opting for soft core course should be ten and affiliated college should get prior permission from the department council before offering the soft core courses.**

2nd SEMESTER M.COM**

Subject Code	Title of the Course	HC/ SC/ OE	Number of Credits				Prescribed Marks			Duration of the semester end Exam
			L	T	P	Total	IA	End Semester Marks	Total Marks	In Hours
CME451	Personality Development	OE	2	2	-	3	30	70	100	3
CMS452	Entrepreneurship Development	SC	3	2	-	4	30	70	100	3
CMS453	Strategic Marketing Management	SC	3	2	-	4	30	70	100	3
CMS454	Business, Industry and Commerce	SC	3	2		4	30	70	100	3
CMH455	Business Research Methods	HC	3	2	-	4	30	70	100	3
CMH456	International Business	HC	3	2	-	4	30	70	100	3
CMH457	Advanced Cost Accounting	HC	3	2	-	4	30	70	100	3

***NOTE: Any two soft core courses or soft core papers shall be selected by the students out of three soft core courses offered, at the time of commencement of IInd semester. The department council and affiliated college will announce at the time of beginning of the IInd semester, which the two soft core papers shall be offered during second semester depending upon the availability of faculty and the demand for soft core courses. The minimum number of students opting for soft core course should be ten and affiliated college should get prior permission from the department council before offering the soft core courses.**

3rd SEMESTER M.COM

Subject Code	Title of the Course	HC/ SC/ OE	Number of Credits				Prescribed Marks			Duration of the semester end Exam
			L	T	P	Total	IA	End Semester Marks	Total Marks	In Hours
CME501	Personal Savings and Investment Management	OE	2	2	-	3	30	70	100	3
CMH502	Artificial and Business Intelligence	HC	3	2	-	4	30	70	100	3
CMH503	Business Ethics and CSR	HC	3	2	-	4	30	70	100	3
CMH504	E-Commerce	HC	3	2	-	4	30	70	100	3
Optional Stream -1: Financial Management and Investment Science (FMAIS)										
CMS 505:	Optional (FMAIS): Advanced IFRS and Practice	SC	3	2	-	4	30	70	100	3
CMS506	Optional (FMAIS): Capital Market Operations	SC	3	2	-	4	30	70	100	3
Optional Stream -2: Human Resource Development and Management (HRDAM)										
CMS507	Optional (HRDAM): Human Resource Development	SC	3	2	-	4	30	70	100	3

CMS508	Optional (HRDAM): Strategic Human Resource Management	SC	3	2	-	4	30	70	100	3
Optional Stream -3: Banking and Insurance Management (BAIM)										
CMS509	Optional (BAIM): Trends in Indian Banking	SC	3	2	-	4	30	70	100	3
CMS510	Optional (BAIM): Management of Life Insurance	SC	3	2	-	4	30	70	100	3
Optional Stream -4: Taxation (TXN)										
CMS511	Optional (TAX): Direct Taxes	SC	3	2	-	4	30	70	100	3
CMS512	Optional (TAX): GST and Custom Duty	SC	3	2	-	4	30	70	100	3

4th SEMESTER M.COM

Subject Code	Title of the Course	HC/ SC/ OE	Number of Credits				Prescribed Marks			Duration of the semester end Exam
			L	T	P	Total	IA	End Semester Marks	Total Marks	In Hours
CMS551	Retail Management	SC	3	2	-	4	30	70	100	3
CMS552	Dissertation	SC	-	4	6	4	-	-	100	-
CMH553	Risk and Insurance Management	HC	3	2	-	4	30	70	100	3
CMH554	International Financial Management	HC	3	2	-	4	30	70	100	3
Optional Stream -1: Financial Management and Investment Science (FMAIS)										
CMS555	Optional (FMAIS): Financial Derivative Markets	SC	3	2	-	4	30	70	100	3
CMS556	Optional (FMAIS): Portfolio Management	SC	3	2	-	4	30	70	100	3
Optional Stream -2: Human Resource Development and Management (HRDAM)										
CMS557	Optional (HRDAM): Organisational Behaviour	SC	3	2	-	4	30	70	100	3
CMS558	Optional (HRDAM): Labour Legislation	SC	3	2	-	4	30	70	100	3
Optional Stream -3: Banking and Insurance Management (BAIM)										
CMS559	Optional (BAIM): Financial Services and Institutions	SC	3	2	-	4	30	70	100	3
CMS560	Optional (BAIM): Actuarial Management	SC	3	2	-	4	30	70	100	3
Optional Stream -4: Taxation (TXN)										
CMS561	Optional (TAX): Corporate Tax Planning	SC	3	2	-	4	30	70	100	3
CMS562	Optional (TAX): GST Business Models	SC	3	2	-	4	30	70	100	3

- Note:** 1) L = Lecture, T = Tutorial, P = Practical
- 2) Two hours Tutorial is equal to One hour Lecture
- 3) Three hours Practical is equal to One hour Lecture, Practical consists of: group discussion, interaction, game play, case analysis, dialogue, debate and one-to-one interaction with the students and so on.
- 4) Internal Assessment marks should be given on continuous comprehensive assessment basis consisting of tests, seminars, assignments and class performance of the students. At least one test shall be conducted

before end of the respective semesters on the basis of multiple choice objective type questions, covering all the units of the particular papers.

5) The Minimum marks for multiple choice objective type questions shall be ten marks.

**** OPTIONAL STREAMS:**

Any one optional stream out of four streams available shall be selected by the student at the time of commencement of Third Semester. Once an optional stream has been selected in the third semester, there is no change in the optional stream in the Fourth Semester. The students must take the same optional stream in the Fourth Semester as well. These papers are specialized streams. The department/affiliated colleges will announce at the end of the Second Semester. Soft core optional streams which shall be offered during the Third and the Fourth Semesters, depending upon the availability of faculty members, infrastructure and the demand for soft core streams. The minimum number of students opting for optional streams should be fifteen.

***DISSERTATION:**

A student in the Second Semester (at the end of the Second Semester) shall register for dissertation which carries four credits in the Fourth Semester. The workload for dissertation is four hours tutorial per week and six hours practical per week. Practical consists of identification of the topic, field work, collecting secondary data, review of literature, questionnaire and collecting the primary data. A student in the Third Semester shall work the dissertation and in lieu of the Retail Management paper code CMS551 in the fourth semester.

Note: A student can opt for dissertation in lieu of the Retail Management paper code CMS551 in the 4th Semester.

M.Com
I Semester
CMS401: MANAGEMENT THEORY AND PRACTICE

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To help students understand the conceptual & strategic Framework of Management.

Unit -1:Development of Modern Management Thought and Patterns of Management Analysis:

F.W. Taylor and Scientific Management – Henri Fayol and Principles of Management – Elton Mayo and Hawthorne Experiment – Patterns of Management Analysis – Definitions and Functions of Management – Recent Trends.

Unit -2: Planning & Organizing: Types of Plans, Steps in Planning, Decision Making-Process of Decision Making – Types of Decisions, Decision Making under Certainty, Uncertainty and Risk – Modern Approaches to Decision Making.

Organizing - Organization Structure - Mechanistic and Organic – Project and Matrix – Formal and Informal – Chain of Command, Span of Management, Authority, Functional Authority, Power- Line and Staff – Decentralization and Delegation – Recent Trends.

Unit -3: Human Resource Planning and Development: Human Resource Planning, External and Internal Sources – Recruitment, Selection, Placement, Training and Development – Performance Appraisal – Internal Mobility in the organization- Recent Trends.

Leadership, Motivation and Communication: Leadership – Concepts- Behaviour and Styles, Situational Approach; Dynamics of Motivation: Theories of Motivation, The Need Hierarchy - Hygiene Approach – The Expectancy - Theory, The Vroom's Theory, The Porter and Lawler Theory, McClelland's Needs Theory – Motivation and Job Enrichment– Motivation and Morale-Organisational Communication: Communication System – Barriers to Communication – Effective Communication – Recent Trends.

Unit -4: Control: Control Process – Critical Control Points and Standards –Requirements of Effective Control – Information System and Control - T.Q.M- Bench Marking and ISO 9000 Series – Kaizen, Just in time, Quality Circles, six-sigma- Recent Trends.

Unit -5: Strategy: Levels of Strategy formulation – Approaches to strategic decision making, goals, Mission, purpose and objectives – Strategic Business Unit (SBU), Functional level strategies- Environmental Analysis and Strategy formulation-Components of Environment– Types – Environment Scanning and appraisal, strategic advantage, Analysis and Diagnosis, SWOT Analysis, Strategic Planning process, Types of Strategies: Modernization, diversification, integration, merger, take over and joint strategies; turnaround, divestment and liquidation strategies-process of strategic choice. Industry competitor and SWOT analysis – Factors affecting Strategic Choice, Generic competitive strategy, Tools for strategy formulation – Recent Trends.

References:

1. Allen L.A., Management and Organisation-Tata McGraw Hill
2. Appleby Robert C, Modern Business Administration, Macmillan Harvard Business Review
3. Banerjee Shyamal, Principles and Practice of Management, Oxford and IBH Publishing Pvt. Co. Ltd.
4. Boone and Kurtz, Management; McGraw Hill
5. Burton Gene and Thakur Manab: Management Today, Principles and Practice(Tata McGraw Hill)
6. Dale Earnest, Management Theory and Practice, Tata McGraw Hill.
7. Drucker Peter F, Management; Tasks, Responsibilities, Practices, Allied Publishers
8. Drucker Peter F, The Practice of Management, Allied Publishers
9. George Claude S.(Jr), Management in Industry, (Prentice Hall)
10. Glueck W. F, Management: The Dydon Press
11. Haynes and Massie, Management: Analysis, Concept and Cases
12. Ivanovich; John and Michuol T Matheson: Organisational Behaviour and Management, Business Publications Inc, Texas
13. James A.F. Stoner, Management – Prentice Hall of India, New Delhi.

14. Koontz Harold and Weihrich Heinz, Management, (Tata McGraw Hill)
15. Koontz Harold, Cyril O Donnell, and Heinz Weihrich, Essentials of Management, Tata McGraw Hill, New Delhi.
16. Koontz Harold and O Donnell Cyril, Management; A Systems and Contingency Analysis of Managerial Functions-McGraw Hill
17. Luthans Fred ; Organisational Behaviour , McGraw Hill, New York.
18. Massie J.L . Essentials of Management, Prentice Hall
19. Mc Farland Dalton E; Management, Collier Macmillan
20. New Men Summer and Warren, Process of Management(Prentice Hall)
21. Newstrom, John W and Keith Davis: Organisational Behaviour; Human Behaviour at work, Tata McGraw Hill, New Delhi.
22. Niles Mary Crushing: The Essence of Management, Orient Longman
23. Prasad Lallan and Gulshan S.S.: Management Principles and Practice, S. Chand
24. Putti, Management: A Functional Approach (SI), McGraw Hill.
25. Robbins ,Stephen P and Mary Coulter; Management , Prentice Hall, New Delhi.
26. Terry George R., Principles of Management: Richard Irwin

**M.Com
I Semester**

CMS402: BUSINESS ECONOMICS

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective:

- 1) To provide students an insight to advanced concepts of business economics.**
- 2) To help students understand various business economics tools for solving business problems in the changing business environment.**
- 3) To enable students to integrate micro and macro economic analysis into business decision/ or decision making power.**
- 4) Business economics is the application of economic principles and methods to business decision making.**
- 5) Business economists play an important role in the firms.**

Unit -1: Business Economics and Decision Making: Nature Significance and Scope of Business Economics, Positive and Normative Economics, Role of Business Economists and Responsibilities, Decision Making under Risk and Uncertainty Situations, Risk and Return Analysis, Business Adventures and Business Behaviour, GDP, Core Economic Concepts– Incremental Principle, Opportunity Cost Principle, Discounting Principles Time Value of Money, Equi-marginal Principle and Strategic Business Planning.

Unit -2: Demand Theory Analysis: Individual and Market Demand Functions: Law of Demand, Determinants of Demand –Shift in Demand and Elasticity of Demand, Meaning and Importance, Price Elasticity, Income Elasticity and Cross Elasticity, Change in Demand, Application of Elasticity in Managerial Decisions, Cost Benefit Analysis, Market Failures.

Unit -3: Production Theory Analysis:- Production Function with one, two and multi variable Inputs; Stages of Production; Economics of Scale, Estimation of Production Function, Production Possibility Curve, Cost Theory and Estimation; Economic Value Analysis; Short and Long Run Cost Functions – Nature, Shape and Inter Relationship , Law of variable Proportions, Law of Return to Scale.

Unit -4: Price Theory Analysis: Price Determination under Different Market Conditions and Pricing Practices, Pricing Power, Characteristics of Different Market Structures – Price Determination and Firm's Equilibrium in Short run and Long run under perfect Competition, Monopolistic Competition, Oligopoly and Monopoly Pricing Practices – Methods of Price Determination, Price Discrimination, International Price Discrimination, Dumping, Transfer Pricing and Profit Management.

Unit -5: Business Cycles Analysis: Business Cycles Nature and Phases of a Business Cycle, Game Theory, Information Super Highways, Small-world Model, Theories of Business Cycle – Psychological, Profit, Monetary, Innovation, Cobweb, Samuelson and Hicks Theories.

References:

1. Adhikary M. Business Economics, Excel Books, New Delhi.
2. Baumol, William J: Economic Theory and Operations Analysis, Prentice Hall, London.
3. Baya, Micheal R: Managerial Economics and Business Strategy, McGraw Hill Inc. New York.
4. Chopra, O.P: Managerial Economics, Prentice Tata Mc Graw Hill, Delhi
5. Craig Peterson, H and Cris Lewis, W: Managerial Economics: Person Education
6. Dean, Joel: Managerial Economics, Prentice Hall, Delhi.
7. Dholokia, R.H. and A.L.Oza: Macro Economics for Management Students, Oxford University Press, New Delhi.
8. Dominick Salvatore and Rewikesh Srivartava; Managerial Economics, eight edition, 2010, Oxford Press.
9. Dwivedi DN: Managerial Economics, Vikas Publishing House, New Delhi.
10. Eaton, B. Curtis and Diane Faton: Micro Economics, Prentice Hall, New Jersey.
11. Gough, J. and S. Hills: Fundamentals of Managerial Economics, MacMillan London.
12. Haynes, W.W., V.L.Mote and S.Paul: Managerial Economic Analysis and Cases, Prentice Hall India, Delhi.
13. Mithani D.M., Macro –Economics: Himalaya Publishing House.
14. Paul G. Keat and Philip K.Y. Young: Managerial Economics: Economics Tools for Today's Decision Makers: Pearson Education.
15. Peterson, H. Craig and W. Cris Lewis: Managerial Economics, Prentice Hall, Delhi.
16. Salvatore, Dominick: Managerial Economics in a Global Economy, McGraw Hill, New York.
17. Samuelson and William D. Nordhaus: Economics: McGraw Hills.
18. Varian, H.R: International Microeconomics: A Modern Approach, East West Press, New Delhi.
19. Varshney RL and Maheshwari KL: Managerial Economics; Sultan Chand and Sons, New Delhi.

M.Com

I Semester

CMS403: INNOVATION IN BUSINESS

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective:

- 1) **To appraise on value of innovation.**
- 2) **To impart skills of innovation.**
- 3) **To enable students think and act on innovation.**

Unit -1: Introduction: Concept of innovation, historic retrospective, typology of innovations, innovation process, Macroeconomic view of innovation approaches to innovations, Assumptions and barriers to innovations, innovation sources, i.e. science and R & D, technology transfer, push and pull approaches. Processes used to explore innovations along the technology, market and strategy dimensions as the innovation moves from idea to market.

Unit -2: Evaluation of Innovation: Effectiveness, evaluation, integration of risks, factors influencing economic effectiveness, Post implementation analysis of innovation projects, intellectual property of innovations, legal aspects of innovations.

Unit -3: Innovation Application in Business: Organizational aspects of innovation, Soft methods and techniques of innovation management, Creative approaches, Systemic and analytical methods and techniques of innovation management, Economic aspects of innovations encompassing sources of innovation financing.

Unit -4: Innovation in Product Design and Marketing: Strategic considerations on innovations, innovation platforms that incorporate new product development, process innovations, service innovation, service design innovation, multiple product options, portfolios and standards.

Unit -5: Innovation and Idea: Mindset, lateral thinking, out of box approach, creativity, imagination and idea and their scope, innovation for problem solving and real time resolution.

References:

1. Fraser, Healthier, Design Works; Toronto: University of Toronto Press, 2012.

- Govindarajan, Vijay & Trimble, Chris, 10 Rules for Strategic Innovators; Boston: Harvard Business School Press, 2005.
- Govindarajan, Vijay & Trimble, Chris, Reverse Innovation; Boston: Harvard Business School Press, 2012.
- Hamel, Gary, The Future of Management; Boston: Harvard Business School Press, 2007
- Mass, Harvard Business Scholl Press, 2006.
- Mauborgne, Rene, Blue Ocean Strategy, Boston, Harvard Business School Press, 2005.
- Snyder, Duarte, Unleashing Innovation, how Whirlpool Transformed an Industry, Jossey- Bass, 2008.

M.Com
I Semester
CMH404: BUSINESS STATISTICS

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To enable the students to acquire knowledge on quantitative analysis and to use statistical techniques for analysis of business data.

Unit -1: Indices, Surds and Binomial Theorem: Laws of Indices and Surds, Operation with Power Functions, Operation on Surd, Rationalising Factor, Root of a Mixed Surd, Binomial Theorem, Position of Terms, Binomial Coefficients.

Unit -2: Arithmetic and Geometric Progressions: Arithmetic Progression (AP), Sum of a Series in AP, Representation of Terms in AP, Geometric Progression (GP), Sum of a Series in GP, Representation of Terms in GP.

Unit -3: Time Series Analysis: Meaning, Components, Measurement of Trend, Measurement of Seasonal Variations, De-Seasonalisation of Data, Measurement of Cyclical Variations.

Unit -4: Probability, Random Variables and Theoretical Distributions: Terminology, Schools of Thought on (Approaches to) the Concept of Probability, Permutation and Combination, Theorems of Probability Conditional Probability, Bayes's Theorem, Calculation of Probability, Meaning of Random Variable, The mean of a Random Variable/ The expected Value of a Random Variable, Binomial Distribution and Fitting a Binomial Distribution, Poisson Distribution and Fitting a Poisson Distribution, Normal Distribution and Fitting a Normal Curve.

Unit -5: Statistical Quality Control (SQC): Meaning, Causes of Variation in Quality, The Purpose, Advantage, Theory and Technique of SQC, Process Control: Mean (X-bar) Chart; Range (R) Chart; Fraction (P) Defective Chart; Number Defective (np) Chart; and Number Defective Per Unit (C) Chart.

References:

- Ajay Goel, Alka Goel: Mathematics and Statistics (New Delhi: Taxmann)
- Asthana B.N: Elements of Statistics (New Delhi: S. Chand)
- Elhance D.N: Fundamentals of Statistics (Allahabad: Kitab Mahal)
- Gupta S.C: Fundamentals of Statistics (Mumbai: Himalaya Publishing House)
- Gupta S.P: Statistical Methods (New Delhi: Sultan Chand & Sons)
- Kothari C.R: Quantitative Techniques (New Delhi: Vikas)
- Levin RI and Rubin DS: Statistics for Management (New Delhi: Prentice Hall of India)
- Render B and Stair, RM Jr.: Quantitative Analysis for Management (Boston: Allyn & Bacon, Inc.)
- Sancheti DC and Kapoor VK: Business Mathematics (New Delhi: Sultan Chand & Sons)
- Thukral J.K: Mathematics (New Delhi: Taxmann)

M.Com
I Semester
CMH405: MANAGEMENT SCIENCE

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To provide an understanding of Management Science techniques used for managerial decision making.

Unit -1: Introduction: History, Nature, Management Science and Systems Approach, Quantitative Analysis: Model Development; Data Preparation; Model Solution; Report Generation, Phases, Management Science Techniques, Significance of Management Science in Business and Industry, Management Science and Functional Areas of Management, Limitations.

Unit -2: Linear Programming Problem (LPP): Basic Concepts, Model Formulation, Assumptions underlying Linear Programming, Examples on the Applications of LPP, Graphical Method for Solution of LPP, Canonical and Standard Forms of LPP, Simplex Algorithm for Solution of Maximisation and Minimisation LPP : Big-M Method and Two-Phase Method, A Few Special Issues in Linear Programming: Infeasibility; Unboundedness; Redundancy; Alternate Optimal Solutions; Degeneracy, Duality in Linear Programming: Construction of a Dual Problem; Shadow Price; The Importance of the Duality Concept; Important Results in Duality.

Unit -3: Transportation Problem: Basic Concepts, Mathematical Model, Relationship to Linear Programming, The Transportation Method, Finding an Initial Feasible Solution: North-West Corner Rule; Least Cost Method, and Vogel's Approximation Method (VAM), Test for Optimality: Stepping Stone Method and the Modified Distribution (MODI) Method, Degeneracy in Transportation Problem, Unbalanced Transportation Problem, Maximisation Case in Transportation Problem.

Unit -4: Assignment Problem: Meaning, Comparison with Transportation Problem, Mathematical Representation of Assignment Model, Formulation of Assignment Model, Hungarian Method for Solution of Assignment Model, Special Cases in Assignment Problems: Maximisation Case; Multiple Optimal Solution; Unbalanced Problem; Constrained Assignment Problem.

Unit -5: Network Based Project Scheduling Techniques: Terminologies, Common Errors, Rules for Drawing Network Diagrams, Numbering of Events by Fulkerson's Rule, Critical Path Method (CPM): Characteristics of Critical Path; Finding Critical Path in Large Network Using Forward Pass Computation and Backward Pass Computation; Significance of Critical Path; Slack Time and Critical Path; Activity Float Analysis, Programme Evaluation and Review Technique (PERT): PERT Procedure; Computation of the Variance and Standard Deviation of Activity Times for PERT; Probability Aspects of Project Completion Time, Cost Considerations in PERT/ CPM: Project Cost; Cost Slope; Time-Cost Trade-off; Crashing of Project Time.

References:

1. Aekoff Russell L. and Sasieni Maurice W: Fundamentals of Operations Research (New York: John Wiley & Sons)
2. Anderson, Sweeney and Williams: An Introduction to Management Science: Quantitative Approaches to Decision Making (Australia: Thomson South Western)
3. Dannenbring, David G and Starr, Martin K: Management Science: An Introduction (New Delhi: McGraw hill Education)
4. Gupta P.K and Hira P.S: Operations Research (New Delhi: S. Chand & Co. Ltd)
5. Kalavathy S: Operations Research (New Delhi: Vikas Publishing House)
6. Kapoor V.K: Operations Research: Problems and Solutions (New Delhi: Sultan Chand & Sons)
7. Kothari C R: Introduction to Operational Research (New Delhi: Vikas)
8. Nagarajan K: Project Management (New Delhi: New Age International)
9. Render, B and Stair, RM Jr: Quantitative Analysis for Management (Boston: Allyn & Bacon, Inc.)
10. Sharma J.K: Operations Research (Bangalore: Macmillan India Ltd.)
11. Sharma S.D: Operations Research (Meerut: Kedarnath Ramnath)
12. Taha, Hamdy A: Operations Research An Introduction (New Delhi: Prentice Hall of India Ltd.)
13. Vohra N D: Quantitative Techniques in Management (New Delhi: Tara McGraw-Hill)

M.Com
I Semester
CMH406: ADVANCED FINANCIAL ACCOUNTING

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective:

- To understand and apply financial accounting tools and techniques for managerial decision making.
- To provide students with the knowledge about contemporary issues in accounting
- To enable students to develop insights into financial analysis of business organizations.

Unit -1: Valuation of Goodwill and shares: Factors – Precautions – Need – Methods of Valuation of Shares and Goodwill

Unit-2: Amalgamation, Absorption and External Reconstruction: Purchase Consideration – Methods of Calculation – Liquidation Expenses – Accounting Treatment.

Unit -3: Accounts of Holding companies: – Requirements – Principles of Consolidation – Consolidated Balance Sheet – Consideration- Estimation – Treatment

Unit -4: Inflation accounting: - Need - Objectives - Adjustments for General Price Level Changes - Current Purchasing Power Accounting and Current Cost Accounting (CPP and CCA) – Preparation of Financial Statements.

Unit -5: Recent Developments In Accounting & Accounting Standards -International Financial Reporting Standards – Indian Accounting Standards – Human Resource Accounting -Social Responsibility Accounting – Environmental Accounting

References:

1. Advanced Accounting by the institute of Chartered accountants of India
2. Anitong Hawkins and Merchant : Accounting – Text and cases, Tata McGraw Hill, New Delhi 2009
3. B.K. Banerjee: Financial Accounting, PMI Learning (P) Ltd., New Delhi 2010.
4. M.C. Shukla: Advanced Accounts S. Chand and Co., New Delhi 2009.
5. Mukherjee and M. Hanif: Modern Accountancy, Tata McGraw Hill, New Delhi 2008
6. R.L. Gupta: Advanced Accountancy, Sultan Chand Sons, New Delhi 2008.
7. R.L.Gupta & M.Radhaswamy: Advanced Accountancy, Sultan Chand and Sons, New Delhi.
8. RSW Pillai, Bagavathi S. Uma: Advanced Accounting, S. Chand & Co., New Delhi. 2008
9. S.P. Jain and K.L. Narang: Advanced Accounting, Kalyani Publishers, New Delhi 2009.
10. S.P. Jain and K.L.Narang : Advanced Accountancy, Kalyani Publishers, Ludhiana.
11. S.P.Iyengar: Advanced Accounting, Sultan Chand and Sons, New Delhi.
12. Shukla and Grewal : Advanced Accounts, S.Chand and Company Ltd., New Delhi.

M.Com
II Semester
CME451: PERSONALITY DEVELOPMENT

Work load: 2 hours lecture and 2 hours tutorial per week: total 3 credits

Objective: To enhance the personal and professional effectiveness of the students by exposing them to the art and science of self-awareness and development.

Unit -1: Self-awareness and development – self-disclosure, self-discovery, self-awareness, self-analysis, self-knowledge and self-development-Johari Window-Blind self, hidden self, undiscovered self, open self - over-confidence, arrogance, ego, superiority and inferiority complex, introvert Vs extrovert, type-A&B personality, assertiveness Vs submissive behaviour – personal ethics and conscientiousness – observation and persuasive skills – Art of convincing – Handling criticisms and toxic behaviours of others – Adaptability and agility – Self-respect and self-esteem – personal SWOT Analysis. Fear & Phobia – Basic Types: Fear of Poverty, Criticism, failure, ill-health (Hypochondria), loss of love of someone, old age, loss of freedom, death - susceptibility to negative influences (the devil's workshop) - symptoms and cures. Perception – Eye of the beholder – Wrong perceptions and incorrect impressions – perceptual process – selective perception – selective distortion – selective retention – characteristics of the perceiver – perceiving object – situational influences – perception Vs reality – telepathy and sixth sense – Nurturing dreams & hopes – Autosuggestions – Powerful ideas.

Unit -2: Beliefs, values and opinions – Beliefs Vs Faith – Value system – upbringing status and cultural profile – opinion seekers and opinion leaders – Needs, wants, preferences, demands and expectations – comparative satisfaction Vs comparative dissatisfaction – Disappointment and Frustration – Management of frustration, cynicism, skepticism, monotony, fatigue and boredom – Failure – causes and management of failure – failure mode analysis – winners Vs Achievers – management of success – self discipline – 7 habits of highly effective people – Good human being Vs Great human being – process happiness and destination happiness – negative thinking, negative emotions and release of negative energy – Positive psychological strokes – Transaction Analysis – Brain: Left Vs. Right hemispheres of the brain- Master mind – Balanced mind – Brain-stilling and concentration - Role of subconscious mind – Tranquility – Thinking and thought process – Feelings/ emotions – behavioural intentions – Behavioural patterns – Attitude Vs Behaviour -Consistency Vs Discrepancy hypothesis – Enthusiastic, indifferent, positive, negative and hostile attitudes – Attitudinal restructuring – behavioural modification – Personal experiences and observations.

Unit -3: Dreams and hopes – Destiny, Fate and luck – coaching, mentoring and counseling – Ladder of inference – Mutual trust, confidence and goodwill – shared vision and determination to excel – perfection Vs Excellence – Execution excellence – Management by alibis – continuous learning and development – Lifelong learning – learning to change, change to learn and learn to learn – Unlearning, relearning, commitment to learning – Slow Vs Advanced Learners – Learning disability and learning disadvantaged people – Kolb's learning cycle and experiential learning – learning by committing mistakes.

Unit -4: Qualification Vs Competency – ability, capacity, capability – knowledge, attitude, skills, habits & values (KASH-V) – Home, school and social environment – opportunity management – Destination, dedication, direction and devotion – shelf-life of competency – competency profiling, development and matching – Employment Vs. Employability – Aptitude, Aspiration, inspiration and perseverance – patience and persistence – Performance quotient – Intelligence quotient (IQ), emotional intelligence quotient (EQ), spiritual quotient (SQ) – Individual, interpersonal, family, community, social and national harmony – Life satisfaction – Scientific temperament and reasoning ability.

Unit -5: Effective communication skills – oral, written and non-verbal (body language/ kinesics) communication - language skills (vocabulary, grammar, usage) – Art of Listening – barriers to listening – overcoming the barriers to listening – presentation and public speaking skills –

conducting meetings and recording the proceedings – Public relations skills – handling media – Impression management and diplomacy – communication breakdown. Human relations skills – intimacy and rapport – Relationship management – Differences of opinion and strained relations – conflict resolution techniques – win-win, win-lose, lose-lose dyadic interpersonal interactions – negotiating skills – Leadership, trust and teambuilding skills. Decision-making and problem-solving skills-creativity and ‘out of box’ thinking – ‘decisions-actions-consequences’ sequential analysis – time management and stress management – work-life balance – yoga and meditation. Self-employment Vs working for others – preparation of resume, curriculum vitae, Biodata - Group discussion skills – Role play – case analysis – In-basket exercise – competing within – art of facing an employment interview – current awareness and updating skills – pen practice – Reading habits – questioning skills – synthesizing ability – Reflective observation and thinking – self-criticism and laughing at oneself.

References:

1. Bhatia Hansraj, 1970: *Elements of Social Psychology*, Bombay: Somaiya Publications (P) Ltd.
2. Brown, D & Srebalu, D.J.1988: *Introduction to Counselling Profession*, Englewood Cliffs: Prentice Hall.
3. Carkuff, R.R, Pierce R, 1978: *The Art of Helping*; Mumbai: Carkuff Institute of Human Technology; Better yourself Books
4. Currie, Fe., 1976: *Barefoot Counsellor – A Premier in Building Relationships*, Bangalore: Asian Trading Corporaion.
5. Daniel Goleman: *Emotional Intelligence*: New York: BantamBooks.
6. Denis Waitly: *Empires of the Mind*, London: Nicholas Brealey Publishing.
7. Edgar Thorpe & Showick Thope (2004), *Winning at Interviews*, New Delhi: Pearson Education.
8. James C.Collins and Jerry I Porras: *Built to last*, New York: Harper Collins.
9. Napoleon Hill: *The Law of Success*, Bangalore: Master Mind Books
10. Napoleon Hill: *Think and Grow Rich*: New York: Ballantine Books
11. Stephen R.Covery: *The 7 Habits of Highly Effective People*, London: Simon & Schuster Ltd.

M.Com
II Semester
CMS452: ENTREPRENEURSHIP DEVELOPMENT

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To provide an introduction to entrepreneurship and its development process, environment and current scenario in India. To make the students aware of the importance of entrepreneurship opportunities available and challenges faced in the society.

Unit -1: Introduction: Meaning, Definition and concept of Enterprise, Entrepreneurship and Entrepreneurship Development, Evolution of Entrepreneurship, Theories of Entrepreneurship. Characteristics and Skills of Entrepreneurship, Concepts of Intrapreneurship, Entrepreneur v/s Intrapreneur, Entrepreneur Vs. Entrepreneurship, Entrepreneur Vs. Manager, Role of Entrepreneurship in Economic Development, Factors affecting Entrepreneurship, Problems of Entrepreneurship.

Unit -2: Entrepreneurial Competency and Development: Meaning and concept of Entrepreneurial Competency, Developing Entrepreneurial Competencies, Entrepreneurial Culture, Entrepreneurial Mobility, Factors affecting Entrepreneurial mobility, Types of Entrepreneurial mobility. Entrepreneurial Motivation: Meaning and concept of Motivation, Motivation theories, Entrepreneurship Development Program: Needs and Objectives of EDPs, Phases of EDPs, Evaluation of EDPs, Startup Entrepreneurship and Practical Expert Entrepreneurs and Sharing Experience.

Unit -3: Institutions and Development of Entrepreneurship: Role of Government in promoting Entrepreneurship, MSME policy in India, Agencies for Policy Formulation and Implementation: District Industries Centres (DIC), Small Industries Service Institute (SISI), Entrepreneurship Development Institute of India (EDII), SIDBI, RUDSET, MFI, SHGS, National Institute of Entrepreneurship & Small Business Development (NIESBUD), National Entrepreneurship Development Board (NEDB), Financial Support System: Forms of Financial support, Long term and Short term financial support, Sources of Financial support, MUDRA, Development Financial Institutions, Investment Institutions.

Unit -4: Women and Social Entrepreneurship: Meaning, Characteristic features, Problems of Women Entrepreneurship in India, Developing Women Entrepreneurship in India, Concept of Social Enterprise and Social Entrepreneurship, Social Entrepreneurs, Sustainability Issues in Social Entrepreneurship, Rural Entrepreneurship, Family Business Entrepreneurship, Concepts of Entrepreneurship Failure, Issues of Entrepreneurial failure, Entrepreneurial resurgence, Reasons of Entrepreneurial Failure, Essentials to Avoid Unsuccessful Entrepreneurship, Business Continuity Management and Sustainability.

Unit -5: Business Ideas, project identification and formulation: Forms of Business Ownership, Issues in selecting forms of ownership, Environmental Analysis, Identifying problems and opportunities, Defining Business Idea, Planning Business Process, Project Management: Concept, Features, Classification of projects, Issues in Project Management, Project Identification, Project Formulation, Project Design and Network Analysis, Project Evaluation, Project Appraisal, Project Report Preparation, Specimen of a Project Report.

References

1. A.K.Rai – Entrepreneurship Development, (Vikas Publishing)
2. Barringer M J - Entrepreneurship (Prentice-Hall, 1999)
3. Couger, C- Creativity and Innovation (IPP, 1999)
4. Holt - Entrepreneurship: New Venture Creation (Prentice-Hall) 1998.
5. Kakkar D N - Entrepreneurship Development (Wiley Dreamtech)
6. Lall & Sahai: Entrepreneurship (Excel Books 2 edition)
7. Nina Jacob, - Creativity in Organisations (Wheeler, 1998)
8. R.V. Badi & N.V. Badi - Entrepreneurship (Vrinda Publications, 2nd Edition)
9. Sehgal & Chaturvedi-Entrepreneurship Development (UDH Publishing edition 2013)

M.Com
II Semester
CMS453: STRATEGIC MARKETING MANAGEMENT

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

- Objective: 1) To familiarize students with the advance concept and issues of strategic marketing and enable them to be able to analyze the market environment and develop international marketing strategies for a business firm.**
- 2) To identify the importance and philosophies in Marketing Management**
- 3) To understand the market driven strategies.**

Unit -1: Strategic Marketing Management: Nature of Strategic Marketing Management, Marketing Philosophies, Advanced Concepts and Approaches, Customer Relationship Marketing- Components of SMM, Brand Loyalty, Brand Positioning, Brand Resonance, Crisis Marketing, Unique Selling Proposition.

Unit -2: Marketing and Strategy Interface: Nature of Marketing Environment- Mission and Vision Statements, Marketing Audit and SWOT Analysis-Growth-Share Approaches to Competitor Analysis- Competitive Advantage and Porter's Three Generic Strategies- Strategies for Market Leaders, Followers, Challengers and Nichers- Approaches to Customer Analysis- Factors Influencing Consumer Behaviour- Buying Decision Process-Marketing Myopia and its Dimensions.

Unit -3: Marketing Mix Strategy: Marketing Segmentation, R & D Factors in Marketing Prospective, Bases for Segmenting Consumer and Industrial Markets- Market Targeting and Product Positioning-Product Life Cycle- New Product Development Process- Service Marketing, and Service Gaps.

Unit -4: Promotion Mix Strategy: Elements in Promotion Mix, Advertising objectives, budget, message, media, and measurement- sales promotion- public relations- personal selling, Event Markets, customer – experience and value creation – Database Marketing.

Unit -5: Strategic Evaluation: Meaning, Objectives and Methods of Strategic marketing Evaluation, Strategic Evaluation -Marketing Control-social marketing-green marketing- global marketing- ethical issues and dilemmas in marketing, Customer – Life time value measurement.

Unit -6: International Marketing: Nature, Importance and Scope of International Marketing, International Distribution and Logistics Management Inventory Management, Advertising, and International Marketing through Internet.

References:

- Baker, M.J., (1985), Marketing Strategy and Management, London:
- Christopher, M.G., Payne, A and Ballantyne, D (1991), Relationship
- Cliffs, NJ: Prentice Hall.
- Cravens, D.W. (1990), Strategic Marketing, Homewood, Illinois: Irwin.
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- Roger J. Best, Market-based management: Strategies for growing customer value and profitability, HI Learning Private Ltd, New Delhi 2001, Fifth edition.
- Schiffman, L.G. and Kanuk, L.L. (1983) Consumer Behaviour, Englewood
- Superior performance, New York: Free Press.
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- Wilson, R.M.S. and Gilligan, C.(1999) Strategic Marketing Management:
- William J. Stanton- Michael J. Etzel and Bruce J Walker: Fundamentals of Marketing, McGraw Hill International Editions.

M.Com
II Semester
CMS454: BUSINESS, INDUSTRY AND COMMERCE

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective:

- To enumerate the fundamentals of Indian economy, business, industry and commerce.
- To study the present status of Business, industry and commerce in India.
- To get a glimpse of future challenges.

Unit –1: An overview of Indian economy: The structure of Indian Economy, Pillars of Economic Development, Role and contribution of Agriculture, Industry, commerce and Services; Performance, recent trends in business, industry and commerce and future scenario of these sectors in Indian economy.

Unit –2: Essentials of Business, Industry and Commerce: Nature, role and importance of business, industry and commerce. Functions and processes, Internal and external influences, Different forms of enterprises, Interaction and linkages with Government and civil society, Macro environment and its impact on business, industry and commerce. Types of Productive Systems, The Manorial or Feudal system, The Guild system, Characteristics of the domestic/ putting-out/outsourcing systems, and the Factory system, Causes and Consequences of industrialization, The IT system of industrialization-services, enabled services, linkage with Manufacturing & Agriculture.

Unit –3: Evolution of Business and Industry in India: Structure of Indian society, Glimpse of economic activity in ancient times, British Raj, Swadeshi movement, Post-Independence scenario, Licence-Permit Raj, LPG era, Economic reforms since 1991, Entrepreneurship Culture in India, Industrial Policy, 2014 & Changing economic policy era.

Unit –4: Structure and Status of Business & Industry in India: Unregistered firms/ Bagedari sector, Start-ups and MSME sector, Large Scale enterprises, Export oriented companies, MNCs in India, Family Business, Industry associations and bodies, Profile of eminent industry persons and houses. Present status and performance of Agriculture and allied fields like horticulture, food processing, animal husbandry, fishing, contract farming etc; Industry sectors like textiles, chemicals, sugar, paper, machine tools, auto components, engineering products, pharmaceutical, biotechnology, semiconductor, hardware products, coal, mining, consumer durables, FMCG etc; Service sectors like information technology, hospitality, tourism, health care, banking, financial services, insurance, tourism, retail etc.

Unit –5: Growth of Business, Industry and Commerce: Nature and types of crisis, Physical damage crisis, Stages of crisis like pre crisis stage, acute crisis, post crisis, consequences of and strategies for managing crisis; Management of human and other resources, changing manpower requirements, Growth dimensions and phases, growth barriers, succession and exit strategies.

Unit –6: Interface with Voluntary Organisations: Provisions of Companies Act 2013, CSR Rules, 2013; characteristics and role of non-governmental organizations (NGOs), Voluntary Organisations (VOs), Non-profit organizations (NPOs), Civil society organizations (CSOs), Types of NGOs by orientation, level of co-operation, scope and coverage, Present status of third sector in India, Confederation of Indian Industry (CCI), Federation Indian Chamber of Commerce and Industry (FICCI), Kanara Chamber of Commerce and Industry (KCCI), PHD Chamber of Commerce and Industry (PHDCCI), Associated Chambers of Commerce and Industry in India (ASSOCHAM), and International Chamber of Commerce (ICC)

References:

1. Ashwani Mahajan & Gaurav Datt “Datt & Sundharam Indian Economy” S Chand 2013, 69th Edition.
2. Bachcha & Pathak “industrial policy-India” Deep and Deep publication Pvt. Ltd. 2007.
3. C.V. Madhavi “Business in Crisis” Create Space Independent Publishing Platform.
4. Dr. Yogesh M. Kulkarni “Performance of Indian industrial Sector” Binding: HBR Year: 2011.
5. Harvard Business Essentials, “Crisis Management: Master the Skills to Prevent Disasters” Harvard Business Review Press (20 September 2011).
6. Nitin Dhingra & Ishwar C Dhingra “Developing New Enterprise” Cosmos Bookhive 2014, 1st edition.
7. Osama Lari “Industrial Sociology” Word press publication, 2010, 1st edition.
8. PRIA (2000) “Defining the sector in India –Voluntary, civil or non-profit” Working paper 1 New Delhi.
9. Sushilaravindranath “The CII Entrepreneur’s Handbook” Westland Ltd, 2010.
10. Uma Kapil, “Indian economy –Performance and Policies” Academic Foundation 2009, 8th edition.
11. Vaidyanathan. R “Reforming the reforms process” Silver jubilee research volume, IIMB India.

M.COM
II Semester
CMH455: BUSINESS RESEARCH METHODS

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: The course is envisaged to provide the students with the knowledge and skill related to conduct of research related to business and familiarise the students with the technicalities of executing a research assignment.

Unit -1: Introduction: Meaning of Business Research, Scope of Business Research, Types of Business Research, Theory Building, An Overview of Research Process, Problem Definition and Discovery, Exploratory Research : Secondary Data; Experience Survey; Pilot testing and Pretesting, Research Questions, Research Objectives, The Design of Research: Design Strategies; Sampling Design (Research Population, Sampling, Steps in Sampling Design, Sampling Frame, Sample Size, Probability and Non-probability Sampling Techniques); Measurement and Attitude Scaling, The Sources and Collection of Data: Secondary Data; Observation; Survey; Questionnaires and Interview Schedules, Analysis and Presentation of Data: Descriptive Analysis; Choosing the Appropriate Statistical Technique; Univariate Statistical Analysis (Concept only); Bivariate Analysis (Concept only); Multivariate Analysis (Concept only); Interpretation; The Research Report (Meaning only).

Unit -2: Regression and Correlation Analysis: Meaning of Regression Analysis, Linear and Non-Linear Regression, Regression Equation, Lines of Regression, Estimation Using the Regression Line, The Standard Error of Estimate , Multiple Regression Analysis, Meaning of Correlation Analysis, Significance of the Study of Correlation, Correlation Versus Causation, Types of Correlation, Methods of Studying Correlation: Scatter Diagram Method ; Graphic Method; Karl Pearson’s Coefficient of Correlation; Correlation of Grouped Data; Least Squares Method of Studying Correlation; Rank Correlation Coefficient, Probable Error of Correlation Coefficient and Interpreting Coefficient of Correlation, Multiple Correlation Analysis, Coefficient of Determination, Correlation Versus Regression.

Unit -3: Sampling Theory and Statistical Inference: Sampling Theory, The Two Concepts: Parameter and Statistic, Objects of Sampling Theory, Sampling Distribution, The Concept of Standard Error(SE), Point Estimation and Interval Estimation, Ordinary Least Squares (OLS) Method of Estimation, Hypothesis Testing Procedure, Null Hypothesis and Alternative Hypothesis, The Two Mutually Complementary Approaches for Hypothesis Testing: Confidence Interval and Test of Significance, Type I and Type II Errors, Two-tailed and One-tailed Tests of Hypothesis, Sampling of Attributes and Tests of Hypothesis for Attributes, Tests of Hypothesis in respect of Samples Concerning Statistics of Variables (Large Samples), Tests of Hypothesis in respect of Samples Concerning Statistics of Variables (Small Samples): The T-Test; Z-Test, The F-Test and Analysis of Variance (ANOVA): One-way and Two-way Classifications.

Unit -4: Non-Parametric Tests: Meaning of Non-Parametric Tests, Advantage of Non-Parametric Tests, The Chi-square (X^2) Test, The Sign Test, The Mann-Whitney U Test (in case of Large Sample only), the Kruskal – Wallis H Test (in case of Large Sample only), the Runs Test for Randomness (in case of Large Sample only), The Wilcoxon Matched Pairs Signed – Ranks Test (in case of Large Sample only).

Unit -5: The Research Report: The Importance of the Report, Types of Written Research Report, Written Research Report Components, Considerations in the Report-writing Process, Oral Presentation and Considerations in Oral Presentations.

References:

1. Cooper D R and Schindler P.S: Business Research Methods (New Delhi: TATA McGraw Hill)
2. Gupta S C: Fundamentals of Statistics (Mumbai: Himalaya Publishing House)
3. Gupta S P: Statistical Methods (New Delhi: Sultan Chand and Sons)
4. Gujarati D N, Porter D C and Gunasekar S: Basic Econometrics (New Delhi: TATA McGraw-Hill)
5. Israel D: Data Analysis in Business Research: A Step-by-step Nonparametric Approach (New Delhi: Response)
6. Kothari C R: Quantitative Techniques (New Delhi: Vikas Publishing)
7. Kothari C R: Research Methodology: Methods and Techniques (New Delhi: New Age International Publishers)
8. Levin R I and Rubin D S: Statistics for Management (New Delhi: Prentice Hall of India)
9. Siegel S: Nonparametric Statistics for the Behavioral Sciences (New Delhi: McGraw Hill Kogakusha Ltd.)
10. Zikmund W.G: Business Research Methods (Chicago: The Dryden Press)

M.Com

II Semester

CMH456: INTERNATIONAL BUSINESS

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective:

- 1) Familiarized the students with functions and practice of International business.
- 2) Enable them get global perspective on issues related to FDI, forex market and globalization.

Unit - 1:International Business Environment: Nature, Scope and Importance of IBE, Tariffs and Non-Tariffs barriers. Foreign Trade Policy, Balance of payment and its problems, an over view of International Trade theories.

Unit - 2: International Business Decisions: World Trading Environment, Globalisation, Historical Background of Globalisation, Drivers of International Business Decisions, Reasons for the firm to go Abroad, Deciding to go Global, Choosing the Mode of Entry, Strategies for Going International, Globalisation and Developing Countries, The Changing Demographics of the Global Economy the Globalisation Debate Antiglobalisation Protests, Globalization and National Sovereign Globalization and the World's Poor and Managing the Firm in the Global Scenario.

Unit-3: Managing Global Business Risk: Enterprise Risk Management, Key Success Involvement of ERM, Steps in ERM, Strategic Risk Assessment, EXIM policy, Foreign Exchange Management.

Unit -4: Foreign Exchange Market: The Functions of the Foreign Exchange Market, The Nature of the Foreign Exchange Market, Capital Flows, Foreign Investment Flows and Barriers, Currency Convertability, Capital Account Convertability, Current Account Convert Ability, Exchange Rate Convertability, Appreciation, Depreciation, Premium and Discount of

Currencies. Foreign Currency Features, Revenues and Pricing Strategies, Purchasing Power Parity Theories, Rupee Dollar Convertability Background, Direct and Indirect Quotes.

Unit -5: Regulatory Environment of International Business: International Trading Environment, Bilateral, Trilateral and Multilateral Treaties, International Economic Institutions – GATT, ASB, WTO, BRICS, UNCTAD, IMF, IBRD, International Laws, International Trading Arrangements of India, Pakistan and China. Free Trade Area, Regional Economic Integration.

Unit-6: Multinationals in International Business: MNC's and TNC's, Issue in Investment, Technology Transfer, Pricing, Regulations, International Collaboration and Strategic Alliances, Defenders and Critics of MNC's and TNC's Corporate Social Responsibility and Contemporary Developments and Issues in International Business.

References:

1. Akira Takayama – International Trade – (Holt, Rinehart and Winston, Inc, Newyork)- 1972.
2. Anant K Sundaram / J. Stewart Black – The International Business Environment – Text and Cases – Prentice Hall of India – (New Delhi) – 1999.
3. Aswathappa .K, International Business, Tata McGraw Hill Education: Sixth Edition 2015.
4. Charles W.L. Hill: International Business, eighth edition Tata McGraw Hill Education Private Ltd., 2016.
5. Charles W.L. Hill, Global Business Today: Tata McGraw Hill, sixth edition.
6. Deo Som – Multinational Corporations and Third World – Ashish (New Delhi) 1986.
7. Exchange Rates and Open Economy Macro- Economics – Edited by – Ronald Mac Donald and Mark P Taylor – (Basil Blackwell) 1989
8. Francis Cherunilam – International Business (Second EDITION)- (Wheeler Publishing) – 2001
9. James Taggart - The Essence of International Business – Prentice Hall (New Delhi) – 1995.
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10. Paul Hallwood and Ronald Mac Donald – with contribution from Robert Shaw. (Basil Blackwell) – 1989.
11. Reuber L . Grant with H. Crookell, M. Emerson and G.Gallais – Hamonno – Private Foreign Investment in Development – (Clarendon Press Oxford) – 1973.
12. Richard N. Farmer and Barry M.Richman-International Business an Operational Theory – (Richard D. Irwin, Inc, Homewood, Illinois) - 1966
13. Sanjaya Lall and Paul Streeten – Foreign Investment, Transnational's and Developing Countries – (MacMillan) - 1980
14. Simmons and Simmons: Consultant editor: Jonathan Reuvid “Managing Business Risk; a practical guide to protecting your business Kogan page U.K.
15. Subba P. Rao – International Business Text & Cases.
16. Virgil Salera – Multinational Business – (Houghton Mifflin Company Boston) – 1969
17. William A. Dymsha – Multinational Business Strategy – McGraw Hill (New York)-1972.

M.Com II Semester

CMH457: ADVANCED COST ACCOUNTING

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To provide the students with an in-depth knowledge of advanced approaches of Cost Accounting in order to enable them to apply costing methods and techniques so as to assist management in taking appropriate decisions

Unit -1: Inventory System: Turnover of Material: ABC Analysis; VED Analysis; JIT, Aims and Objectives of JIT, Methodology in Implementation of JIT, Impact of JIT on Production Price. JIT's Effect on Costing System. Material Requirement Planning (MRP-I), Aims, Methodology, Methods of Operations, Requirement for Implementation of MRP-I, MRP-I and Inventory Management. Zero Inventory system.

Unit -2: Process Costing: Comparison of Process Costing and Job Costing, Inter Process Profits, Work in Progress and Equivalent Production.

Unit -3: Marginal Costing and Break Even Analysis: – Calculation and Interpretation of a Break-Even Point and Margin of Safety-Marginal Costing and CVP Analysis – Preparation of Various Breaks Even Charts.

Unit -4: Standard Costing and variance analysis: – Concept of Standard Costs – Uses of Standard Product Costs- Fixation of Standard Costs – Material – Labour – Overhead, Profit and Sales Variances Leading to Decision Making and Reporting.

Unit -5: Managerial Decisions and Cost Accounting: Pricing, Accepting Special Offer, Profit Planning. Make or Buy Decision, Determining Key-Factor, Determining Sales- Mix, Determining Optimum Activity Level, Performance Evaluation, Alternatives Methods of Production, Cost Reduction & Cost Control.

References:-

- 1) B.S. Khanna, I.M. Pandey, G.K. Ahuja and M.N. Arora – Practical Costing, S.Chand and Company, Ltd., New Delhi.
- 2) Baneerjee, Cost Accounting-Theory & Practice, Prentice Hall of India, N. Delhi.
- 3) Dr. S.N. Maheswari – Advanced Cost Accounting, Sultan Chand and Sons, New Delhi.
- 4) Horngreen C.T.: Cost Accounting, Management Emphasis, Prentice Hall of India Pvt. Ltd, New Delhi.
- 5) Lal Jawahar.: Cost Accounting, Tata McGraw Hill, New Delhi.
- 6) N.K. Prasad: Principles and Practice of Cost Accounting, Book Syndicate Pvt. Ltd. Calcutta
- 7) Prof. Subhas Jagtap : Practice in Advanced. Costing and Management, Accounting Niraii Prakashan, Pune
- 8) R.S.N. Pillai and V. Bagavathi – Cost Accounting, S. Chand and Company Ltd. New Delhi.
- 9) Ravi M. Kishore : Advanced Cost Accounting and Cost Systems Taxmann, New Delhi.
- 10) Ravi M. Kishore : Student's Guide to Cost Accounting Taxmann, New Delhi
- 11) Reeve, James. M.: Readings and Issues in Cost Management, South western College Publishing, USA.
- 12) S.P. Iyengar, Cost Accounting – Sultan Chand & Sons New Delhi.
- 13) S.P. Jain & R.L. Narang – Advanced Cost Accounting, Kalyani Pubhshar, Ludhiana.
- 14) S.P. Iyengar : Cost Accounting Principles and Practice, Sultan Chand and Sons, New Delhi

**M.Com
III Semester**

CME 501: PERSONAL SAVINGS AND INVESTMENT MANAGEMENT

Work load: 2 hours lecture and 2 hours tutorial per week: total 3 credits

Course Objective:

The objective of this course is to provide students the knowledge of various avenues of savings and investment for individuals.

Unit 1: Introduction to Investments

Meaning of Investments, Difference between Savings and Investment; Difference between Investment, Speculation and Gambling. Investment Goals; Investment Constraints. Identifying Risk Tolerance.

Unit 2: Pre-cautionary Investments

Health Insurance: Types, operations and procedure. Life Insurance: Origin, Types, Operations and Procedures, Selection of Type of Insurance Policy. Pension Funds.

Unit 3: Tax Saving Schemes and Savings Schemes

Bank Deposits, Post-office Saving Schemes, NDFC Deposits, Kisan Vikas Patra, National Savings Certificates, Employee Provident Fund, Public Provident Fund.

Unit 4: Mutual Funds

Introduction to Mutual Funds, Historical background of Mutual Funds in India, Classification of Mutual Funds.

Selection of Mutual Funds – criteria for selection. Calculation of Net Asset Value. Calculation of Mutual Fund Returns for Dividend Payment Plan, Dividend Reinvestment Plan, Bonus Plan and Growth Plan.

Performance Criteria – Sharpe's Measure, Treynor's Measure and Jensen's Alpha.

Unit 5: Stocks and Bonds

Meaning of Shares and Stock, Bonds – Features and Types of Bonds.

Stock Market Operations; SEBI Guidelines – KYC guidelines.

References:

1. Chandra, Prasanna (2008), “Investment Analysis and Portfolio Management”, Tata McGraw Hill Publishing Limited, 3rd Edition.
2. Rao, Balaji, “Financial Markets and Investment Instruments – An Industry Integrated Working Knowledge Study Material”, Balaji Rao Publishers.
3. Bhalla, V.K. (2006); “Investment Management”, S. Chand; 12th Edition.
4. Avadhani V.A (2006), “Securities Analysis and Portfolio Management”, Himalaya Publishing House, Eighth Revised Edition.
5. Ranganatham and Madhumathi (2005); “Investment Analysis and Portfolio Management”, Pearson Education, First Edition.
6. Pandian, Punithavathy (2007); “Security Analysis and Portfolio Management”, Vikas Publishing House Private Limited, Fifth Reprint Edition.
7. Kevin (2008); “Security Analysis and Portfolio Management”, Prentice Hall of India Private Limited, First Reprint Edition.
8. Maheshwari, Yogesh (2008); “Investment Management”, PHI Learning Private Limited, First Edition.
9. “Stock Market Book” (2005); Dalal Street Journal.
10. “The Layman’s Guide to Mutual Funds” (2004), Outlook Publishing (India) Private Limited, First Edition.

M.Com

III Semester

CMH 502: Artificial and Business Intelligence

Workload: 3 hours Lecture and 2 hours Tutorial per week: Total 4 Credits

Objective: In the business world, competition is the main factor, intelligence is prerequisite for understand to meet competition. AI and BI are essential learning and analytical concepts. So that, students can enhance their intelligence and they can take-up career in these fields.

Unit -1: Artificial Intelligence: Meaning, scope, nature of business problem solving, cognitive science, knowledge acquisition techniques, knowledge sharing and transformation of knowledge.

Unit -2: Knowledge Mapping: Inheritable knowledge, machine and robotic knowledge, knowledge mapping system, knowledge V/s skills, re-skills, knowledge creation with the help of AI, forward and backward thinking, value system and mind mapping techniques, human capital analytics.

Unit -3: Modeling of AI: Intelligent system, areas of AI, Psychological modeling, improving efficiency, business model analysis, appreciative intelligence, benchmarking analysis and business model analysis.

Unit -4: Intelligent Cycle: Intelligent cycle components, forms of analysis: facts, perception, beliefs, assumptions, projections and synthesis. Intelligent decision-making, intelligent solution to business problems, unlock value of AI in business, avoiding analysis pitfalls and developing analytical fitness through AI, recent trends in AI.

Unit -5: Business Intelligence: Meaning, importance in business decision-making interpretation of big data, business intelligence and competitive intelligence in business, business analytics, BI capabilities in business solutions, recent trends in BI.

References:

- Anu Singh Lather, Anil S Saini and Sanjay Dhingra: Business Intelligence and Data ware housing: Narosa Publishing House.
- Barr et al (1981) Handbook of Artificial Intelligence: Morgan Kaufmann.
- Business Intelligence: Concepts, methods, tools and application by MAIR (Management Association Information Resources) IGI Global Publisher 2015.
- Charniak and McDermott: Introduction to Artificial Intelligence (1985) Addison Wesley.
- Craig S. Fleisher and Babette E. Bensoussan: Business and Competitive Analysis, Pearson.
- Elaine Rich and Kevin Knight: Artificial Intelligence, Second edition: McGraw-Hill –Inc.
- Genesereth & Nilsson (1987): Logical Foundation of Artificial Intelligence: Morgan Kaufmann.

- John Boyer et al: Business Intelligence Strategy: A Practical Guide for achieving business intelligence excellence: McGraw Hill.
- John Brooks: Business Adventures: John Murracy Learning Private Information and Business Development.
- Nilsson (1980): Principles of Artificial Intelligence: Morgan Kaufmann.
- Rajiv Sabherwar, et al, Business Intelligence Practice: Practices, Technologies and Management, Willey.
- Shapiro and Eckroth (1987): Encyclopedia of Artificial Intelligence: Addison Wesley.
- Webber B. L and Nilsson: Reading in Artificial Intelligence: Morgan Kaufmann.
- Winston (1984): Artificial Intelligence: Addison Wesley.

M.Com

III Semester

CMH503: BUSINESS ETHICS AND CORPORATE SOCIAL RESPONSIBILITY

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To make the students acquire knowledge of ethical issues, social responsibility and corporate governance practices in corporate.

Unit-1: Ethical theory: An overview of Ethical theory, Kantianism, Nature of Ethics; Ethics and its relation to values, norms, and morals; Ethics, Economics and Law; Cognitivist and non-cognitivist theories; Virtue Ethics and Conflict of interest.

Unit-2: Business Protocol: Scope; Relevance; Ethical Issues in Marketing; Ethics in Financial Services and Financial Markets; Ethical issues in hostile takeovers; Arguments against Insider trading, self-regulation, social value, surrogate decision-maker and corporate whistleblower.

Unit-3: Corporate Social Responsibility: Nature of Corporate Social Responsibility and Environmental disclosure, Approaches to Corporate Social Responsibility; Dimensions of Social Responsibility; Sachar Committee's Suggestions; Arguments for and against Corporate Social responsibility, corporate reputation, Recent trends in CSR and new CSR Act in India.

Unit-4: Social Responsibility and Corporate Governance: Social Responsibility and sustainable development of corporate, corporate citizenship models and corporate excellence, corporate mis-governance, corporate governance- advantages, corporate frauds, corruption, reporting practice, governance and charities, charities and external stakeholders- scope and dimensions: internal aspects of governance – ouster of Board of Directors and Chairmans' and exemplary employment practice, corporate frauds impact on the development of economies.

Unit-5: Global Business and cross cultural diversity: Globalisation and business changes; values for global managers; Values West can learn from East and vice-versa, cross-cultural comparison and managing cross-cultural diversity – parochialism, good corporate citizenship, transparency, relationship building in global level.

References:

1. Agarwal, Corporate Social Responsibility in India (Sage Publication)
2. Boatright John R, Ethics and the conduct of Business (Pearson Education).
3. C.A.Kamal Garg, Corporate Social Responsibility with companies (Corporate Social Responsibility Policy) Rules, 2014, w.e.f. 01-04-2014. (Bharat Law House Pvt. Ltd., New Delhi)
4. Ghosh Biswanath, Ethics in Management and Indian Ethos (Vikas)
5. Hartman Laura Pincus, Perspectives in Business Ethics (McGraw Hill)
6. Harvard Business Review, 'Harvard Business Review on Corporate Social Responsibility, Paperback.
7. Kaushal Shyam L, Business Ethics- Concepts, Crisis and Solutions. (Deep and Deep)
8. Madhumita Chatterji, Corporate Social Responsibility (Oxford University Press)

9. Moon Chris and Bonny Clive, Business Ethics- Facing up to the issues (The Economist)
10. Philip Kotler, Corporate Social Responsibility: Doing the most Good for your Company and your cause.
11. Sanjeev Rinku and Khanna Parul, Ethics and Values in Business Management (Ane Books India)

M.Com
III Semester
CMH504: E-Commerce

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objectives:

- 1. To understand the nature of E-Commerce business and its various dimensions.**
- 2. To Identify the various strategies and advanced concept of web-based commerce.**
- 3. To understand the importance and role of E-Commerce and M-Commerce business environment.**
- 4. To provide insights to the students on E-Commerce models.**

Unit-1: Electronic commerce: Nature and scope of E-Commerce and M-Commerce; Global-E-Commerce; business environment, Evolution of world wide web and future status of web-based business role of web site in E-Commerce, alternative modes of customer relationship management, e-mail etiquette and e-mail security.

Unit-2: E-Commerce models: B2B, B2C, C2C, N2N, B2G, O2O and other models of E-Commerce, service digitalization, remote sensing and online Marketing.

Unit-3: Electronic Payment System: Different types of E-payments, E – cash, E-cheques, E-Wallet, credit cards, smart cards, electronic purses and debit cards, legal risks of E-payment and options of E-payment system.

Unit-4: Conflicts in E-Commerce business: Features and perceptions of E-Commerce-Conflicts, functional and dysfunctional conflicts in E-Commerce, levels of conflicts, causes of conflicts in E-Commerce and conflict resolution and negotiation through e-mail and its strategies.

Unit-5: Security issues in E-Commerce: Digital signature and electronic signature, E-Commerce Security, E-Commerce Threats, Protecting from E-Commerce Threats, Security tools, Encryption and its roles in E-Commerce Business.

Unit-6: E-Commerce Policy: IT Act 2000, National Cyber Security Policy, Opt in and opt out policy, Recent issues, Role of Net Neutrality in E-business, Language and culture in E-Commerce, legal environment in E-Commerce, its border and jurisdiction, contracting and contract enforcement; National and International Cyber – Laws, ethical and moral issues in E-Commerce.

References:

1. Laudon Kenneth C. and Carol Guercio Traver (2002) E-Commerce : Business, Technology, Society.(New Delhi : Pearson Educatin).
2. Awad Elias M.(2007), Electronic Commerce: From Vision to Fulfillment (New Delhi : Pearson Education).
3. Kalakota Ravi and Marcia Robinson (2001), Business 2.0: Roadmap for success (Nw Delhi : Pearson Education).
4. Smith P.R. and Dave Chaffey (2005), E-marketing, excellence; The Heart of E-Business (UK : Elsevier Ltd.)
5. Lewicki Roy et.al : ‘Negotiation ; Mcgrow Hill Education India Pvt. Ltd. (5th Edition) New Delhi – 2013.
6. Singh B.D. ‘ Managing Conflict and negotiation, Excel Books, New Delhi – 2008.
7. Jayforder and Patrickquirk ‘ Electronic Commerce and Law’, JohnWilley and Son

M.Com
III Semester
CMS 505: Advanced IFRS and Practice

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective : To familiarize and acquaint the student the recent developments in International Accounting Standards and various financial reporting practices at the global level.

Unit – I : IFRS dimensions in accounting practice

Role of IFRS, Accounting Environment, Accounting Principles and Scope and application of IFRS system, Fundamental Principles - Conceptual Framework Approach - Independence - Confidentiality - Conflicts of Interest - Conflicts in Application of the Fundamental Principles - IFAC Developments- Ethical requirements of corporate reporting and their consequences

Unit - II: Financial Reporting Framework

The application, strength and weakness of accounting framework, Uniform Global Financial Reporting : Need – Differences between IAS, Indian GAAP and US GAAP – Translation of Indian GAAP statements in to US GAAP and IFRS – International Accounting Standards Board. **IFRS** : Convergence with IFRS – Benefits of Convergence – Challenges of Convergence – Role of IASB in post convergence scenario.

Unit – III: Financial Reporting Performance

Asset related standards including IAS 16 Property, plant and Equipment, IAS 38 Intangible Assets, IAS 40 Investment property, IFRS 5 Assets held for sale and discontinued operations, IAS 36 Impairment of assets, IAS 23 Borrowing Costs, IAS 41 Agriculture

Disclosure standards including IAS 33 Earnings per share, IAS 24 Related Party Disclosures, IFRS 8 Operating Segments, IAS Interim Financial Reports, IFRS 13 Fair value measurements

Accounting for Financial instruments including impairment of financial assets and hedge accounting – IFRS 9 Financial Instruments, IAS 32 Financial Instruments: Presentation, IFRS 7 Financial Instrument: Disclosure

Other areas of reporting including – IFRS 16 Revenue from contracts with customers, IFRS 16 Leases, IFRS 2 Share-based payment, IAS 19 Employee benefits, IAS 12 Income taxes, IAS 37 Provisions, contingent liabilities and contingent assets, IAS 20 Accounting for Government Grants and Disclosure of Government Assistance, IAS 10 Events after the reporting date, Reporting requirements of small and medium-sized entities (SMEs), IAS 21 The effect of changes in Foreign exchange rates

Unit- IV: Financial Statements Group Structure

Group accounting for complex groups including statements of cash flows – Continuing and discontinued interests – Changes in group structures – Foreign transactions and entities. The standards to be covered include IAS 27, IAS 28, IFRS 3, IFRS 10, IFRS 11, IFRS 12

Unit – V: Developments on Financial Reporting

True blood Report (USA). Corporate Report (UK), Stamp Report (Canada). **Financial Reporting:** General Purpose- Qualities – Significance of Corporate Annual Reports – Recent Trends in Corporate Reporting in India.

References:

1. Gupta, Ambrish, "Financial Accounting for Management – An Analytical Perspective"; Pearson Publications.
2. Vijaykumar M P., "First Lessons in Financial Reporting", Snow White Publications.
3. Chandra, Prasanna, "Finance Sense – Finance for Non-finance Executives", Tata McGraw Hill.
4. Agarwal, V. Rakesh, "Systematic Approach to Cost Accounting", Bharat Publications.
5. Tulsian and Tulsian, " Financial Reporting", S.Chand.
6. Vijaykumar M.P., "First Lessons in Accounting Standards:, Snow White Publications.
7. Ramachandran, and Kakani, "How to Analyze Financial Statements", Tata Mc Graw Hill.
8. Palat, Raghu, "How to Read Annual Reports and Balance Sheets", JAICO Publishing House.
9. Dash A.P., "Financial Wisdom – Finance for Non-Finance Executives", Biztantra.
10. Jawaharlal " Accounting Theory and Practice" Himalaya Publishing Company;
11. Rawat D.S. " Accounting Standards: Taxmann Allied Services Private Limited;
12. Kamal Garg " IFRS Concepts and Applications : Bharat Law House Pvt. Limited;
13. Ghosh T.P. " IFRSs for Finance Executives ", Taxmann Allied Services Private Limited;
14. Porwal L.S. " Accounting Theory" Tata Mc Graw – hill Publishing Company.
15. Jain S.P. & Narang K.L: Accounting Theory & Management Accounting , Kalyani.
Journals : 1.Chartered Accountant, ICAI;2; 2. Management Accountant, ICAI;
News papers: 1.Business Line, 2.Economic Times.

M.Com

III Semester

CMS506: Optional (FMAIS): CAPITAL MARKET OPERATIONS

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: This course is designed to acquaint the students with various concepts of Investment Management and to facilitate them to understand various issues of capital market in India.

Unit-1: Introduction: Evolution and Development of Financial System in India, Structure of Financial Markets, Financial Institutions. Introduction to Investment- Attributes of Investment- Investment Process, and Avenues of Investments. - Mutual Funds, Concepts, Constitution of Mutual Funds, Functions of Asset Management Companies-Regulation of Mutual Funds and Recent Development in the Financial System.

Unit-2: New Issues Market and Stock Exchanges: Methods of floating New Issues- Stock Exchanges-Growth and Functions- BSE- OTCEI- NSE- ISE- Stock Market Operations – Insider Trading- Legal Control of Stock Exchange in India-SEBI- Market Indices- Methods of computing Market Indices. Recent Developments in the Primary and Secondary Markets.

Unit-3: Behaviour of Capital Markets: Fundamental Analysis-Economy, Industry and Company Analysis- Technical Analysis-Dow Theory and its basic tenets- Charts and Signals-Technical Indicators-ROC-Moving Averages-Oscillators-Stochastics-Relative Strength Index. Valuation of Securities- Equity Shares- Bonds Valuation-Immunization-Duration.

Unit-4: Efficient Market Theory: The Concept of Efficient Market – Forms of Efficient Markets – Weak, Semi-strong and Strong Forms – Tests of weak, Semi- Strong and Strong forms-Market Anomalies – Implication of Random walk for Technical and Fundamental Analysis, Market Rationality.

Unit-5: Bonds: Type and Bonds, Valuation and Bonds, Return on Bonds, Risks associated with Bonds, Duration and Convexity of Bonds.

References:

1. Francis Jack Clark,
Investments-Analysis and Management, (McGraw Hill)
2. Elton Edwin J and
Gruber Martin J, Modern Portfolio Theory and Investment Analysis, (John Wiley and Sons)
3. Sharpe William F,
Alexander Gordon J, Bailey Jeffrey V, Investments, (Prentice Hall)
4. Stevenson R.A.
and Jennings E H, Fundamentals of Investments, (West Publishing Company)
5. Luenberger David
G, Investment Science, (Oxford University Press)

6. Security Analysis and Portfolio Management, (Holt, Rinehart and Winston) Bolten Steven E,
7. and Clendenin John C, Introduction to Investments, (McGraw Hill) Christy George A
8. Tuttle Donald L and Heaton Cherril, Essentials of Modern Investments, (Ronald Press Company, NY) Jones Charles P,
9. C, Essentials of Investments, (Houghton Mifflin) Sprecher Ronald
10. Blackwell, Introduction to Investments and Finance, (The MacMillan Company, NY) Renwick Fred
11. and Gordon Gail, Financial Futures and Investment Strategy, (Dow Jones Irwin Illinois) Rebell L Arthur
12. D, Using Dow Theory, (Vision Books) Sheimo Michael
13. Sarnat Marshall, Investment and Portfolio Analysis, (Wiley Series in Finance) Levy Haim and
14. and Archer Stephen, Portfolio Analysis, (McGraw Hill series in Finance) Francis Jack Clark
15. C, Financial Management and Policy, (Prentice Hall) Van Horne James
16. Financial Decision Making, (Prentice Hall) Hampton John,
17. and Jordan Ronald J, Security Analysis and Portfolio Management, (Prentice Hall) Fischer Donald E
18. Alex, Mrcus J Alan, Investments,. (McGraw Hill/Irwin) Bodie Zvi, Kane
19. Technical Analysis Explained, (McGraw Hill) Martin J Pring,
20. Financial System, (Vikas Publishing House) Machiraju, Indian
21. Working of Stock Exchanges in India, (Wiley) Machiraju, The
22. "Investment-Analysis and Management" Prasanna Chandra,
23. Parthasarathy, "Security Analysis and Portfolio Management", Vikas Publishing House. Pandiar,

M.Com III Semester

Optional Stream – 2: Human Resource Development and Management(HRDAM)

CMS507: Optional (HRDAM): Human Resource Development

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To familiarize the students with the conceptual, theoretical and practice-oriented perspectives in HRD along with ethics and national policy framework.

Unit-1: An overview of Human Resource Development : Concepts of education, training and development – Distinction between Human Resource Management and HRD, Strategic HRD- Theories of HRD : General systems theory, institutional theory, human capital theory, resource-based theory – characteristics, role and relevance, nature and scope of HRD.

Unit-2: The National Context : Nature and characteristics of labour markets – Public policy and infrastructure – Ministry of HRD : Structure, Role and Functions – Adult education – National education policy – Human Development and HRD – Recent Developments.

Unit-3: The organizational context: The external context – the internal context- components of HRD: Employee Training, Management Development, Career Development, and Organizational Development – Current trends.

Unit-4: The HRD process: Individual, team and organizational learning – Analysis of training needs – Designing and implementing HRD programmes – Andragogy – Experiential Learning Cycle- Evaluation of HRD contributions – purposes and processes of evaluation – Problems with evaluation. Facilitators and barriers to transfer of learning - Workplace Diversity and Cross-cultural training – open, distance and flexible learning – multimedia and e-learning.

Unit-5: Policy and Ethics in HRD: HRD policy – The ethics of HRD – Learning Organization, lifelong learning and knowledge Management – Global HRD.

References:

- Harrison R.(1997), Employee Development, London: Institute of personnel and Development.
- Mabey C. and Salaman G.(1995), Strategic Human Resource Management, Oxford : Blackwell.
- Noe R.A. ‘ Employee Training and Development’, McGraw-Hill.
- Rothwell W.J. and Kanas H.C. (1989b), Human Resource Development: A Strategic Approach, Amherst M.A: HRD Press.
- Rothwell W.J. and Kanas H.C. (1991) Strategic Human Resource Planning and Management, Englewood Cliffs NJ : Prentice Hall.
- Rothwell W.J. and Kanas H.C.(1989a), Strategic Human Resource Development, Englewood Cliffs, N J : Prentice Hall.
- Stewart J and Tansley C(2002), training in the knowledge based economy, London : Chartered Institute of personnel and Development.
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- Swanson R.A. and Holton III, E.F., ‘ Foundations of Human Resource Development’ Berrett – Koechler Publishers.
- Thomson R. and Mabey C(1994), Developing Human Resources, London: Butterworth – Heinemann.
- Walton J.(1999), Strategic Human Resource Development, Essex: Financial Times/Prentice Hall.
- Wilson J(Editor) (1999)Human Resource Development, London : Kogan Page.

M.Com

III Semester

CMS 508: STRATEGIC HUMAN RESOURCE MANAGEMENT

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To make the learner understand the basic functioning of organisations from the human resource point of view and to explore the role of people and the functions related to employees in organisations.

Unit-1:The Strategic Role of Human Resource Management: Evolution and Growth - Objectives and Functions, Human Resource Department: Structure, Changing roles, outputs and competencies of HR practitioners - Globalisation and Future of SHRM in Dynamic Environment - High Performance work systems (HPWS).

Unit-2: Staffing the Organisation: Introduction – Human Resource Planning – Job Analysis – Competency-based Job Analysis - Recruitment – Sources and Methods - Selection Process, Placement, Induction, Internal Mobility and Separations – Recent Trends.

Unit-3:Developing Effectiveness in Human Resources: Career Management - Training Vs Development, Types of Training, Executive Development – Methods of Management Development – Succession Planning - Knowledge Management- Concepts and Process – Recent Trends.

Unit-4:Evaluating Performance and Managing Compensations: Performance Appraisal Methods of Performance Appraisal – Potential Appraisal – Strategic Compensation Planning Incentives and Employee Benefits – Incentive pay plans – Individual, Group and Organisation-wide Incentives – Recent Trends in Executive Compensation.

Unit-5:Human Capital Relations and Organisational Exit: Principles of Relationship Management – Prevention and Settlement of industrial Disputes – Grievance Management –

Collective Bargaining –HR Audit- Disciplinary Procedure. Organisational Exit: Voluntary Retirement Vs Compulsory Retirement – Exit Policy – Exit Interview – Downsizing Retraining and Redeployment, Managing the Ageing Workforce – Recent Trends.

References:

1. Gangaram Singh, R Nandagopal, R.G Priyaadardini, Strategic Human Resource Management in a Global Economy, Excel Books, New Delhi.
2. Nayantara Padhi 'Strategic Human Resource Management Theory and Practice, Atlantic Publishers & Distributors, New Delhi.
3. PVL Raju and Nagasudha Ravinuthala, 'Strategic Human Resource Management – An Introduction, ICFAI University Press, Hyderabad.
4. Rajib Lochan Dhar, Strategic Human Resource Management Excel books – New Delhi
5. Scott Snell and George Bohlander, Human Resource Management, South Western Cengage Learning
6. Tapomoy Deb, Strategic Approach to Human Resource Management- Concept, Tools and Application, Atlantic Publishers, New Delhi.
7. VSP Rao, Human Resource Management, Second Edition, Excel Books, New Delhi

M.Com

III Semester

CMS509: Optional (BAIM): Trends in Indian Banking

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: The course aims at providing students with an understanding of structure, organizations, Operation and Current Trends in Indian Banking.

Unit-1: Commercial Banks: Principles of Sound Banking Functions and Services of Indian Banks, Analysis of Balance sheet of Banks, Portfolio Management, Employment of funds in assets, Factors governing Cash Reserves, Earning assets, statutory provisions regarding liquid assets, Term financing by banks, universal banking, Retail Banking and Wholesale Banking, Core Banking Services, Financial Intermediation – Recent trends.

Unit-2: Banking System in India:-Constituents of the Indian Banking System, Commercial banks, Scheduled and Non-scheduled banks, Foreign Banks, Merchant Banks, organisation and structure of Commercial Banks, Public and Private, Institutional Agencies for Rural finance, cooperative Banks, Land Development Banks, Regional Rural banks, Bank Correspondents, NABARD, SIDBI, New generation Banks, Productivity and profitability in Banks-MIS in Banks- Customer Service, Quality circles in Banks, Relationship Banking, Social and Ethical Issues in Banks– Recent Trends.

Unit-3: Risk Management:- Mismatch between Assets and Liabilities- source of risk, credit analysis, overall risk of a bank, Types of Risk, Interest sensitive Assets, credit Risk, Interest Rate Risk, Liquidity risk and operational risk, Derivatives, treasury function, Monitoring risk, RBI Guidelines for Risk Management, Risk Management Systems.

Unit-4 Financial Sector Reforms: Nationalization of Banks, Branch expansion, Deposit mobilisation, credit expansion, Priority sector lending and problems, Globalization and Indian Commercial Banks, Narasimham committee on Financial Sector Reforms 1991, Recommendations of the Committee, BASCL Basal 1, 2 and 3 norms, Prudential Accounting norms, Income Recognition, Asset classification, standard, substandard, Doubtful and Loss making assets, Provisioning requirements, capital adequacy, Non-Performing Assets, (NPAs), public issue of shares, Narasimham committee on Banking Sector Reforms 1998; Weak public Sector Banks, Report of Working Group (1999) (Verma Committee), Problem of Recovery, Debt Recovery Tribunals (DRTs), SARFAESI Act 2002, Securitization of Assets Reconstruction Corporations (ARCs).

Unit-5: Management of Financial Services of Banks: Diversification in Banking functions, Housing Finance, Mutual Funds- Insurance Business- Bancassurance – Investment in commodity exchange – New technology in Banking – Computerization of Banks- E-Services – Debit and Credit cards- Internet Banking – ATM – EFT-MICR-RTGS-NEFT-DEMAT Accounts, Mobile Banking and insolvency and bankruptcy code.

References

1. K.C. Shekhar and Lekshmy Shekhar K (2005): *Banking Theory and Practice*, Vikas Publishing House Pvt. Ltd., New Delhi.
2. H.R. Machiraju (2001), *Modern Commercial Banking*, Vikas Publishing House Pvt. Ltd., New Delhi.
3. H.R. Machiraju (2002), *Indian financial System*, Vikas Publishing House Pvt. Ltd., New Delhi.
4. Bharath V. Pathak (2003), *Indian Financial System*, Pearson Education.
5. M.Y. Khan: *Financial Services*, Tata McGraw Hill.
6. Report of the committee on *Financial Sector Reforms* 1998.
7. Report of the committee on *Banking Sector Reforms* 1998.

M.COM

III Semester

Optional Stream-3: Banking and Insurance Management (BAIM)

Optional (BAIM): CM 510 Management of Life Insurance

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Unit-1: Principles of life insurance: essentials of life insurance contract, new trends in life insurance, life insurance products, purpose of life insurance, benefits of life insurance, demand and outlook of life insurance, Role of Life Insurance Advisors and Insurance Intermediaries.

Unit-2: Accounting and taxation for insurance: accounting principles for preparation of financial statements, final accounts of life insurance companies, taxation aspects of insurance, documentation in life insurance, concept of actuarial valuation, pricing of life insurance products, life Insurance policy provisions and Riders.

Unit-3: Life Insurance Risk Management: meaning of risk management, features, objectives, risk management process, use of technology in risk management, risk management and decision making, enterprise risk management, risk management information system(RMIS), life Insurance underwriting, Life Insurance Financial Management and Retirement Planning.

Unit-4: Bancassurance: combination of banking and insurance business, difference between banking insurance and life insurance companies, claims management- settlement, marketing of insurance products, distribution channels, concept of postal life insurance, Health Insurance Products and Disability Income Insurance.

Unit-5: Globalisation of insurance market: need for globalisation, globalisation and liberalisation, global picture of insurance globalisation and its impact on India, benefits and challenges of market access liberalisation, Information Technology and Life Insurance companies and recent developments in Life Insurance companies in India.

References:

- 1.M.N. Mishra: Insurance Principles and Practice: sultan Chand and company, New Delhi.
- 2.Pande; Insurance Principles and Practice.
- 3.P.K. Gupta: Insurance and Risk Management.
- 4.Sharma R.S: Insurance Principles and Practice
- 5.Dhavi B.S: Insurance Principles and Practice.
- 6.M.J. Mathew: Insurance Principles and Practice.
- 7.Dinsdale M.A: Elements of Insurance.

- 8.C. Arthur Williams.Jr, Michal L. smith Peter C Young: Risk Management and Insurance.
9. Kenneth Black, Jr, Herold D.Skipper, Kenneth Black,III – Life Insurance, 14th Edition, USA.

M.Com
III Semester
Optional Stream – 4 : Taxation (TAX)
CMS 511: OPTIONAL (TAX): DIRECT TAXES

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Course Objective

The subject equips students with tools to effectively manage income and expenditure and offers a better understanding of tax savings. It provides basic understanding of tax concepts and familiarize with filing of tax returns for different heads of income. Students will be gaining knowledge about taxation and methodology based on practical aspects.

Unit-1 Introduction

The Income Tax Act 1961 The Finance Act Benami Transactions Act 1988 Tax Planning; Basic concepts:Agricultural income, Assesse, Assessment year, Average rate of tax, income of person, gross total income, Previous year, Charge of income Tax; Capital and Revenue Receipts capital or revenue expenditure, residence and Incidence of Tax: Residence Determination of the Residential status Tax Free Incomes.

Unit-2 Heads of Income

Computation of Income from salaries, Income from house property Profits and gains of business or profession, Capital gains, Income from other sources; computation of total income and Tax liability.

Unit-3 Depreciation

Conditions for charge of depreciation-Assets-used for business-New method of charging depreciation-Block of assets-Rates of depreciation-Actual cost of assets-written down value of assets-Types of depreciation- computation of depreciation-Misc. provisions about depreciation.

Unit-4 Clubbing, Aggregation And Set-off

Clubbing of Income, Transfers Income of individual to include income of spouse etc. Liability of person in respect of income included in the income of another person, aggregation of income set off losses; Early forward and set of losses, Deductions from gross total income and rebate of Tax.

Unit-5 Assessment

Assessment of individuals, Hindu undivided families, partnership firms and companies- theory only.

Unit-6 Tax Administration

Income tax authorities Procedure for assessment Deduction of tax at source: salaries, interest on securities. Dividends, winnings from lottery or cross word puzzles, winnings from horse races. Insurance commission Penalties imposable and prosecution.

Tax audit as per the provisions of section 43 B of Income tax act, 1961: Tax audit report and non-compliance with the legal requirements.

References:

1. Vinod K. Singhania, “Corporate Taxes - Planning and Management”, Taxmann
2. Girish Ahuja and Ravi Gupta, “Direct Taxes Planning and Management”, Bharat Publications.
3. Manoharan T N, “Direct Taxes”, Snow White Publications.

M.Com
III Semester
CMS512: OPTIONAL (TAX): GST and CUSTOM DUTY

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Course Objective:

- A. To impart students with knowledge about GST and it's features.**
- B. To give insight on the taxes influencing a corporate entity particularly in GST system.**
- C. To orient the students on the procedures and formalities to be adhered with regard to GST profiles.**

Unit-1: Goods and Services tax and its framework

Introduction to Goods and Services Tax, Constitutional framework, Orientation to CGST, SGST and IGST, Definitions – Supply, Inward Supply, Outward Supply, Continuous Supply, Time of Supply, Place of Supply, Goods, Services, Person, taxable Person, Related Person, Business, Place of Business, Business Verticals, Consideration, Capital Goods, Input and Input Service, Input tax, Output tax, Aggregate Turnover, Deemed Exports, Recipient, Reverse Charge and Works Contract.

Unit-2: Valuation for GST and Computation of GST Liability

Taxable and Exempted Goods : valuation of Taxable Supply of Goods, Computation of GST Liability on Supply of Goods, Set-off of Input tax Credit : taxable and Exempted Services : Valuation of Taxable Value of Services : Computation of GST Liability on Supply of Services, Set-Off of input Tax Credit and Reverse Charge Mechanism.

Unit-3: GST Procedures

Registration under GST, Tax Invoice, Levy and Collection of GST, Composition Scheme, Due dates for Payment of GST, GST Returns – Types of Returns, Monthly Returns, Annual Return and Final Return – Due dates for filling of returns and Final Assessment.

Unit-4: GST and Technology

GST Network: Structure, vision and mission, Powers and Functions. Goods and Service Tax Suvidha Providers (GSP): Concept, Framework and Guidelines and Architecture to integrate with GST system. GSP Eco system and GST softwares.

Unit-5: GST Features:

Federal level of GST, New Tax System – Pricing, Control Anti-Profiteering provisions to monitor prices, role and recommendations of organization of economic co-operation and development, E-way bill and its scope.

Unit-6: Customs Duty:

Export and Import procedure. Meaning and Types, features and Sources, Applicability, Chargeability of Customs Duty, Exceptions for Levy of customs Duty, Taxable event, valuation of imported and exported goods for levy of customs duty, Computation of Customs Duty payable.(GST valuation / procedure is considered for computation)

References:

- **Datey, V.S., “ Indirect Taxes”, Taxmann Publications.**
- **Hiregange et al, “ Indirect taxes: Puliani and Puliani**
- **Haldia, Arpit, “GST Made Easy”, Taxmann Publications.**
- **Chaudhary, Dalmia, Girdharwal, “ GST – A Practical Approach”, Taxmann Publications.**
- **Garg, Kamal, “ Understanding GST”, B harat Publications**
- **Hiregange, Jain and Naik, “ Students Handbook on Goods and Services tax”, Puliani and Pliani.**

M.COM
IV Semester
CMS551: Retail Management

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Unit-1: Introduction to Retail: Retail in India - Retail models and theories of retail development – Types of Retailers-Ethical & Security Issues in Retail - Retailing in other countries- opportunity in Retailing - multichannel retailing.

Unit-2: Strategic Retail Planning: Strategic Retail Planning Process - Understanding the Retail Customer-Delivery value through retail formats - Role of Customer services and Relationship Marketing in Retail-Retail franchising-Retail location & Site decision - Retail buying-Retail Market Segmentation.

Unit-3: Retail Marketing : Product Merchandise - Pricing decisions in retailing - Promotion & Communication Mix in Retail - Multi-channel retailing, Managing Retail services-Merchandise management process overview - considerations in setting up retail prices - Store design objectives.

Unit-4: Retail Operations: Supply chain management & vendor relation's role in Retail- Management of Human Resources - Financial Management Issues in Retail - The strategic profit model - the profit path - Store operations - size & place allocation - Store Maintenance, Inventory Management -FDI in Retailing.

Unit-5: Retail Structure- Enterprise Density- Market Concentration- Product Sector- Innovation Employment Structure- Merging Structure - Global Structure- Developing markets – Stages in development of International Operations - Export- Management Contracts- Franchising – Acquisition and Mergers – Organic Growth- Choice of Market Entry- Domestic Market- Retail Operations - Non Domestic market.- Retail Positioning and Brand Image - Measurement of Store Image – Open ended Techniques - Attitude Scaling Techniques - Multi Attribute model – Multi dimensional Scaling - Conjoint analysis.

Unit-6: - Legal & compliances for a Retail Store Legal & compliances: License-Contracts & Recovery - Legal Process - PF/ESIC & Exemptions Food & Restaurants - PPF-IR – Law-Shops & establishments - IPR Patents - Copyright & Trademarks- Inclusion of Service Mark - Procedure and Duration of Registration - Collective Mark - Certification Mark - Procedural Compliance for Establishing an Retail Store - Customer Rights - Consumer Protection Acts - Unfair Trade Practices –Procedures applicable for a Retail Store.

References:

1. Pradhan, Swapna; Retailing Management; Tata McGraw Hill; New Delhi
2. Bajaj, Chetan, Tuli, Rajnish and Srivastava, Nidhi; Retail Management; OUP; New Delhi
3. Berman, Barry & Evans, Joel R.; Retail Management – A strategic approach; Pearson Education/Prentice Hall of India; New Delhi
4. Levy, Michael & Weitz, Barton A.; Retailing Management; Tata McGraw Hill; New Delhi
5. Newman, Andrew J. & Cullen, Peter; Retailing – Environment and Operations; Thomson Asia Pvt. Ltd.; New Delhi
6. Dunne, Patrick M., Lusch, Robert F & Griffith, David A.; Retailing; Thomson Asia Pvt. Ltd; ND
7. Lamba, A.J. The Art of Retailing; Tata McGraw Hill; New Delhi
8. Nicolas Alexander International Retailing-Blackwell Business Publishers Ltd.
9. Arthur A Thompson,AJ Strickland, John E Gamble & Arun K Jain Crafting and Executing Strategy- Concepts and Cases –Tata McGraw Hill Publishing Company Ltd.
10. Abbas J Ali Globalization of Business- Practice and Theory – Jaico Publishing House
11. Margaret Bruce, Chistopher Moore, and Grete Birtwistle International Retail Marketing: A Case Study Approach
12. Allan M Findlay, Ronan Paddison and John A Dawson Retailing Environments in Developing Countries- Rutledge
13. Arun Chandra, Pradep Rau, & John K Ryans India Business: Finding Opportunities in This Big Emerging Market- Paramount Market Publishing Inc
14. Legal Aspects of Business –Akhileshwar Pathak- The McGraw Hill Companies

M.Com
IV Semester
CMH553: Risk and Insurance Management

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objectives:

- 1. To understand the nature of various insurance policies and its dimensions.**
- 2. To learn the insurance and risk management strategies.**
- 3. To understand the importance of corporate risks and individual risks and mitigation strategies.**
- 4. To provide the risk handling methods.**

Unit-1: Insurance Management: Definition of Insurance, Functions of Insurance, Characteristics of Insurance, Costs and benefits of Insurance, financial crisis, Pricing of Insurance, Investment and Solvency-Principal and Agent Relationship and Problems in Insurance Business.

Unit-2: Insurance Dimensions: Life and Non-Life Insurance, Liability Insurance, Health Insurance, Pension Plans and Regulations, Social Insurance, Nationalization of Insurance Business, IRDA Act 2000, Role of Government in Insurance Business and Economic Development and Insurance, Insurance Penetration Rate in India and Demand of Insurance Policy.

Unit-3: Risk and Insurance: Meaning and Definition of Risk, Risk and Uncertainty, Classification of Risk, Re-Insurance, Captive Insurance and Claims Settlement, and Procedure for Claims Settlement, Actuarial Management.

Unit-4: Legal Issues in Insurance Business: Insurance Contract, Underwriting, Insurance Ombudsman, Regulation of Insurance Business, Principles of Indemnity, Insurance Interest, Subrogation and Utmost Good Faith, Insurance Industry and Markets, Indian Insurance Market, Banking and Insurance, Insurance Management and Risk Management, Postal Insurance in India, and other Related Financial Services.

Unit-5: Crime Insurance: Commercial Crime Insurance Programmes, Commercial Crime Insurance Forms, Robbery and Burglary of other Property, Criminal and Tortious Behaviour of Insureds and Insurer, Negligence and Defenses of Negligence's.

Unit-6: Risk Management and Disaster Management: Definition, Meaning, Nature and Scope of Risk Management, Disaster Management its Meaning, Types of Disaster Management, Measures for Mitigating Disaster Management, Use of technology in Risk Management and Disaster Management, Steps in the Risk Management Process, Risk Management Tools, Risk Control, Risk Finance, Risk Management's Contribution to the Organization, Risk Management by Individuals and Corporates.

References:

1. Ben G Baldwin – New Life Insurance Investment Advisor.
2. Christopher L Culp – Art of Risk Management
3. Eric Breys – Insurance from under writing to derivatives (Asset Liability Management): Dimensalisation.
4. Emmelt J Vaughan – Essentials of Risk Management and Insurance.
5. George E Rejda – Social Insurance and Economic Security
6. Herold D Jr Skipper – International Risk and Insurance : An Environmental Management approach (Irwin McGraw Hill)
7. Lau A.C.K. – Risk Management Society Publishing, 1992(6)
8. Marks DORF Man – Introduction to Insurance
9. Parker and Beaver – Risk Management – Challenges and Solutions.
10. Philip Kepter – Risk Management and Insurance, 2nd Edition 1998
11. S.R.Diacon and R.L Cartee – Success in Insurance.
12. S.S.Huelouer Kenneth Blach Jr Life Insurance.
13. T.S.Mann- Law and practice of Life Insurance in India.
14. Walter Rielhoz and Partrier Liedthe- Strategic Issues in Insurance.
15. Wasow, Bernard and Raymond D.Hill (Editors) the industry in Economic Development University press, New York,1989.
16. Williams, Smith and Young – Risk Management and Insurance, 8th Edition.

M.Com
IV Semester
CMH 554: INTERNATIONAL FINANCIAL MANAGEMENT

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

OBJECTIVES:

- A. To orient the students on global business environment and international markets.**
- B. To make students understand the various risks an enterprise is exposed to on account of international transactions.**
- C. To provide knowledge and skills for hedging foreign currency risks.**

COURSE CONTENT AND STRUCTURE

Unit 1: Global Financial Environment

Evolution of International Monetary System, Bimetallism, Classical Gold Standard, Interwar Period, Bretton Woods System, Flexible Exchange Rate Regime, The current Exchange Rate Agreements, European Monetary System, Fixed vs. Flexible Exchange Rate Regime.

Unit 2: Balance of Payments

Introduction, Accounting Principles in Balance of Payments, Valuation and Timing, Components of the Balance of Payments, 'Surplus' and 'Deficit' in Balance of Payments, Importance and limitations of BOP Statistics, Relationship of BOP with other economic variables.

Unit 3: International Financial Markets

Motives for using International Financial Markets. Foreign Exchange Market – History and Transactions, interpreting Foreign Exchange Quotations, International Money Markets, International Credit Markets and International Bond Markets. Comparison of International Financial Markets.

Unit 4: Exchange Rate Determination

Purchasing Power Parity Theory, Interest Rate Parity Theory, International Fischer's Effect, Pure Expectations Theory.

Unit 5: Foreign Exchange Risk and Risk Hedging Strategies

Transaction Risk, Translation Risk, Economic Risk. Risk Hedging Strategies: Internal – Netting, Leads and Lags. External – Forwards, Futures, Options, Money-market Hedging, Currency Swaps.

Unit 6: Interest Rate Risk and Risk Hedging Strategies

Interest Rate Swaps, Forward Rate Agreements, Interest Rate Futures, Interest Rate Options, Caps, Floors and Collars, Swaption.

REFERENCES

1. Alan Shapiro: *Multinational Financial Management*, Prentice Hall, New Delhi.
2. Apte, Prakash, "International Finance – A Business Perspective", Tata Mc Graw Hill.
3. David B. Zenoff & Jack Zwick: *International Financial Management*.
4. Rita M. Rodriguez L. Bigame Carter: *International Financial Management*.
5. V. A. Avadhani: *International Finance- Theory and Practice*, Himalaya Publishing House.
6. Madura, Jeff, "International Corporate Finance", Thomson South-Western.
7. Sharan, Vyuptakesh, "International Financial Management", Prentice Hall of India.
8. Jain, Peyrard, and Yadav' "International Financial Management", MacMillan
9. J. Fred Weston, Bart: *Guide to International Financial Management*.
10. Robery O. Edmister: *Financial Institutions - markets and Management*.
11. A.V. Rajwade: *Foreign Exchange International Finance and Risk Management*, Prentice Hall.

M.Com
IV Semester
CMS555: Optional (FMAIS): FINANCIAL DERIVATIVE MARKETS

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: The objective of this course is to provide students with knowledge of hedging investments.

Unit-1: Introduction:

Meaning of Derivatives, forwards and futures contract, option, traders in futures and option markets, functions of derivatives market, world derivatives market and evolution of derivatives market in India.

Unit-2:

Forwards and Futures Contract: Valuation of forwards and futures, stock index futures, valuation of stock index futures, hedging using futures contract and stock index futures contract, adjusting the beta of portfolio using stock index futures.

Unit-3:

Options Contracts: Characteristics of option contracts, buyer and seller attitudes, option pricing, risk and return on equity option, Pay-off-on options, option trading strategies.

Unit-4:

Valuation of Options: A graphic analysis of call and put values, characteristics of option values, models of valuation of option, Binomial Option Pricing Model, applicability of Black and Scholes Model.

Unit-5:

Trading Risks and Regulations: Trading mechanism, types of orders, risks in derivatives trading, regulations on derivatives, and recent trends in derivatives market in India.

References

1. N.D.Vohra and B.R.Bagri, Futures and Options, Tata McGraw Hill, New Delhi.
2. John C Hull, Fundamentals of Futures and Options market, Pearson Education, New Delhi
3. Robert W Kolb, Understanding Futures Markets, PHI, New Delhi
4. Franklin R Edwards, Futures and Options, Tata McGraw Hill, New Delhi
5. V K Bhalla, Financial Derivatives and Risk Management, S Chand, New Delhi
6. Chance, Introduction to Derivatives and Risk management, Thomson Learning
7. D C Patwari, Options and Futures in an Indian Perspective, Jaico Publishers
8. I.M, Pandey, Advanced Financial Management, Vikas Publishing House, New Delhi.
9. William F. Sharpe, Gordon J Alexander and Jeffery V Bailey, Investments, Prentice Hall New Delhi
10. R.Mahajan, Futures and Options, Vision Books Pvt Ltd, New Delhi.
11. Prafulla Kumar Swain, Fundamentals of Derivatives, HPH
12. Business Dailies
13. Parasuraman, "Derivatives".
14. SSS Kumar, "Derivatives".

M.Com
IV Semester
CMS556: Optional (FMAIS): PORTFOLIO MANAGEMENT

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: The objective of this course is to provide students with an insight of constructing and managing portfolio.

Unit-1: Portfolio Construction: Markowitz Model - Efficient Frontier – Graphical Presentation - Portfolio Diversification – Indifference curves – Utility Analysis. Sharpe's Single Index Model – Diversification – Constructing Optimal Portfolio.

Unit-2: Capital Market Theory: Capital Asset Pricing Model (CAPM): Assumptions of CAPM – Risk Free Asset – Risk Free Lending and Borrowing – Capital Market Line (CML) – Security Market Line (SML) – Shifts in Security Market Line – Empirical tests of CAPM – Zero Beta Version of CAPM –Imposing Restrictions on Risk – Free borrowing – Consumption Oriented CAPM, Multi Beta CAPM.

Unit-3: Factor Models: Factor Models and Return Generating Process - One Factor Models – Multiple Factor Models- Sector Factor Models –Factor Models and Equilibrium.

Unit-4: Arbitrage Pricing Theory – Principle of Arbitrage-Constructing Arbitrage Portfolios- Pricing effects and interpreting APT Pricing Equation-Synthesis of APT and CAPM.

Unit-5: Portfolio Performance Evaluation and Portfolio Revision: Measures of Return- Rupee Weighted Returns, Time Weighted Returns- Risk Adjusted Measures of Performance- Sharpe's measure, Treynor's measure, Jensen's measure and Fama's measure- Portfolio Revision- Formula Plans.

References:

1. Francis Jack Clark, Investments-Analysis and Management, (McGraw Hill)
2. Elton Edwin J and Gruber Martin J, Modern Portfolio Theory and Investment Analysis, (John Wiley and Sons)
3. Sharpe William F, Alexander Gordon J, Bailey Jeffrey V, Investments, (Prentice Hall)
4. Stevenson R.A. and Jennings E H, Fundamentals of Investments, (West Publishing Company)
5. Luenberger David G, Investment Science, (Oxford University Press)
6. Bolton Steven E, Security Analysis and Portfolio Management, (Holt, Rinehart and Winston)
7. Christy George A and Clendenin John C, Introduction to Investments, (McGraw Hill)
8. Jones Charles P, Tuttle Donald L and Heaton Cherril, Essentials of Modern Investments, (Ronald Press Company, NY)
9. Sprecher Ronald C, Essentials of Investments, (Houghton Mifflin)
10. Renwick Fred Blackwell, Introduction to Investments and Finance, (The MacMillan Company, NY)
11. Rebell L Arthur and Gordon Gail, Financial Futures and Investment Strategy, (Dow Jones Irwin Illinois)
12. Sheimo Michael D, Using Dow Theory, (Vision Books)
13. Levy Haim and Sarnat Marshall, Investment and Portfolio Analysis, (Wiley Series in Finance)
14. Francis Jack Clark and Archer Stephen, Portfolio Analysis, (McGraw Hill series in Finance)
15. Van Horne James C, Financial Management and Policy, (Prentice Hall)
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18. Bodie Zvi, Kane Alex, Marcus J Alan, Investments, (McGraw Hill/Irwin)
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20. Machiraju, Indian Financial System, (Vikas Publishing House)
21. Machiraju, The Working of Stock Exchanges in India, (Wiley)

M.Com
IV Semester
Optional Stream – 2: Human Resource Development and Management (HRDAM)
CMS557: Optional (HRDAM): Organizational Behaviour

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To familiarize the students with individual, interpersonal and group-related perspectives in organizational behaviour along with the recent developments.

Unit-1: An Overview of Organisational Behaviour: Evolution – Concepts and Approaches - Consistency Vs Individual Differences in Human Behaviour - Tools for Learning about Behaviour in Organisations-Psychological contract-Challenges and Opportunities for Organisational Behaviour.

Unit-2: Individual Behaviour : Biographical Characteristics – Ability-Job Fit - Traits and Determinants of Personality - Personality-Job Fit Theory - Person- organization fit – Perception – Hallucination -Learning - Adult Learning Curve – Values and Attitudes – Sources and Types of Values and Attitudes –Emotional Intelligence-Pygmalion Effect- Job Satisfaction, Job Involvement, and Organisational Commitment- Attribution theory- stereotypes-coaching mentoring and counseling – Employee Involvement and Empowerment –Employee Engagement.

Unit-3: Group behaviour: Concept of Group - Stages of Group Development – Group Behaviour Model - Group Decision Making – Teams Vs Groups - Team Effectiveness Model - Interpersonal Relations – Johari Window – TA - Conflict – Conflict Process – Negotiation and Bargaining – Distributive Vs Integrative Bargaining – Managing Inter-group Relations.

Unit-4: Bases of Power – Power and Influence - Power Tactics - Organisation System: Organisation Design – New Work Designs and Technology – Tasks Characteristics Theories - Work Space Design – organizational designs and employee behaviour – Flex time –quality of work life and workplace stress-Telecommuting - work-life balance-Alcoholism and Drug Abuse Organisation Culture – Types and Functions of Culture - Learning Culture.

Unit-5: Organisation Change – Forces for Change – Lewin’s 3-step Model - Kotter’s 8-step plan-Managing Change – Impression Management – Innovation in Organizations – Organizational Citizenship Behaviours – Psychological Capital.

References:

- Adler N.J., International Dimensions of Organistional Behaviour, (Kent)
- Boony L.E. and Bowen D.D. (eds) , The Great Writings in Management and Organisation Behaviour, (Random House)
- Cranny C J, Smith P.C. and Stone E F (eds), Job Satisfaction (Lexington Books)
- Hewstone M., Fincham F.D. and Foster J., “ Psychology”, Blackwell.
- Jex S.M., ‘Organizational Psychology ‘, John Wiley
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- Schein E H, Organisational Psychology, (Prentice-Hall)
- Senge Peter M., The Fifth Discipline (Doubleday)

M.Com
IV Semester
CMS 558: LABOUR LEGISLATION

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective: To familiarize the students about the legal framework regulating the behaviour, working conditions, economic benefits, and union-management relationship.

Unit-1: Labour Laws: Growth of Labour Legislation in India – Principles of Labour Legislation Scope Indian Constitution and Labour Legislation – Administration of Labour Legislation in India – Enactment and Enforcement of Labour Laws - ILO and Labour Legislation Recent Trends.

Unit-2: Legislation Regulating Working Conditions in Factories: The Factories Act, 1948: Preliminary - Inspecting Staff – Health, Safety, and Welfare – Hazardous Process – Working Hours of Adults – Employment of young Person- Annual Leave – Penalties –Recent amendments and Case Laws.

Unit-3: Social Security Legislation: The Workmen’s Compensation Act, 1923; The Employees Provident Funds & Miscellaneous Provisions Act, 1952; The Payment of Gratuity Act, 1952; The Maternity Benefit Act, 1961; The Employees State Insurance Act, 1948 – Important Provisions –. New Pension Scheme - Recent amendments and Case Laws.

Unit-4: Legislation Pertaining to Wages and Bonus: The Payment of Wages Act, 1936; The Minimum Wages Act, 1948; The Payment of Bonus Act, 1965 - Main Provisions – Recent amendments and Case Laws.

Unit-5: Legislation Governing Industrial Relations: The Industrial Disputes Act, 1947 – Preliminary Authorities – Strikes & Lockouts – Lay-off, Retrenchment – Unfair Labour Practices – Penalties; The Industrial Employment (Standing Orders) Act, 1946; The Trade Unions Act, 1926 - Provisions – Interpretations and Case Laws - General Understanding of Other Labor Laws: The Child Labor (Prohibition & Regulation) Act, 1986; The Apprentices Act, 1961. Recent amendments and case laws.

References:

1. Chawla and Garg, *Industrial Law* - Kalyani
2. Kapoor N D and Tripathi P C, *Industrial Laws and Practice*, - Sultan Chand and Sons
3. Kapoor N D, *Handbook of Industrial Law*, - Sultan Chand and Sons
4. Maheshwari, *Industrial Law*, - National Publishing House
5. Malik P L, *Handbook of Industrial and Labour Law*, - Manas
6. Mishra S N, *Labour and Industrial Law* - Allahabad Law Agency

M.Com
IV Semester
Optional Stream -3: Banking and Insurance Management (BAIM)
CMS559: Optional (BAIM): Financial Services and Institutions

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objectives: The course aims at providing students with an understanding of the structure, Operations, Functions and procedures of financial institutions, Markets and different services provided by them.

Unit -1:Introduction: Nature and role of financial system, financial system and economic development – Indian Financial System, Monetary Management, R.B.I, - Functions, Promotional and Regulatory rules- Recent trends.

Unit-2:Merchant Banking and credit rating: concept- Functions, Lead Managers, underwriters to an issue – Bankers to an issue, Debenture Trustees, Portfolio Managers, - Regulation of Merchant Banking activities – Credit Rating agencies – Rating Methodologies and processes- Rating symbols- Recent Trends.

Unit-3:Special Financial Institutions in India – Concept; functions, project identification – promotion- Project appraisal and Evaluation – Procedure of lending – Supervision and follow up Entrepreneurship Development Programmes – Agencies to carry out EDP's, types, nature and evaluation – Regional imbalance - causes and consequences- Government policy – measures for Balanced development – Package measures of Development Banks – Recent trends. A brief study of development banks like IFCI –IDBI –ICICI-LIC and GIC –UTI – SFC's- SIDC's/SIIC's–IRBI – SIDBI – Recent Trends.

Unit-4:Financial Markets – Money and Capital markets – Money market, constituents, functions, call money market, REPOs and Reverse REPOs Money market instruments, treasury bills, commercial bills, trade bills, commercial papers and certificates of Deposit, The Discount Market – Discounting service – Discount and Finance House of India – Recent trends in Indian Money Market- Capital Market- Primary and Secondary markets, Depositories and Custodians- Depository system, National Securities Depository Limited- Central Depository Services(India Ltd.), Custodians, Stock Holding Corporation of India Ltd. Role of SEBI- Recent Trends.

Unit-5:Non banking Financial Companies: Concept, Functions, role of non banking financial intermediaries – Non banking companies – RBI and statutory commission – Public Deposits ,RBI's Directions on Acceptance of Public Deposits – Lease Financing, Hire Purchase finance. Factoring and Forfaiting, Venture Capital Financing – Mutual Funds – Investment Policies of non banking Financial Companies- Recent trends.

References

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- Kuchhal S.C – Industrial Economy of India – Chaitanya Publishing House
- Tarakeshwar and Martin P.D – Institutional Financing in India – Sahitya Bhawan – Agra.
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M.Com
IV Semester
Optional Stream-3: Banking and Insurance Management (BAIM)
CMS560: Optional (BAIM): Actuarial Management

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objectives: Objective of this course is to equip students with theoretical and practical knowledge of actuarial science in order to work in life and non-life insurance companies, designing innovative insurance products, research and consultancy and valuing financial contracts.

Unit-1:

Actuarial Risk Management: Nature, importance and scope of actuarial Risk Management, Functions of Actuarial Risk Management in Life and Non-life insurance business.

Unit-2:

Role of Actuaries in Social Security Sectors : Social security versus Actuaries Management, Valuation of a new scheme, legal versus actual coverage, benefit provisions, financial provisions, interrelationships between social security schemes and their demographic, economic and fiscal environment.

Unit-3:

Actuarial assumptions and Models : Actuarial assumptions and models for social security projections: features of actuarial assumptions, population projections – social security area population projections by marital status and dependency ratio's.

Unit-4:

Models in Risk Theory : Introduction, Compound Poisson, Negative binomial and binomial distributions credibility theory and survey of graduation theory. Actuarial present values of benefits in life insurance business.

Unit-5:

Insurance Business and Risk Models : Introduction, expected value principle, notion of utility and risk models for short term. Mortality tables, its functions, conversion tables and other tables.

References:

1. Shailaja R.Deshmukh : Actuarial Statistics, A introduction using 'R': University press : Private ltd.: 2009.
2. Hasey H. Panjer : Acturial Mathematics: Volume 35, American mathematical Society Providence, Rhode Island 2000.
3. Bowers N.L. : Gerber, Hickman, Jones and Nesbitt: Acturial mathematics, Society of Actuarial Itasca Llinois, 1988.
4. Benjamin and Pollard : The Analysis of Mortality and other actuarial statistics, Heinemann, London 1980.
5. Pierre Plamondon, Annedrouin et-al: Actuarial Practice in Social Security : International Labour Office: Geneva.
6. Mark S. Dorfman : Introduction to Risk Management and Insurance: Eight Edition, Prentice Hall of India, New Delhi – 2005, ISBN No. 81-203-2768-03.

7. Donald D.W.A. “ Compound Interest and Annuities – Certain”, 2 Ed., Cambridge(Eng.) Published for the Institute of Actuaries and the Faculty of Actuaries at the University Press, 1970.
8. R.E.Underwood, “ The Elements of Actuarial Science”, 4th Edition, Pitman.
9. Harry Freeman, “ Mathematics for Actuarial Students”, Cambridge at the University Press, 1949.

M.Com
IV Semester
CMS561: OPTIONAL (TAX): CORPORATE TAX PLANNING

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Objective:

The aim of this course is to familiarize the student with major latest provisions of the Indian tax laws and related judicial pronouncements pertaining to corporate enterprises having implications for various aspects of Corporate planning with a view to derive maximum possible tax benefits admissible under the law.

Unit 1: Tax Planning

Meaning of tax planning and management, tax evasion and tax avoidance; Nature and scope of tax planning and management in the corporate sector; Justification of corporate tax planning and management.

Computation of corporate tax: Carry forward and set off of losses in the case of certain companies under Sec. 79 of Income -tax Act, 1961; Computation of taxable income of companies; Computation of the amount of corporate tax liability; Minimum Alternate Tax; Tax on distributed profits of domestic companies; Tax on income distributed to unit holders.

Unit 2: Tax Concessions and Incentives

Implications of Tax concessions and incentives for corporate decisions in respect of setting up a new business, location of business and nature of business, E-way bill and it's scope.

Unit 3: Tax Management

Tax planning with reference to financial management decisions: Capital structure decisions; Dividend Policy; Bonus Share; Investments and Capital Gains.

Unit 4: Tax System and Funds

Tax planning with reference to managerial decisions: Owning or leasing of an asset; purchasing of assets by installment system or Hire System; Purchasing of an asset out of own funds or out of borrowed capital; manufacturing or buying; Repairing, replacing, renewing or renovating an asset; Sale of assets used for scientific research; Shutting down or continuing operations.

Unit 5: Tax Agreements

Tax Planning in respect of amalgamation or de-merger of companies or Slump sale or conversion of a firm into a company.

Foreign collaborations and incidence of taxation on domestic companies; provisions for relief in respect of double taxation; important Double Taxation Avoidance Agreements with different countries like USA, UK, Germany, France, etc.

REFERENCES:

1. Vinod K. Singhania, “Corporate Taxes - Planning and Management”, Taxmann
2. Girish Ahuja and Ravi Gupta, “Direct Taxes Planning and Management”, Bharat Publications.
3. Manoharan T N, “Direct Taxes”, Snow White Publications.

M.Com
IV Semester
CMS 562: OPTIONAL (TAX): GST BUSINESS MODELS

Work load: 3 hours lecture and 2 hours tutorial per week: total 4 credits

Course Objective:

The course is designed to provide students, a thorough and detailed knowledge of service tax, its systems and operations; CST, System of one country one tax and its operations and an overview of Goods and Service Tax structures.

Unit 1: GST and overview:

Introduction to GST : Historical background of VAT, MODVAT, CENVAT, GST council and its Frame Work; GST-I, GST-II and GST – III, GST-IV and other GST registration forms. S-GST, C-GST and UT-GST and integrated GST (I-GST)

Unit 2: GST Procedure:

Salient features of GST, Centre-state financial relationship under GST, State-Governments financial problems after GST era, advantages of GST, GST act on services tax and its impact on the common man, GST rules, formats on registration, payments, invoices – E-way bills returns and refund procedures and payments checked by the individual consumers.

Unit 3: GST Business Models:

GST business models of corporates, MSME's, hotels, Insurance Business, Banking Business, Transportation and agricultural and Agri – Business Sectors.

Unit 4: GST Tax Structure:

GST difference tax structure, slabs, reasons behind the zero tax and high tax rates, cess on luxury goods and services and its impact on the Indian economy. Particularly GST rates, on goods and GST rate structure and services.

Unit 5: Global GST Senario

Countries adopted GST in the world, rates on goods and services of different countries in the world. Successive stories and fit falls of GST-Australian GST model, European GST model, Canada GST model and India's GST model.

Unit 6: GST Analysis:

GST benefit to consumers, GST benefit to business community, GST benefit to Indian economy, GST benefits to poor people in India analysis of GST and assesses to economic impact of GST.

References:

1. Sodhani, Vineet, "Indirect Taxes", Taxmann Publications.
2. Manoharan, T.N. and Hari, G.R., "Indirect Taxes:", Snow White Publications.
3. Hiregange, Jain and Nayak, "Student's Handbook on Indirect Taxes", Puliani and Puliani.
4. Rajesh Kumar V and Sreekanth R K, "Indirect Taxes", Vittam Publications.

IV Semester B.Sc.								
Group I Core Subject	Theory BSc CHC- 281	Chemistry Paper IV	4	3	80	20	100	2
	Practical BSc CHP- 282	Chemistry Practical IV	3	3	40	10	50	1
Group II Elective	Theory BSC CHOE- 283	Chemistry in everyday life	2	2	40	10	50	1*
Total number of Credits for Subject in IV Semester:04								
V Semester B.Sc.								
Group I Core Subject	Theory BSc CHC- 331	Chemistry Paper V	3	3	80	20	100	2
	Theory BSc CHC- 332	Chemistry Paper VI	3	3	80	20	100	2
	Practical BSc CHP- 333	Chemistry Practical V	4	4	80	20	100	2
Total number of Credits for Subject in V Semester:06								
VI Semester B.Sc.								
Group I Core Subject	Theory BSc CHC- 381	Chemistry Paper VII	3	3	80	20	100	2
	Theory BSc CHC- 382	Chemistry Paper VIII	3	3	80	20	100	2
	Practical BSc CHP- 383	Chemistry Practical VI	4	4	80	20	100	2
Total number of Credits for Subject in I Semester to IV Semester:16								
Total number of Credits for Core Subject in I-VI Semesters:28								

*Credits for Elective Papers will be considered for the entire B.Sc. Programme

I-Semester
Food Chemistry and Biomolecules

UNIT I

Food and Nutrition: Introduction, Terminology used in food chemistry, classification of food, pH of foods., functions. Food as source of energy and structural material. Components of food – Carbohydrates, Proteins, Oils and Fats. Micronutrients-Vitamins, minerals. Chemical substances used in food preparation - water, common salt, baking powder, vinegar. Digestion of food- dissolution in the mouth, digestion in stomach and small intestine, absorption of food. Digestion of carbohydrates, proteins, oils and fats - Explanation. Food Processing. drying, salting, canning, pickling, smoking, packing and refrigeration Food additives, emulsifying agents, Texturing agents, flavoring and coloring agents ,antioxidants, sweeteners ,low caloric sweeteners, artificial sweeteners like glycamates,D-aminoacids,saccharin,aspartame,designer sweetners,sugar alcohols,corn sweeteners

Naturally occurring sweeteners: Stevioside, Monellin,curculin,Pentodin, Isovanillyll sweeteners .
Soft drinks-Components. Effects on health. 12hrs.

Unit-II

Vitamins :Introduction, classification,Fat soluble vitamins, source of vitamin, vitamin D, Niacin, structure and synthesis. Water soluble vitamins, pantothenic acid, cyanocobalamin, synthesis ,structure and deficiency disease's.

Photosynthesis of carbohydrate, mechanism of light phase reaction,.

Proteines : Oxytocin and vasopressin ,chemical synthesis and biological activity.

Antibiotics, Introduction, classification, synthesis of chloramphenicol

Lipids: Introduction, occurrence,biological functions,chemical and physical properties, Derived lipids, cholesterol and its biological functions 12hrs.

Reference Books:

1. Food: The Chemistry of its components-Tom Coultate, Kindle Edition.
2. Food Science and Technology-Geoffrey Campbelt-Platt,Wiley Blackwell, Kindle Edition.
3. Chemistry at Home: Exploring the ingredients in everyday products- John Emsley, Royal Society of Chemistry (2015).
4. Chemistry in daily life - Kripal Singh, Third Edition, Eastern Academy Education, PHI Learning Pvt. Ltd, New Delhi(2012).
5. Chemistry in everyday life-Shardendu Kislaya, Discovery Publishing House Pvt.Ltd(2011).
6. Food chemistry by H.K.Chopra and P.S.Panesar (Narosa Publishing)
7. Organic Chemistry of Natural Products,By Gurudeep R.Charwal(Vol-I and II) ,edited by M.Arora(Himalaya Publishing House)

II semester: Computers for Chemists, Laboratory Safety and Chemotherapy

UNIT I

Computers for Chemists

Basic structure and functioning of computer with a PC as an illustrative example.

Memory, Input/output devices, Secondary storage, Computer languages, Operating systems, Algorithm and Flow chart, programmes and packages, MS-word, EXCEL, PPT, CHEM SKETCH etc.

Demonstration and writing and drawing of chemical formulae and structure through chem sketch.

Plotting the various graphs such as pressure-volume (PV), pressure- temperature (PT), potentiometric, conductometric and colorimetric plots through EXCEL. 8h

LABORATORY SAFETY

Introduction. General laboratory protocols: Basic rules, Good Laboratory Practices. Chemical hazards, safety data sheets, symbols and hazard information, storage procedure, Physical hazards, Health hazards, Reaction hazards. Assessing the risks of hazards. Minimizing the risks of hazards: fume hood, ventilation, fire extinguisher, personal protective equipment's, Preparedness for emergencies from uncontrolled hazards: Importance of reporting incidents, response to common emergencies such as fires, explosions, chemical spills, chemical exposures, injuries. 4h

UNIT II

SERENDIPITY

The role of Chance in making Scientific Discoveries

What is Serendipity- Some Serendipous Inventions in Science; Guncotton, Velcro, Plastic, X-rays, Microwave, Superglue, Mauve, Teflon, Saccharin, Stainless steel, Matches. Role of Serendipity in Drug discovery; Inventions in Chemistry that enabled the modern world. 3h

CHEMOTHERAPY

Introduction. Classification – antibiotics-Chloramphenicol and Pencillin. Synthesis and Uses. Analgesics – Narcotic analgesics and Non-Narcotic analgesics-Examples and their uses. (Simple Synthesis to be included).

Sulphonamides-Preparation of sulphonamides.-Examples and their uses. Antiseptics and disinfectants-Examples and their uses. Hypoglycemic agents –Cancer treatment by Chemotherapy.

A brief account of medicinally important compounds. Compounds of aluminum as pharmaceuticals; compounds of phosphorous as pharmaceuticals; Compounds of iron as pharmaceuticals. Examples and uses. (Only specific examples) 4h

Laboratory Reagents:

Preparation of laboratory reagents and maintenance of electrodes and equipment's. Methods of expressing concentrations of solution, Preparation of reagents for qualitative analysis of organic and inorganic compounds. Precaution and safety measures during reagent preparation. 5h.

References:

1. Laboratory Safety, theory and Practice, 1st Edition, Editors: Anthony Fuscaldo and others Elsevier Publications, 1980.
2. Chemical Laboratory Safety and Security: A Guide to Developing Standard Operating Procedures. National Academies Press (2016). Board on Chemical Sciences and Technology , Division on Earth and Life Studies.
3. Chemistry Laboratory Safety Manual, Indian Institute of Science Education and Research, Tirupati.
4. Laboratory Safety Manual, NCBS, 2016.
5. Pharmaceutical Chemistry by Thyagarajan.
6. Science and serendipity: Famous accidental discoveries, Samira Shackle, Thursday, 2nd April 2015- NEW HUMANIST.
7. The role of serendipity in drug discovery. Thomas A. Ban, MD, FRCP- Dialogues in Clinical Neuroscience, 2006 Sep; 8(3): 335–344.
8. Five Chemistry Inventions that changed the modern world-THE CONVERSATION. June 2, 2015
9. Hannan, Patrick J. (2006). Serendipity, Luck and Wisdom in Research; Universe. ISBN 0-595-36551-5.
10. Practical Chemistry- Dr. O.P.Pandey, D.N. Bajpai, Dr. S. Giri
11. Vogel's Qualitative Inorganic Analysis- G. Svehla
12. Computers and their applications to Chemistry – Ramesh Kamari
13. Computers in Modern Chemistry – A. Kumar

III-Semester : Corrosion and Green Techniques

UNIT I

Corrosion : Introduction, definition, Types of corrosion, Galvanic corrosion, Crevice corrosion, Pitting corrosion, Erosion corrosion, Stress corrosion, Corrosion rate, definition, Factors affecting on corrosion rate

Metallic factor-Purity, Electrode Potential of metal, hydrogen over voltage, nature of corrosion product

Environmental factors-Temperature, pH of the medium, humidity, presence of impurities, electrical conductivity of the medium, velocity of the medium, concentration of the medium.

Prevention of corrosion: Material selection-Metals and alloys, metal purification, non-metallic, Alteration of environment-Changing media, inhibitors, Design-wall thickness, design rules, Coating-Metallic and other inorganic coatings, organic coating

Unit-II

Green Chemistry-Introduction, Principles, atom-economy, Prevention of waste, byproducts, hazardous products/chemicals, water as a solvent for organic reactions, ionic liquids, solidstate-solventless reactions, use of microwaves, careful use of protecting and deprotecting agents, use of catalytic reagents, Phase transfer catalysts and its synthetic applications.

Examples of Green synthesis: Synthesis of adipic acid, catechol, disodium iminodiacetate, Boots synthesis of brufen, Microwave assisted reactions in water-Hofmann elimination, Methyl benzoate to benzoic acid, oxidation of toluene and alcohols

Microwave assisted reactions in organic solvents:-Diels-Alder reaction and decarboxylation reaction, Green synthesis of compostable and widely applicable polylactic acid, plastic from corn.

Limitations of green techniques.

References:

1. Laboratory Safety, theory and Practice, 1st Edition, Editors: Anthony Fuscaldo and others. Elsevier Publications, 1980.
2. Chemical Laboratory Safety and Security: A Guide to Developing Standard Operating Procedures. National Academies Press (2016). Board on Chemical Sciences and Technology , Division on Earth and Life Studies.
3. Chemistry Laboratory Safety Manual, Indian Institute of Science Education and Research, Tirupati.
4. Laboratory Safety Manual, NCBS, 2016.
5. Text book of Physical Chemistry By Puri, Sharma and Pathania
- 6.
7. text book of ElectroChemistry By Glaston
8. Text book of Physical Chemistry By Atkins
9. Text book of Physical Chemistry By Bahl and Bahl
10. Text book of Physical Chemistry By Gurudeep Raj
11. Pharmaceutical Chemistry by Thyagarajan

Semester IV : Chemistry in Daily Life (Open Elective)

UNIT I

Food: Food as source of energy and structural material. Components of food – Carbohydrates, Proteins, Oils and Fats. Micronutrients-Vitamins, minerals. Chemical substances used in food preparation - water, common salt, baking powder, vinegar. Digestion of food- dissolution in the mouth, digestion in stomach and small intestine, absorption of food. Digestion of carbohydrates, proteins, oils and fats - Explanation. Food Processing. Food additives, preservatives and flavours. Explanation with examples for the preservation of food by the use of inhibitors, drying, salting, canning, pickling, smoking, packing and refrigeration. Food safety. Soft drinks- Components. Effects on health. 6 Hrs

Chemistry for our household requirements

Cleansing agents: Chemical composition of Soaps, detergents, dish washers, drain cleaners, bleaching powder, Tooth paste and shampoo. Stain removers – Explanation with some common examples.

Domestic items: Safety matches, wax candles, shoe polish, mosquito coils, household germicides and pesticides-their chemical composition.

Cosmetics: Talcum powder, nail polish, thinners, skin care, hair care, Lipsticks, sun protection lotions and creams, eye shadow and eyebrow pencils, antiperspirants, perfumes and deodorants- explanation with examples. 6 Hrs

UNIT

Chemistry for our future

Alternative sources of energy: Need for the search of renewable sources of energy.

Solar Energy: Basic properties of solar energy. Applications of solar energy. Transformation of solar energy. Solar heat collectors. Solar photovoltaic collectors. Applications of solar collectors. Examples. Solar power plant.

Wind Energy: Basic properties of wind energy. Applications of wind energy. Transformation of wind energy. Wind turbines. Operative characteristics of wind turbines. Wind power plant. Utilization of wind power. Examples. Trends in wind energy utilization.

Hydro power: Basic properties water energy. Transformation of water energy. Hydro power plant. Utilisation of hydro power. Examples. Trends in hydro power utilization. 6hrs.

Hydrogen energy: Production and applications.

Food adulterations-Definition, common harmful effects, detection of adulteration, Prevention, Food adulteration act, artificial ripening of fruits, explanation with examples'. Transformation of biomass energy. Applications of biomass.

Ocean energy- Principles of ocean thermal energy, conversion system. Principles of wave and tidal energy conversion. 6 Hrs

Reference Books:

1. Food: The Chemistry of its components-Tom Coultate, Kindle Edition.
2. Food Science and Technology-Geoffrey Campbelt-Platt,Wiley Blackwell, Kindle Edition.
3. Chemistry at Home: Exploring the ingredients in everyday products- John Emsley, Royal Society of Chemistry(2015).
4. Chemistry in daily life - Kirpal Singh, Third Edition, Eastern Academy Education, PHI Learning Pvt. Ltd, New Delhi(2012).
5. Chemistry in everyday life-Shardendu Kislaya, Discovery Publishing House Pvt.Ltd(2011).

6. Renewable energy sources and emerging technologies-D.P.Kothari, K.C.Singal and Rakesh Ranjan, Eastern Economy Edition.
7. Solar energy: fundamentals and applications- H.P.Garg and J.Prakash, Mc Graw Hill, First Revised Edition.
8. Biomass regenerable energy-D.O.Hall and R.P.Overend, Wiley-Blackwel(1987).
9. Introduction to wind turbine aerodynamics – Alois Peter Schaffarczyk, Springer(2014).
10. Hydrogen and fuel cells: Fundamentals, technologies and applications-Detlef Stolten, Wiley-Vest(2010).
11. New Trends in Green Chemistry - Ahluwalia V.K and Kidwai M.R, Anamalaya Publishers (2005).
12. Green Chemistry - Theory and Practical, Anastas, P.T and Warner J.K : Oxford University Press (1998).
13. Introduction to Green Chemistry- Matlack, A.S. Marcel Dekker (2001).
14. Introduction to Green Chemistry- Ryan, M.A. & Tinnesand, M., American Chemical Society, Washington (2002).

MANGALORE UNIVERSITY

REVISED CURRICULUM STRUCTURE AND SCHEME OF EXAMINATION OF

B.C.A. (BACHELOR OF COMPUTER APPLICATIONS)

Choice Based Credit System (CBCS)

2019-2020 Onwards

MANGALORE UNIVERSITY
Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

I / II/III/IV Semesters

	Courses	No. of Courses L/P	Instruction Hrs/week	Duration of Exam(hrs)	Marks			Credits
					IA	Exam	Total	
Group 1	5 Computer Application Courses	3T	3 x 4	3 x 3	3 x 20	3 x 80	3 x 100	3 x 2 =6
		2P	2 x 4	2 x 3	2 x 20	20 x 80	2 x 80	2 x 2 =4
Group 2	One course from 4 Electives	1T	1 x 2	1 x 2	1 x 10	1 x 40	1 x 50	1*1 =1
Group 3	2 Languages	2L	2 x 4	2 x 3	2 x 20	2 x 80	2 x 100	2 x 2 =4
	Elective Foundation	1T	1 x 2	1 x 2	1 x 10	1 x 40	1 x 50	1*1 =1
Group 4	EC & CC	1T	1 x 2	1 x 2	1 x 50	--	1 x 50	1*1=1
					Semester Credit Total			17

V Semester

	Courses	No. of Courses L/P	Instruction hrs/week	Duration of Exam(hrs)	Marks			Credits
					IA	Exam	Total	
Group 1	9 Compute Application Courses	6T	6 x 4	6 x 3	6 x 20	6 x 80	6 x 100	6 x 2=12
		3P	3 x 3	3 x 3	3 x 20	3 x 80	3 x 100	3 x 2 =6
					Semester Credit Total			18

VI Semester

	Courses	No.of Courses L/P	Instructi on hrs/ week	Duration of Exam(hrs)	Marks			Credits
					IA	Exam	Total	
Group 1	4 Computer Application courses	4 (T/P)	4x4	4x3	4x20	4x80	4x100	4x2=8
	Project work	Dissert ation	20		100	Project Report : 300 Presentati on & VIVA :100	500	10
						Semester Credit Total		18
Grand Total Credit for three year Degree Programme : 104								

MANGALORE UNIVERSITY
Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

I SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC131	Fundamentals of Information Technology	4	3	20	80	100	2
	BCAC132	Problem Solving using C	4	3	20	80	100	2
	BCAC133	Computer Organization	4	3	20	80	100	2
	BCAP134	Office Automation Lab	4	3	20	80	100	2
	BCAP135	C Programming Lab	4	3	20	80	100	2
II	BCACE136 BCACE137	E1 : Internet Basics & HTML E2: Cloud Computing	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC & CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

II SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC181	Basic Mathematics	4	3	20	80	100	2
	BCAC182	Object Oriented Programming using C++	4	3	20	80	100	2
	BCAC183	Database Concepts and Oracle	4	3	20	80	100	2
	BCAP184	C++ Lab	4	3	20	80	100	2
	BCAP185	DBMS Lab	4	3	20	80	100	2
II	BCACE186 BCACE187 BCACE188	E1 : Internet of Things E2: Big Data Analytics E3: Artificial Intelligence	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC & CC	2	2	50	-	50	1
		Total	34	27	210	640	850	17

MANGALORE UNIVERSITY
Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

III SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC231	Operating Systems & Linux	4	3	20	80	100	2
	BCAC232	Data Structures	4	3	20	80	100	2
	BCAC233	Visual Basic .NET Programming	4	3	20	80	100	2
	BCAP234	Operating Systems and Data Structures lab	4	3	20	80	100	2
	BCAP235	VB.Net Lab	4	3	20	80	100	2
II	BCACE236 BCACE237	E1 : Hardware & PC Maintenance E2 : Desktop Publishing	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC &CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

BCA206: Elective Courses: Course Detailed are attached in APPENDIX I

IV SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC281	Computer Graphics and Animation	4	3	20	80	100	2
	BCAC282	Java Programming	4	3	20	80	100	2
	BCAC283 BCAC284 BCAC285	E1: Data Mining E2: CONA E3: Business Statistics & Mathematics	4	3	20	80	100	2
	BCAP286	Computer Graphics and Animation Lab	4	3	20	80	100	2
	BCAP287	Java Lab	4	3	20	80	100	2
II	BCAOE288 BCAOE289	E1 : Fundamentals of ICT E2: E-Commerce	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC &CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

MANGALORE UNIVERSITY
Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

V SEMESTER

Group	Course Code	Course Particulars	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC331	Software Engineering	4	3	20	80	100	2
	BCAC332	Computer & Communication Networks	4	3	20	80	100	2
	BCAC333	Distributed Computing	4	3	20	80	100	2
	BCAC334	Web Technology	4	3	20	80	100	2
	BCAC335	Python Programming	4	3	20	80	100	2
	BCAC336 BCAC337 BCAC338	E1: Accounting & Financial Management E2: Android Application Development E3: SciLab Programming	4	3	20	80	100	2
	BCAP339	Web Applications Lab	3	3	20	80	100	2
	BCAP340	Python Programming Lab	3	3	20	80	100	2
	BCAP341 BCAP342 BCAP343	E1:AFM Lab / E2: AAD Lab / E3: SciLab	3	3	20	80	100	2
		Total	33	27	180	720	900	18

VI SEMESTER

Group	Course Code	Course Particulars	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC381	E-Commerce	4	3	20	80	100	2
	BCAC382	Network Security & Management	4	3	20	80	100	2
	BCAC383	Software Testing	4	3	20	80	100	2
	BCAC384 BCAC385 BCAC386	E1: Programming for Analytics E2: Business Statistics with R E3: Multivariate Data Analysis	4	3	20	80	100	2
	BCAC387	Project Work	20	3	100	Reports - 300 Presentation and Viva - 100 Total: 400	500	10
		Total	36	27	180	720	900	18

Total Marks : 5200

Grand Total Credit for three year BCA Degree Programme: 104

Common scheme of Practical Examination for I to VI Semesters

The practical examination in the concerned subject specified in the I Semester to VI Semester shall be conducted for 80 marks. There shall be two components – Problem solving and execution and Viva voce components. 80 marks can be distributed as follows.

Each Practical paper includes three Parts- PART A, PART B and PART C. **One question shall be asked in each part.**

Sl. No.	Details			Marks	Total
1.	PART A	i.	Problem solving and coding	08	18
		ii.	Compiling the code and debugging	06	
		iii.	Execution and testing	04	
2.	PART B	i.	Problem solving and coding	10	22
		ii.	Compiling the code and debugging	07	
		iii.	Execution and testing	05	
3.	PART C	i.	Problem solving and coding	11	25
		ii.	Compiling the code and debugging	08	
		iii.	Execution and testing	06	
4.	Record				10
5.	Viva –Voce				05
Total Marks					80

MANGALORE UNIVERSITY

Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

I SEMESTER BCA

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC131	Fundamentals of Information Technology	4	3	20	80	100	2
	BCAC132	Problem Solving using C	4	3	20	80	100	2
	BCAC133	Computer Organization	4	3	20	80	100	2
	BCAP134	Office Automation Lab	4	3	20	80	100	2
	BCAP135	C Programming Lab	4	3	20	80	100	2
II	BCACE136	E : Internet Basics & HTML	2	2	10	40	50	1
	BCACE137	E2: Cloud Computing						
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC & CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

Group I**Course-1****BCAC131 : Fundamentals of Information Technology****48 hours****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80**

Learning Objective: To impart the knowledge about the evolution of computers, classification, various peripherals of computers, types of softwares etc.

Learning Outcome : Able to identify various devices and their working principles.

UNIT I**12 Hrs.**

Computer Basics: Introduction, Characteristics computers, Evolution computers, Generation of computers, Classification of computers, the computer system, Application of computers. **Computer Architecture:** Introduction, Central processing unit- ALU, Registers, Control unit, system bus, main memory unit, cache memory, communication between various units of a computer system. **Components inside a computer system** – System case, Power supply, Mother board, BIOS, Ports and Interfaces, Expansion card, Ribbon cable, Memory chips, Processors.

UNIT II**12 Hrs**

Computer memory and storage : Introduction, memory representation, memory hierarchy, Random access memory, Types of RAM, Read-only memory, Types of ROM, RAM, ROM and CPU interaction. **Secondary Storage:** Types of secondary storage device - Magnetic tape, magnetic disk, Floppy disk, Hard disk, Advantages and disadvantages of magnetic disk, Optical disk, Types- CD, DVD, Blu ray disk, Advantages and disadvantages of optical disk, Magneto-optical disk, Memory stick, , Universal serial bus, Mass storage devices.

UNIT III**12 Hrs**

Input devices: Introduction, Types of input devices, Keyboard, Mouse, Introduction to Track ball, Joystick light pen, Touch screen and track pad. Speech recognition, digital camera, webcam, flat bed scanner, Optical character recognition, Optical Mark Recognition, Magnetic ink character recognition, Bar code reader. **Output devices:** Types of output, Classification of output devices, Printers- Dot matrix, drum printer, Ink jet, Laser, Hydra, Plotter, Monitor- CRT, Displaying graphics on CRT, Colour display on CRT, LCD, Differences between LCD and CRT, Other types of monitors, Voice response, Projector, Electronic white board.

UNIT IV**12 Hrs**

Computer programming languages: Introduction, Developing a program, Program development cycle, Types of programming languages, generation of programming languages, Features of a good programming language. **Computer software:** Introduction, software definition, relationship between software and hardware, software categories, Installing and uninstalling software, software piracy, software terminologies. Word processing software, **Spreadsheet** software: Excel environment, Copying cells using Fill handle, dragging cells, Formulas and functions, Inserting Charts, sorting. **Presentation software:** Introduction, , PowerPoint environment, creating a new presentation, working with different views, using masters, adding animation, adding transition, running slides. **Microsoft Access :** Access environment, Database objects.

Text Book:

1. ITL Education Solution Limited, **Introduction to Information Technology**, Pearson- Second Edition.

Reference Books:

1. A K SHARMA, **Computer Fundamentals and Programming in C**, Universities Press, 2nd edition, 2018
2. Peter Norton, **Introduction to Computers**, 7th edition, Tata McGraw Hill Publication, 2011
3. Anita Goel, **Computer Fundamentals**, Pearson Education, 2011.

Group I
Course-2
Theory/Week 4 Hrs
Credit :2

BCAC132: Problem Solving Using C

48 hours

IA: 20,
Exam: 80

Learning Objective: To develop skills in solving problems, to obtain knowledge about the structure of the programming language C and to develop the program writing and logical thinking skill.

Learning Outcome : To apply programming knowledge to create solutions to challenging problems, including specifying, designing, implementing and validating solutions for new problems

UNIT I

12 Hrs

Problem Solving techniques : Introduction , Problem solving procedure, **Algorithm:** Steps involved in algorithm development , Algorithms for simple problems : To find largest of three numbers, factorial of number , check for prime number ,check for palindrome , Count no.of odd , even and zeros in list of integers. **Flowcharts:** Definition , advantages, Symbols used in flow charts.Flowcharts for simple problems mentioned in algorithms. Psuedocode. **Introduction to C:** Overview of C Program, Importance of C Program, Basic structure of a C-program, Execution of C Program. **Constants, Variables & Data types:** Character set, C token, Keywords & identifiers, Constants, Variables, data types, Declaration of variables, assigning values to variables, defining symbolic constants.

UNIT II

12 Hrs

Operators and Expression: Arithmetic, Relational, logical, assignment, increment & decrement, conditional, bit wise & special operators, evaluation of expressions, Precedence of arithmetic operators, type conversions in expressions, operator precedence & Associativity, built in mathematical functions. **Managing Input and Output operations:** Reading & writing a character, formatted input and output. **Decision Making and Branching:** Decision making with if statement, simple if statement, the if else statement, nesting of if ... else statements, the else if ladder, the switch statement, the ?: operator, the go to statement. **Decision making and looping:** The while statement, the do statement, for statement, exit, break, jumps in loops.

UNIT III

12 Hrs

Arrays: Declaration, initialization & access of one dimensional & two dimensional arrays. Programs using one and two dimensional arrays- sorting and searching arrays. **Handling of Strings:** Declaring & initializing string variables, reading strings from terminal, writing strings to screen, Arithmetic operations on characters, String Handling functions,table of strings. **User defined functions:** Need for user defined functions, Declaring, defining and calling C functions return values & their types, Categories of functions: With/without arguments, with/without return values. Nesting of functions

UNIT IV

12 Hrs

Recursion: Definition, example programs. **Storage classes:** The scope, visibility & lifetime of variables. **Structures and union:** Structure definition, giving values to members, structure initialization, comparison of structure variables, arrays of structures, arrays within structures, Structure and functions, structures within structures. Unions. **Pointers:** Understanding pointers, accessing the address of a variable, declaring & initializing pointers, accessing a variable through its pointer, pointer expression, pointer increments & scale factor, pointers & arrays, Pointer and strings, passing pointer variables as function arguments. File Management- Create in Read/Write and Append mode, copying file. **The Pre-processor:** Macro substitution, file inclusion,

Text Books:

1. E. Balagurusamy, Programming in ANSI C, 7th Edition, Tata McGraw Hill.
2. Introduction to Information Technology IITL education solution Ltd, Second Edition

Reference Books:

1. K.R. Venugopal and Sudeep R Prasad, Programming with C, 4th Edition, Tata McGraw-Hill Education.
2. Yashavant P. Kanetkar, Let Us C, 10th Edition, Tata McGraw Hill, 2010.

Group-1
Coursre-3
Theory/Week:4 Hrs
Credits:2

BCAC133:COMPUTER ORGANISATION

48 hours

I.A: 20
Exam: 80

Learning Objectives: The objective of this subject is to introduce the number system and Boolean algebra. The course will also enable the student to understand the design components of a digital subsystem that required realizing various components such as Register, Counter .and etc.

Learning Outcome : At the end of this course students will learn various number systems , Boolean algebra concepts ,various design Components of Computer System like logical gates m registers, counters.

UNIT I

12 Hrs.

Digital computers and Digital system: Introduction to Number system, Decimal number, Binary number, Octal and Hexadecimal numbers, Number base conversion, Complements, Binary codes, Binary arithmetic's, Addition , Subtraction in the 1's and 2's complements system, Subtraction in the 9's and 10's complement system. **Boolean Algebra:** Basic definitions, Axiomatic definition of Boolean algebra, Basic theorems and properties of Boolean algebra, Venn diagram.

UNIT II

12 Hrs.

Digital logical gate: Boolean functions, Canonical and Standard forms, other logic operations, Digital logic gates, Universal gate. **Simplification of Boolean function:** The map method, Two and three variable maps, Four-variable maps, Don't care conditions, Product of sum Simplification, NAND implementation, NOR implementation. Implementation of EX-OR,EX-NOR using NAND and NOR gate.

UNIT III

12 Hrs.

Combinational Logic : Introduction, Design Procedure, Half adder, Full adder, half Subtractor, Full Subtractor, Binary parallel adder, BCD adder. **Combinational logic with MSI and LSI:** Code converter, Exclusive-OR and Equivalence functions. Magnitude comparator, Decoders, Encoders, Multiplexers, Demultiplexers.

UNIT IV

12 Hrs.

Sequential Logic: Introduction, Flip flops,RS-FF ,D-FF, T-FF, and JK-FF,Triggering of flip-flops, Master slave Flip flop, state table, and State diagram. State equations, Flip Flop excitation tables, Sequential circuits design. **Registers, Counters:** Synchronous Counter Design using RS, JK, D & T flip flops. Ripple counters Introduction, Registers, Shift registers, Timing sequences, Bidirectional shift register.

Text Book:

1. M.Morris Mano,Digital Logic and Computer design, PHI, 2015

References Books:

1. Thomas L Floyd, **Digital Fundamentals**, 10th Edition, Pearson, 2011.
2. Thomas. C. Bartee, **Digital Computer Fundamentals**, 6th edition, TMH.

Practical-I	BCAP 134: OFFICE AUTOMATION LAB	48 Hours
Practical/Week: 4 Hrs Credits: 2	Exercises in MS-Office package	I.A: 20 Exam: 80
Practical-II	BCAP 135: C Programming Lab	48 Hrs
Practical/Week: 4 Hrs Credits: 2	Exercises in C language	I.A: 20 Exam: 80

**Group-II
Course-1****Elective - I : Semester Supportive Course****24 Hours****Theory : 2 hrs/week
Credits : 1****BCACE 136-E1:Internet Basics & HTML****IA : 10
Exam : 40****Learning Objectives**

- To provides knowledge about basic concepts of internet and its applications and about various 5internet tools available. Also to learn HTML instructions to develop simple web pages
- **Learning Outcome :**
At the end of the course the students will be able to
- Understand features of Internet and email
- Develop Simple web pages using HTML & Style Sheets

UNIT I**12 Hrs**

The Internet : Introduction, Evolution, basic internet terms, Getting connect to internet, Internet applications, Data over the internet **Internet tools:** Web browser, Web browser features, Internet Explorer environment, Electronic mail, Email address structure, checking email,sending email, email attachment, How email works, advantages and disadvantages of email,

Search Engines: Searching an internet, refining the search, Instant messaging, Features of messengers.

UNIT II**12 Hrs**

Creating Web page using HTML tags: Concepts of HTML, Head & Body Sections,Building HTML documents using various text formatting tags: <H1>...<H6>, ,<U>,<I>, , <SUP><SUB><P> with align,
<BLOCKQUOTE>
<BODY> with attributes bgcolor, background,text, <HR> with size,color, Lists: Ordered, unordered and definition lists, <A>
Creating tables : <TABLE>,<CAPTION>,<TH><TR><TD> with various attributes
Creating frames <FRAMESET>,<FRAME> tags with attributes-
Creating FORMS with elements <Input> types textbox, radio, checkbox, list box, combo box,text area, submit, button , reset. Cascading Stylesheets : Inline, embedded and external stylesheets with examples by applying font, background and box properties.

Text Books :

1. ITL Education Solution Limited, **Introduction to Information Technology**, PearsonEducation, 2012
2. Steven Holzner, HTML Black book, dreamtech publisher, 2010

**Group II
Course-2**

**Elective - I : Supportive Course
BCACE 137-E2: CLOUD COMPUTING**

24 Hours

Theory/Week 2 Hrs

Credit :1

IA :10

Exam :40

Learning Objectives:

Introducing Cloud Computing, Provides knowledge about basic concepts of cloud types, services and Deployment models. To provide knowledge about cloud data storage.

Learning Outcome :

Analyze the Cloud computing setup with its vulnerabilities and applications & Assess cloud Storage systems and Cloud security, the risks involved, its impact and develop cloud application

12 Hours

UNIT I

Introduction to Cloud Computing:, History and Evolution of Cloud Computing, Roots of Cloud Computing , Layers and Types of Clouds ,Cloud , Desired Features of a cloud , Cloud Infrastructure Management, Infrastructure as a Service Providers, Platform as a Service Providers, Challenges and Risks.

Migrating into a Cloud: Introduction, Broad Approaches to Migrating into the Cloud, The Seven-Step Model of Migration into a Cloud, Migration Risks and Mitigation. **The Enterprise Cloud Computing Paradigm:**

Relevant Deployment Models for Enterprise Cloud Computing, Adoption and Consumption Strategies, Transition challenges ,The Cloud supply chain. **Virtualization** : Introduction to Virtualization , Virtualization technology Overview ,, Virtual machine provisioning and Manageability , ,Virtual machine migration services

UNIT II

12 Hours

Secure distributed data storage in cloud computing : cloud storage: From LANs to WAN, Moving From LANs to WANs, Existing Commercial Cloud Services, Vulnerabilities in Current Cloud Services, Technologies for data security in cloud computing, Database Outsourcing and Query Integrity Assurance, Data Integrity in Untrustworthy Storage, Web-Application-Based Security Multimedia Data Security Storage.

SLA Management in Cloud : Introduction , traditional methods of SLO management ,types of SLA , Life cycle of SLA, SLA Management in Cloud , Automated Policy Based Management.

Performance Prediction for HPC in Cloud : Grid and Cloud , Grid and Cloud integration. ,HPC in cloud

Cloud Best Practices :Business and technical benefits of cloud Computing , Understanding Amazon Web Services Cloud, Cloud Best Practices, **Data Security in Cloud Computing:** Introduction , data Security risk , Cloud computing and identity digital identity and data Security .

Text Book:

1. Arshadeep Bhaga and Vijaya Madiseti, Cloud Computing A Hands an Approach, Universities Press, 2014..
2. Rajkumar Buyya, James Broberg, Andrzej M. Goscinski, Cloud Computing: Principles and Paradigms, John Wiley and Sons Publications, 2016

Reference Books:

1. Kailash Jayaswal, Jaganath Kallakurchi, Donald & Dr.Deven Shah,Cloud Computing, Black Book, dream tech publisher.
2. Toby Velte, Anthony Venlte, Cloud Computing, A Practical Approach, Mcgraw-hill, 2009

MANGALORE UNIVERSITY

Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

II SEMESTER BCA

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC181	Basic Mathematics	4	3	20	80	100	2
	BCAC182	Object Oriented Programming using C++	4	3	20	80	100	2
	BCAC183	Database Concepts and Oracle	4	3	20	80	100	2
	BCAP184	C++ Lab	4	3	20	80	100	2
	BCAP185	DBMS Lab	4	3	20	80	100	2
II	BCACE186 BCACE187 BCACE188	E1 : Internet of Things E2: Big Data Analytics E3: Artificial Intelligence	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC &CC	2	2	50	-	50	1
		Total	34	27	210	640	850	17

Group-I
Course-4

BCAC 181: BASIC MATHEMATICS

48 Hours

Theory:4 Hrs/week

IA: 25

Exam: 75

Learning Objectives:

To study Foundation of mathematics like Algebra, Trigonometry, Calculus, Set Theory, Logical Statements, Relations and Matrix Algebra

Learning Outcome :

Students will understanding of the foundations of mathematics, Perform computations in mathematics
Develop problem-solving skills required for Computer Applications.

UNIT I

12 Hours

Algebra: Logarithms- Introduction, Definition, Laws of operations, change of base, Permutations and combinations **Binomial theorems-** Introduction, Binomial theorem, Position of terms.

Analytical geometry: Introduction, directed line, midpoint, distance between two points, Section formula, external division, coordinates of a centroid, Area of a triangle. **The straight line** – slope of a straight line, different forms of equations of the straight line. **Circle** -The equation of a circle, different forms of circles, General equation of the circle, equation of tangent and normal to the circle, Ellipse

UNIT II

12 Hours

Trigonometry: Introduction, Measurement of angles, trigonometric functions, relation between trigonometric functions, signs of trigonometric functions, trigonometric functions of standard angles.

Calculus: Limit of function, continuity of a function. **Differentiation:** Derivative of a function of one variable, Power function, constant with a function, sum of functions, product of two functions, quotient of two functions. **Integration-** Indefinite integral, rules of integration, some standard results and examples, definite integral.

UNIT III

12 Hours

Set theory: Basic concepts of Set theory, notation, Inclusion and Equality of sets, The power set, some operations on sets, Venn diagrams, ordered pairs, n-tuples, Cartesian products. **Relations:**

Relations, properties of binary relations in a set, relation matrix and the graph of a relation, equivalence relations, compatibility relations, composition of binary relations, partial ordering, partially ordered set

Functions: Definition and Introduction, composition of functions, Inverse functions, Binary and n-ary operations, characteristic function of a set.

UNIT IV

12 Hours

Logical statements and Truth tables

Introduction, definition, truth tables, negation, Compounding, Negation of compound statements, Tautologies and Fallacies, Prepositions, Algebra of Prepositions, Conditional statements, Biconditional statements, Arguments, Joint Denial. **Matrix Algebra:** Introduction, definition, types of matrices, scalar multiplication of matrices, equality of matrices, matrix operations, Addition and subtraction, Multiplication, Transpose of a matrix, Determinants of a square matrix, determinants of order two, Cramer's rule, determinant of order three, expansion of the determinants, minors of a matrix, co-factors of a matrix, adjoint of a square matrix, inverse of a matrix (using adjoint matrices –cofactor method), rank of a matrix.

Text Books :

1. D.C. Sanchethi & V.K. Kapoor, **Business Mathematics**, 11th edition, Sulthan Chand & sons.
2. JP Tremblay, R Manohar, **Discrete Mathematical Structures with Applications to Computer Science**, 3rd edition, Tata McGraw Hill publication

Reference books:

1. Padmalochan Hazarika, **A Textbook of Business Mathematics**, 2nd Edition, S. Chand Publishing, 2010
2. Ross Sharon Cutler, Kolman, Bernard, **Discrete Mathematical Structures**, Phi Learning, 2008

Group-I		48 hours
Course -5	BCAC 182: OBJECT ORIENTED PROGRAMMING USING	
Theory/Week:4 Hrs	C++	I.A: 20
Credits:2		Exam: 80

Learning Objects :

To understand concept of Object Oriented Programming and Create Software applications using OOPs Concept.

Learning Outcome :

On Completion of Course students will understand how to apply the major object-oriented concepts to implement object oriented programs in C++.

UNIT I**12 Hrs**

Principles of Object Oriented programming: Basic Concepts, benefits, application.

Beginning with C++: Program features, comments, cin, cout, return statement, Structure of a C++ program. **Tokens, expressions and control structures:** Tokens, keywords, identifiers, basic and derived data types, symbolic constants, declaration of variables, dynamic initialization of variables, reference variables, the operators::, ::*, .*, delete, endl, new, setw. Typecast operator, expression and implicit conversions, operator precedence, control structures – while, do-while, if, and switch.

UNIT II**12 Hrs**

Functions in C++: main function, Prototyping, call and return by reference, inline functions, default arguments, const arguments, function overloading, mathematical functions **Classes and objects:** structures, specifying a class, creating objects, accessing class members, defining member functions, making outside functions inline, nesting of member functions, private member functions, arrays within a class, memory allocation for objects, static data members, static member functions, arrays of objects, objects as function arguments, friends functions, returning objects, const member functions, pointers to members.

UNIT III**12 Hrs**

Constructors and destructors: Parameterized constructors, multiple constructors, constructors with default arguments, dynamic initialization of objects, copy constructor, dynamic constructors, constructing two dimensional arrays, const object, destructors, memory allocation to an object using destructor

Operator overloading: defining, overloading unary and binary operators, overloading binary operators using friend functions, manipulation of strings using operator overloading, rules for overloading operators, type conversions – basic to class, class to basic, one class to another class.

UNIT IV**12 Hrs**

Inheritance: Defining a derived class, single inheritance, protected members, multilevel inheritance, multiple inheritance, hierarchical inheritance, hybrid inheritance, , containership, virtual base classes, abstract classes, constructors in derived classes, nesting of classes. **Pointers, virtual functions, polymorphisms:** Pointers to objects, this pointer, pointers to derived classes, virtual functions.

Text Book:

E Balagurusamy, **Object Oriented Programming with C++**, 5th Edition, Tata McGraw hill Publication.

Reference Books:

1. D Ravichandran, **Programming with C++**, Third Edition, McGraw hill 2011
2. Robert Lafore, **Oriented Programming in C++**, Galgotia Publications Pvt. Ltd, 2006..

Group I**Course -6****Theory/Week 4 Hrs****Credit :2****BCAC 183: Database Concepts and Oracle****48 hours****IA: 20****Exam: 80****Learning Objectives:**

To provide knowledge about RDBMS Concepts ,SQL Concepts and PL/SQL Programming. To provide knowledge about database normalisation and to learn theory behind data models and query Languages.

Learning Outcome:

- The student will be able: To describe data models and schemas in DBMS
- To understand the features of database management systems and Relational database.
- To Demonstrate an understanding of the relational data model and use SQL.
- To understand the functional dependencies and use SQL solutions to a broad range of query and data update problems.

UNIT I**12 Hrs**

Database and Database Users: DBMS Definition , Characteristics of the Database Approach, Advantages of Using a DBMS, Database Users, Database Administrators .

Database System concepts and architecture: Data Models, Schemas, and Instances, Three-schema architecture and Data Independence, Database Languages and Interfaces, The Database System Environment, Classification of Database Management Systems.

Data Modeling Using the Entity-Relationship Model : High-Level Conceptual Data Models for Database Design, An example database application, Entity Types, Entity Sets, Attributes and Keys, Relationships, Relationship Types, sets, roles, and Structural Constraints, Weak Entity Types, ER Diagrams. Design issues.

UNIT II**12 Hrs**

Relational Data Model, Relational Constraints: Relational Model Concepts, Relational model Constraints and Relational Database Schemas, Update Operations, transactions and Dealing with Constraint Violations.

Relational Algebra: Unary relational algebra Operations : SELECT and PROJECT, Relational Algebra operations from Set theory, Binary relational operations - JOIN and DIVISION, Additional Relational Operations. **Basics of Functional dependencies and Normalization for Relational databases:** Functional dependencies, Normal Forms based on primary keys, General definitions of second and third normal forms, Boyce-Codd Normal form. **Disk Storage, basic file structures and Hashing:** Secondary storage devices, Buffering of Blocks, Placing File Records on Disk, Operations on Files, Files of Unordered Records (Heap Files), Files of Ordered Records (Sorted Files), Hashing Techniques.

UNIT III**12 Hrs**

SQL-The Relational Database Standard : Data manipulation in DBMS, Data types, SQL commands: Create Table, Inserting data, SELECT, DELETE, UPDATE, ALTER TABLE, DROP TABLE, RENAME, DESCRIBE. (Explain with syntax and examples) Computations on table data, DUAL, SYSDATE, UNION, INTERSECT MINUS CLAUSE ORACLE functions, DATA constraints on table, USER_CONSTRAINT TABLE, defining and dropping Integrity constraint in ALTER TABLE, Default value concepts, GROUP BY, HAVING, ORDER BY, Sub queries, Joins. SQL transaction commands COMMIT, ROLLBACK and SAVEPOINT.

UNIT IV**12 Hrs**

Introduction to PL/SQL: PL/SQL structure , **CURSORS:** Definition, Types of cursors , cursor attributes ,Parameterized cursors, Exception Handling: Need for exception handling , named Exception handlers, RAISE_APPLICATION_ERROR PROCEDURE, Stored Procedures and functions, Package Database triggers.

Text Books:

1. RamezElmasri and ShamkanthB.Navate, Fundamentals of Database Systems, 7th Edition, Pearson Education
2. Ivan Bayross, SQL/PL/SQL- the Programming language of Oracle, 2nd Revised edition (or 4th revised Ed), BPB Publications

Reference Books:

1. Abraham Silberschatz, Henry Korth and S. Sudarshan, Database Systems Concepts, 3rd edition, McGraw Hill International Editions.
2. C J Date, Introduction to Database systems, Addison-Wesley.

Practical-III	BCAP 184: C++ LAB	48 Hours
Practical/Week: 4 Hrs Credits: 2	Exercises on C++ programming	I.A: 20 Exam: 80

Practical-IV	BCAP 185: DBMS Lab	48 Hrs
Practical/Week: 4 Hrs Credits: 2	Exercises on DBMS problems	I.A: 20 Exam: 80

Group II
Course-3

Elective -II: Expanded Course **BCACE 186: -E1: Internet of Things**

24 Hours

Theory/Week 2 Hrs

IA :10

Credit :1

Exam :40

Learning Objectives:

To learn Basic concepts behind IoT and to study design principles for Connected devices , IoT communication protocols , internet based connectivity , Sensor technologies and Sensor data Communication protocols

Learning Outcome :

Students will be fully aware of Technology behind IoT , Design Principles for Connected devices ,IoT communication protocols and internet based communication.

UNIT I

12 Hrs

Internet of Things Overview : IoT Definition , IoT vision ,smart and hyper connected devices , IoT conceptual framework, IoT Architectural view, Technology behind IoT , Components of IoT system, ,Development tools,APIs and Device interfacing components , Platform and integration tools ,Sources of IoT , M2M communication , M2M architecture, Software and Development tools, IoT examples. **Design Principles for Connected Devices :** Introduction , Modified OSI model for IoT /M2M systems,ITU-T reference model ,Communication technologies. **Design Principles for Web :** Web Communication protocols for connected devices ,Message Communication protocols ,Communication Gateway protocols-SOAP ,REST,HTTP RESTFUL and WEBSOCKETS

UNIT II

12 Hrs

Internet Connectivity -Introduction , Internet connectivity , Internet based communication , IP addressing in IoT. Data Acquiring and storage , Organising the data Transactions on stored data. **Internet Connectivity** - Introduction , Internet connectivity , Internet based communication , IP addressing in IoT. Data Acquiring and storage , Organising the data Transactions on stored data

TEXT BOOK :

1. Arshadeep Bhaga and Vijaya Madiseti, Internet of Things, A Hands an Approach, Universities Press, 2014.
2. Raj Kamal, *Internet of Things: Architecture and Design Principles*, Mc Graw Hill Education .

Reference Books:

1. Rob Barton, Gonzalo Salgueiro, David Hanes, IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things, Cisco Press,2017.

Group II
Course-4

Elective -II: Expanded Course BCACE 187-E2: Big Data Analytics

24 Hours

Theory/Week 2 Hrs
Credit :1

IA :10
Exam :40

Learning Objectives:

- To provides an overview of approaches facilitating data analytics on huge datasets.
- To Introduce various Technologies for Handling Big Data

Learning Outcome :

At the end of the course the students will be understand:

- Basic Concept of Big Data
- Hoop Ecosystem , Role of Hbase and MapReduce Frame work

UNIT I

12 Hrs

Getting an Overview of Big Data :- What is Big Data. History of Data management – Evolution of Big Data. Structuring of Big Data. Types of data, Structured Data, Unstructured Data, Challenges Associated with unstructured Data, Semi-Structured Data, Elements of Big Data, Big Data Analytics, Advantages of Big Data Analytics, Careers in Big Data. **Exploring the use of Big Data in Business Context:-** Use of Big Data in social networking, Use of Big Data in preventing Fraudulent activities, Use of Big Data in Detecting Fraudulent activities in Insurance Sector, Use of Big Data in Retail Industry. **Introducing Technologies for Handling Big Data :-** Distributed and Parallel Computing for Big Data, How data models and computing models are different? Introducing Hadoop, Cloud Computing and Big Data, In-Memory Computing Technology for Big Data. **Understanding Hadoop Ecosystem:-** Hadoop Ecosystem, Hadoop Distributed File System, MapReduce, Hadoop YARN, Introducing Hbase, Combining Hbase and HDFS, Hive, Pig and Pig Latin, Sqoop, ZooKeeper, Flume, Oozie.

UNIT II

12 Hrs

Understanding MapReduce, Fundamentals and Hbase:- The MapReduce Framework, Techniques to Optimize MapReduce Jobs, Uses of MapReduce, Role of Hbase in Big Data Processing. **Understanding Big Data Technology Foundations:-** Exploring the Big Data Stack, Physical Redundant Networks, Virtualization and Big Data, Virtualization Approaches. **Storing Data in Databases and Data Warehouses:-** RDBMS and Big Data, Non-relational Database, Polyglot Persistence, Integrating Big Data with Traditional Data Warehouses, Big Data Analysis and data Warehouse, Changing Deployment Models in Big Data Era

Text Book:

1. DT Editorial Services, Big Data Black Book Black Book, Dreamtech Press Publications, 2016

Reference Books:

1. Furht, Borko, Villanustre, Flavio, Big Data Technologies and Applications, Springer publication, 2016.
2. Vijayalakshmi Radha and Shankarmani, Big Data Analytics Wiley Publication, 2016.

Group II
Course-5

Elective -III: Expanded Course BCACE 188: Artificial Intelligence

24 Hours

Theory/Week 2 Hrs
Credit :1

IA :10
Exam :40

Learning Objectives:

- To provide a strong foundation of fundamental concepts in *Artificial Intelligence*
- To enable the student to apply these techniques in applications which involve perception, reasoning and learning

Learning Outcome :

At the end of the course the students will

- Aware various searching techniques, constraint satisfaction problem and example problems
- Able to apply these techniques in applications which involve perception, reasoning and learning
- knowledge of real world Knowledge representation.

UNIT I

12 Hrs

Introduction : What is AI ? Early work in AI, Importance of AI, AI and its related fields ,AI techniques

Problems , Problem space and search : Defining the problem as state space search ,Control strategies, heuristic search **Heuristic search techniques:** Generate and test, Hill climbing : Simple hill climbing, steepest-Ascent hill climbing , best- first search ,climbing agendas , problem reduction ,constraint specification . **Knowledge Concepts:** Introduction ,definition and importance of knowledge , some knowledge based systems, Knowledge representation , organization ,manipulation , acquisition

General concepts in Knowledge acquisition : Introduction learning , types of learning , general learning model , performance measures

UNIT II

12 Hrs

Pattern recognition : Introduction ,the recognition and classification process , Learning classification , Patterns , Recognizing and understanding speech . **Expert System architecture :** Introduction , characteristics features of expert system , background history , applications , importance of expert system , rule based architectures . **LISP and other AI Programming language :** Introduction to LISP ; syntax and numeric functions , Basis List manipulation function , functions , predicates and conditionals , input , output and local variables , iteration and recursion , , property lists and array , miscellaneous topic , PROLOG and other AI programming languages .

Text Book:

1. Elaine Rich and K.Knight , Artificial Intelligence , TMH 3rd edition, 2009
2. RAJENDRA AKERKAR , Introduction to AI and Expert Systems , PHI publications , 2014

Reference Books:

1. Stuart Russell, Peter Norvig, Artificial Intelligence: A Modern Approach, 2nd Edition, Pearson education
2. Saroj Kaushik, Artificial Intelligence, Cengage Learning India, 2011

MANGALORE UNIVERSITY
Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

III SEMESTER BCA

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC231	Operating Systems & Linux	4	3	20	80	100	2
	BCAC232	Data Structures	4	3	20	80	100	2
	BCAC233	Visual Basic .NET Programming	4	3	20	80	100	2
	BCAP234	Operating Systems and Data Structures lab	4	3	20	80	100	2
	BCAP235	VB.Net Lab	4	3	20	80	100	2
II	BCACE236	E1 : Hardware & PC Maintenance	2	2	10	40	50	1
	BCACE237	E2 : Desktop Publishing						
	BCACE238	E3: Excel Programming with VBA						
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC &CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

Group-I**48 hours****Course-7****BCAC 231: OPERATING SYSTEM & LINUX****Theory/Week: 4 Hrs****I.A: 20****Credits: 2****Exam: 80****Learning Objectives:**

- To make students understand the purpose, role, structure, functions, application of operating systems, Understand services provided by operating systems and to study Linux file system and commands.

Learning Outcome :

- At the end of the course students will able to Analyze the structure of OS and basic architectural components involved in design Analyze the various resource management techniques conceptualize the components involved in designing a contemporary OS
- Learn Linux Operating system basics

UNIT I**12 Hrs**

Introduction : Operating System, Simple Batch Systems, Multi programmed Batched Systems, Time Sharing Systems, Real-Time Systems, Multi-processor Systems. **System Components, Operating System Services. Process :** Process Concept, Process Scheduling, Cooperating Process, **Threads**(Thread Concept, Single and Multiple Threads, Benefits) : **CPU Scheduling:** Basic Concepts, Scheduling Criteria, Scheduling Algorithms. **Process Synchronization.** The Critical Section Problem, Semaphores

UNIT II**12 Hrs**

Deadlocks: Deadlock Characterization, Methods of Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock. **Memory Management.** Logical versus Physical Address Space, Swapping, Contiguous Allocation (Memory Allocation, Fragmentation), Paging(Basic Method), Segmentation (Basic Method). **Virtual Memory.** Demand Paging, Page Replacement, Page Replacement Algorithms, Thrashing (concept). **File System.** File Concept, Access Methods

UNIT III**12 Hrs**

An Introduction to Linux : Introduction, About Operating Systems, Free and Open Source Software, Origin of Linux, Linux Kernel, Linux Features, Linux Distributions, Linux Opportunities, Introduction About Linux Distributions, RPM Based Distributions, Deb Based Distributions. **Managing Linux Files and Folders :** Introduction, Linux Files and Folders, Creating Files and Folders, Managing Files and Folders, Searching for Files, Linux File System, Linux File Managers. **Linux Administration basics**

UNIT IV**12 Hrs**

Linux files system, login and logout. **Linux commands:** Command format, Directory oriented command, wild card characters, File oriented commands, File Access Permissions, Process oriented commands, Background processing, Communication oriented commands, General purpose commands, **Pipe and Filters** related commands, **vi editor, Shell programming, System administration.**

Text Books:

1. Abraham Silberschartz and Peter Galvin, **Operating System Concepts**, 6th edition, TMH
2. K.L. James, **Linux: Learning the Essentials**, PHI learning private limited, 2011
3. B Mohammed Ibrahim, **Linux: A Practical Approach**, FireWall Media, 2009

Reference books:

1. Andrew S Tanenbaum, **Operating System Design and Implementation**, PHI
2. Milan Milenkovic, **Operating Systems**, TMH
3. Cristopher Negus, Dreamtech, **Red Hat Linux 9 Bible**, Wiley Publication

Group-I**48 hours****Course-8****BCAC 232:DATA STRUCTURES**

Theory/Week 4 Hrs

I.A: 20

Credits :2

Exam: 80**Learning Objectives:**

- To choose the appropriate data structure and algorithm design method for a specified application.
- To learn the systematic way of solving problems, various methods of organizing large amounts of data.

Learning Outcome

- To describe the usage of various data structures
- To choose the appropriate data structure to solve a programming problem
- To demonstrate various methods of organizing large amounts of data.

12 Hrs**UNIT I****Introduction to Algorithms: Preliminaries:** Introduction, Algorithmic notations, Control Structure**Algorithms:** Definition and Characteristics of an algorithm. **Data Structure :** Definition, Types of Data structures. **Linear Data Structure - Arrays :** Operations on linear structure, Arrays, Definition, Memory representation of one and two dimensional arrays. Representation of Polynomial using arrays, Sparse matrices**UNIT II****12 Hrs**

Sorting and Searching : **Sorting** -Introduction , bubble sort, Insertion sort, Selection sort, Merge sort, Shell sort, Radix sort. **Searching** – Introduction, Linear search, Binary Search, Comparisons of searching techniques. **Linked List:** Introduction, characteristics, types of linked list, Representation of singly linked list in memory, Dynamic memory allocation, Memory allocations and garbage collection, Singly linked list – Operations, algorithms, Circular linked list – Operations, Linked representation, Doubly linked list – Linked Representation , Operations

UNIT III**12 Hrs**

Stack ,Arithmetic expression, Queue : **Stack** – Array representation of stacks, Linked representation of stacks, Operations, Applications of stacks- Recursion, Implementation of recursive procedure by stack (factorial function and Fibonacci sequence). **Arithmetic expression:** prefix, infix and postfix notation, infix to postfix conversion, evaluation of postfix expression. **Queues:** Array representation of queue, Linked representation of queue Types of queue- Simple queue, circular queue, double ended queue, priority queue. Operations on queues

UNIT IV**12 Hrs**

Trees : Terminologies, tree properties, binary tree-properties, memory representation – Array and Linked representation, Binary search tree – Creation through insertion, searching, Tree traversals- recursion algorithms, Applications of binary trees - representation of an Expression using tree

Graphs: Terminologies, Matrix representation of graphs, Traversals: Breath First Search and Depth first search.**Text Books :**

1. Seymour Lipschutz, Data Structures with C, Schaum's Outlines Series, Tata McGraw Hill, 2011.
2. Horowitz Shani and etc et. Fundamentals of Data Structures in C, Universities Press, 2nd edition, 2008.
3. R. Venkatesan and S. Lovelyn Rose, Data Structures First Edition:2015 , Wiley India Pvt. Ltd. Publications

Reference Books:

1. Yedidiah Langsam, Moshe J, Augenstein and Aaron M, Tenenbaum, Data Structures Using C and C++, , 2nd Edition, Pearson Educations.
2. J.P Trembly and Sorenson, An Introduction to Data Structures with Applications, 2nd Edition,, McGraw Hill 2000.

Group I
Course -9

48 hours

Theory/Week: 4 Hrs

BCAC 233: VISUAL BASIC .NET PROGRAMMING

Credits: 2

I A: 20

Exam: 80

Learning Objective: To learn programming with graphical interface using object oriented concept .

Learning Outcome : To develop skill in VB .NET framework, tools, programming and connectivity with databases.

UNIT I

12 Hrs.

Essential Visual Basic .NET, Working with Visual Basic .NET, New features, .NET framework and common language runtime, system name space File extensions in VB.Net, The visual Basic integrated Development Environment : start page, menu system, tool bars, New project dialog box, graphical designers, code designers, Intellisense, object browser, Toolbox, Solution explorer, property window, dynamic help window, component tray, server explorer, output window, task list, command window

The Visual Basic Language: Visual basic statements- General syntax with keywords public, protected, friend, private, static, readonly. Option and import statements, Declaring constants and variables (with public, protected, friend, private, static, readonly.) Datatypes, datatype conversion, checking data types, declaring arrays and dynamic arrays, Redim and Preserve keywords, Handling Strings, string handling functions, conversion between strings to numbers and vice versa, characters and character codes, Operators, Operator precedence, commenting, Decision making: if...else, select case statements, Selections - switch and choose, Loop - Do, For, For Each...Next, While statements; With statement, Math methods, dates time properties, formatting date and time, End statement

UNIT II

12 Hrs

Sub procedures and Functions: scope, exceptions, creating Sub procedures and Functions with private and public only, passing variable no. of arguments, using optional procedure arguments, preserving variable's values between Procedure calls with static variables, scope- block, procedure, module, name space, **Exception handling:** unstructured exception handling, using Resume Next and Resume Line, On Error GoTo 0, getting an exception's number and description, raising an exception intentionally, structured exception handling, exception filtering in the Catch Block, Multiple Catch statements, using Finally, throwing an Exception, throwing a Custom Exception. **Windows Forms:** About Windows Forms, form designer, **Form properties-** Text, control box, maximize and minimize box, formborderstyle, controlling tab order, setting initial positions, back color, background image, enabled, visible, forecolor, height, icon, isMDIchild, Ismdicontainer, Location, Mdichildren, Mdiparent, name, width, windowstate, **Windows forms methods** – Activate, close, focus, hide, layoutmdi, refresh, show, showdialog. **Events:** Activated, Click, Closed, Closing, Doubleclick, Forcolorchanged, Gotfocus, Move, Sizechanged, Textchanged. **MDI :** Creating MDI applications, creating MDI child windows in code, Arranging MDI child windows. MsgBox function, InputBox function, creating dialog box, Displaying reading from dialog box, creating accept and cancel button. Handling Mouse events and handling keyboard events. Sending keystrokes to other programs.

UNIT III

12 Hrs

Text Boxes, Rich Text Boxes, Labels and Link Labels: Use of Text boxes, Rich Text Boxes, Labels and Link Labels, Creating Multiline, Word-wrap Text Boxes, Accessing Text, Adding Scroll Bars, Aligning text, Making a Text Box read-only, selecting and replacing Text in a Text Box, copying or getting selected text to or from the clipboard, creating a password control, controlling input in a Text Box, TextChanged event creating textbox in code.

Accessing Text in a Rich Text Box, creating Bold, Italic, Underline and Strikeout Text, Indenting Text in Rich Text Boxes, Adding Bullets to Rich Text Boxes, Text color in RTF boxes, saving and loading RTF files from and to Rich Text Boxes, Aligning Text in RTB, creating RTB in Code.

Using Labels instead of Text Boxes, Formatting, aligning Text in labels, Label Events, using Labels to give access keys to Controls without Captions, Use of Link Labels, Creating link labels, linking to another form. Use of Buttons, Checkboxes, Radio Buttons, Panels and Group boxes .

Buttons : Setting forecolor and back color, font, taborder, picture, click event **Checkboxes:** Getting and setting checkbox state, creating three state checkboxes. **Radiobutton:** Getting and setting radiobutton state, toggle buttons. Adding controls to panel and groupbox in code. Use of List Boxes, Checked List Boxes, Combo Boxes and Picture Boxes. Listbox: Adding item, referring item by index, selected index

changed, click, removing item, sorting, counting items, SelectedItem, SelectedIndex, multicolumn, multiselect listboxes, clearing a list box, **CheckListBox**: Determining the items checked, checking or unchecking items through code, handling item check events in checked list box. Types of comboboxes: simple, dropdown, dropdown list. **PictureBox**: setting or getting the image, adjusting box size, creating image maps. **Use of Scroll Bars, Track Bars, Pickers, Tool Tips and Timers** Properties of scrollbars and trackbar: Largechange, Smallchange, Maximum, Minimum, Value. Scroll event, Orientation, Tickstyle, Tickfrequency. **DateTimePicker**: Maxdate, Mindate, customformat, text, value. Setting datetime picker custom formats. Creating tooltips, Timer properties, methods and events.

Use of Image Lists, Tree and List Views, Toolbars, Status and Progress Bars. Creating and using imagelist with other controls, Handling treeview events, creating in code, Creating, selecting, handling listviews, Creating toolbar with dropdown button, menuitems, imagebutton, combobox. Creating, adding panels, displaying text in status bar, creating progress bar.

UNIT IV

12 Hrs

Menus : Creating menus, submenus, adding checkmark to items, menu access key, menu shortcuts, merging MDI menus, creating context menu, creating Open File, Savefile, Font, Color dialog boxes, Printing, creating printpreview, pagesetup dialogboxes. **Data Access with ADO.NET**: databases, Basic SQL commands, Working with ADO.NET, Overview of ADO.NET objects, Accessing with server explorer, populating a dataset, **Binding Controls to Databases**: Various ways to bind the data, simple binding, complex binding, binding data to control, Navigating data sets, Adding and deleting from a dataset, canceling a dataset edit, updating the underlying datastore, Performing data validation in controls. **Handling Database in Code**: creating a table, data columns, datarows, in code, accessing individual data items. Writing datasets to XML and reading datasets from XML.

Text Book:

1. Steven Holzner, **Visual Basic.NET Programming Black Book**, Dreamtech Press

Reference Books:

1. Bradley, Millspaugh Julia Case, Anita, **Programming in Visual Basic. NET**, Tata McGraw Hill.
2. Dr Garima Khadelwal, **Programming with Visual Basic. NET**, Prakhar Publishers Distributors

Group-I Practical-V	BCAP 234: Operating Systems and Data Structure Lab	48 Hours
Practical/Week: 4 Hrs Credits: 2	Exercises on OS and DS programming	I.A: 20 Exam: 80

Practical-VI	BCAP 235: VB .NET Lab	48 Hrs
Practical/Week: 4 Hrs Credits: 2	Exercises on VB .NET problems	I.A: 20 Exam: 80

Group –II
Course-6

24 Hours

Elective -III: Skill Development

Theory : 2 hrs/week
Credits : 1

BCACE 236-E1: HARDWARE AND PC MAINTENANCE

IA : 10
Exam : 50

Learning Objectives:

- To build and maintain computer systems, desktops, and peripherals.
- To learn installing, diagnosing, repairing, maintaining, and upgrading Softwares

Learning Outcomes:

At the end of the course students will fully aware of

- Assembling Computer Systems
- Installing Various Operating Systems and other softwares
- Trouble suiting Computer Systems

UNIT I

12 Hrs

The Complete PC: External Connections, Devices and Their Connectors. Introduction to networking hardware: Crimping, Cabling and NIC Card Fixing, Setting up of a Local Area Network(User account creation, IP Address configuration, MAC Address, ARP Tables),Essential Networking Commands. Microprocessor: Selecting, Installing, and Troubleshooting. RAM: Type, Installing, Troubleshooting.

BIOS :Modify CMOS: The Setup Program, A Quick Tour Through a Typical CMOS Setup Program, Power-On Self Test (POST). Motherboards: Installing Expansion Cards, Upgrading and Installing Motherboards, Installing and Maintaining Power Supplies .Hard Drive Technologies: Installing Drives, BIOS Support: Configuring CMOS and Installing Drivers, Hard Drive Formatting, The Partitioning and Formatting Process, Installing Removable Media.

UNIT II

12 Hrs

Installing and Upgrading Windows: Preparing for Installation or Upgrade, Troubleshooting Installation Problems, Post-Installation Tasks. Windows7: The Windows Interface, Operating System Folders, Tech Utilities. Task Manager, Managing Users in Windows 7, Maintaining Windows, Optimizing Windows, Preparing Windows for Problems, Failure to Boot: Windows 7 Installing and Configuring a Wired Network, Connecting to the Internet, Installing a Printer in Windows, Network Security.

Text Book:

1. Mike Meyers' CompTIA A+® Guide to Managing and Troubleshooting PCs Fourth Edition, 2016Publication - McGraw-Hill

References Books:

1. Balvir Singh, PC Hardware, Published by : Firewal Media, 2008.
2. Craig Zacker and Jhon Rourke, The Complete Reference PC Hardware, Tata McGraw-Hill Publishing Company Limited, 2001

**Group-II
Course-7**

**Theory : 2 hrs/week
Credits : 1**

Elective -III: Skill Development

BCACE 237-E2: DESKTOP PUBLISHING

24 Hours

**IA : 10
Exam : 40**

Learning Objectives:

To understand Documentation using DTP software tools like Page Make, CorelDRAW

Learning Outcome :

At the end of the course the students will be able to produce documentation with combination of Text, Audio, Video and Images in in standard format

UNIT I

12 Hrs

Page Maker: Introduction To Pagemaker Package. Preparation of Document Using DTP Package. , Page Maker Icon and help, Tool Box, Styles, Menus etc., Different screen Views, Importing text/Pictures, Auto Flow, Columns, Text Formatting, Different Page Layouts, Printing Various Fonts and Character Sets. Various types of Printers used in DTP. Indian Language Fonts, Creation of Indian Language Fonts. Import & Export of Documents created by other Word Processors, Multi Page Document design , Assembling master Page , Assembling Booklet Cover , Assembling double page spread , Assembling backcover , Adding index entries , Generating and formatting Table of contents , Spelling Check, Designing exercise like Visiting Card, Letter head , Greeting Cards ,Advertising for Job , News Paper columns

UNIT II

12 Hrs

CorelDRAW: Introduction to Programs, Suite Interface, Page Setup, Viewing - DRAW / PAINT, Selecting and Moving – DRAW, Masks - PHOTO-PAINT, Transforming – DRAW, Drawing – DRAW, Shape Tools – PAINT, Editing Tools – DRAW, Fills – DRAW / PAINT, Outlines – DRAW, Objects – PAINT, Arranging Objects – DRAW, Text – DRAW, Text - PHOTO-PAINT, Interactive Tools, Miscellaneous – DRAW, Editing and Retouching – PAINT, Color Adjustment – PAINT, Filters – PAINT, Brushes Tools – PAINT, Input/Output - DRAW / PAINT, Other Programs.

Text Books

1. M C Sharma, Desktop Publishing on PC, BPB Publication, 2003
2. Adobe PAGE MAKER 7.0 Class Room in a Book Tec media Publications, 2002.
3. Gary David Bouton, CorelDraw X5 The Official Guide, Tata Mcgraw-Hill Edition, 2011.

Reference Books :

1. Shirish Chavan, Rapidex DTP Course, Unicorn Books Pvt Ltd, 2003
2. Chries DC La Nougerede, CorelDraw an Introduction, Dk Pub, 2002

Group-II	Elective -III: Skill Development	24 Hours
Course-8		
Theory : 2 hrs/week	BCACE 238-E3: Excel Programming with VBA	IA : 10
Credits : 1		Exam : 40

Learning Objectives

1. To understand programming in Excel
2. To familiarize Excel Macros
3. To create Excel UserForms

Learning Outcome : At the end of the course the students will be able to

1. Create WorkBooks with customized Macros
2. Implement UserForms with different classes of controls
3. Design WorkBook with different functionality

UNIT I**12 Hrs**

Introducing VBA : Start with the Macro Recorder, Working with VB Editor, VBA fundamentals, Working with Range Objects [Chapter-2]. **VBA Programming Fundamentals** – Overview, Comments, Variables, Data Types, Constants, Assignment Statements, Arrays, Object Variables, Built-in functions, Manipulating Objects and Collection, Controlling code execution [Chapter-3]. **Working with VBA Sub Procedures** – About Procedures, Executing Sub Procedures, Passing arguments to Procedures [Chapter-4]. **Creating Function Procedures** – Sub Procedures vs Function Procedures, An introductory Function example, Function Procedures [Chapter-5].

UNIT II**12 Hrs**

Understanding Excel's Events – Know about events, Getting acquainted with workbook-level events, Examining worksheet events, Monitoring with application events [Chapter-6]. **Introducing UserForms** : Inserting new UserForm, Adding controls to a UserForm, ToolBox Controls, Displaying a UserForm, Closing UserForm, Creating a UserForm : an example, Understanding UserForm Events, Referencing UserForm Controls [Chapter-13]. **UserForm Examples** : Creating a UserForm “Menu”, Selecting Ranges from a UserForm, Creating a Splash Screen, Disabling a UserForm's close button, Changing a UserForm's size, Zooming and Scrolling a sheet from a UserForm, ListBox Techniques [Chapter-14].

Text Book

1. Michael Alexander, Dick Kusleika, Excel 2016 Power Programming with VBA, John Wiley & Sons, 2017.

MANGALORE UNIVERSITY
Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

IV SEMESTER BCA

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC281	Computer Graphics and Animation	4	3	20	80	100	2
	BCAC282	Java Programming	4	3	20	80	100	2
	BCAC283 BCAC284 BCAC285	E1: Data Mining E2: CONA E3: Business Statistics & Mathematics	4	3	20	80	100	2
	BCAP286	Computer Graphics and Animation Lab	4	3	20	80	100	2
	BCAP287	Java Lab	4	3	20	80	100	2
II	BCAOE288 BCAOE289	E1 : Fundamentals of ICT E2: E-Commerce	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC &CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

Group I**Course-10****48 hours****Theory/Week: 4 Hrs****BCAC 281: Computer Graphics and Animation****I.A: 20****Credits: 2****Exam: 80**

Learning Objective : To learn about various technologies in computer graphics, animation and virtual reality system.

Learning Outcome: Students are able to draw primitive graphical shapes and perform transformation techniques programatically. They are also learning about various new technologies developed and their applications.

UNIT I**12 Hrs.**

Introduction to Computer Graphics and Display Systems: Introduction, Image and Objects, Image Representation, Basic Graphics Pipeline, Raster and Vector-Based Graphics, Applications of Computer Graphics, Display Devices, Flat Panel Display Displays, , 3D Display Technology, Coordinate System Overview-Cartesian Coordinate system, Introduction to Graphics Libraries in C. Line Drawing Algorithms-DDA, Bresenham's, Loading the Frame Buffer, Line Function, Circle Generating Algorithms, Ellipse Generating Algorithms, Filled-Area primitives..

UNIT II**12 Hrs**

Attributes of Output Primitives : Line attributes, Curve Attributes, Color and Grayscale levels, area fill attributes, Character attributes. Two Dimensional Geometric Transformations- Basic Transformations, Matrix Representations and Homogeneous Coordinates, Composite Transformations, Other Transformations, Transformations between Coordinate Systems, Affine Transformations. Two-Dimensional Viewing: The Viewing Pipeline, Viewing Coordinate Reference Frame, Window-to-Viewport Coordinate Transformation, Two-Dimensional Viewing Functions, Clipping operations, Point clipping, Line clipping- Cohen- Sutherland Line clipping, Polygon clipping-Sutherland-Hodgeman Polygon clipping.

UNIT III**12 Hrs**

Computer Animation: Introduction, Key Frame Animation, Construction of Animation Sequence, Motion Control Methods, Procedural Animation , Key Frame animation Vs Procedural Animation, Introduction to Morphing. **Introduction to Virtual Reality:** Introduction, Classical Components and Design of VR System, Important Factors in Virtual Reality System, Types of Virtual Reality Systems, Advantages of Virtual Reality.

UNIT IV**12 Hrs**

Graphic Display Interface, Sound Display Interface, Examples of Input Devices, Haptic Feedback, Graphical Rendering Pipeline, Applications of Virtual Reality: **Object Modeling and Computer Architecture for Virtual Reality:** Introduction, Modeling Techniques in Virtual Reality, Model Management, PC Graphic Architecture and Accelerators

Text Book:

1. Rajesh K. Maurya, Computer Graphics with Virtual Reality Systems., 2nd Edition, Wiley publication, 2014.
2. Donald Hearn, M. Pauline Baker, **Computer Graphics - C version**, 2nd Edition, LPE Pearson, 1996.
- 3.

Reference Books:

1. Tay Vaughan, Multimedia: Making It Work, 8th Edition, Tata McGraw Hill, 2011.
2. Steven Harrington, Computer Graphics: A Programming Approach, McGraw Hill Education, 1987.
3. James D. Foley, Fundamentals of interactive computer graphics, Addison Wesley Longman Publishing Co, 1982.

Group I**Course-11****Theory : 4 hrs/week****Credits : 2****BCAC 282: Java Programming****48 Hours****IA : 20****Exam : 80****Learning Objectives**

1. To understand pure object-oriented programming paradigm
2. To familiarize with the fundamentals of Java features
3. To introduce console and GUI based applications using Java
4. To know the basic approaches to the design of software applications.

Learning Outcome : At the end of the course the students will be able to

1. Know the structure and model of the Java programming language
2. Use the Java programming language for various programming technologies
3. Develop software using the Java programming language
4. Choose an engineering approach to solving problems, starting from the acquired knowledge of programming and knowledge of operating systems.

12 Hrs**UNIT I**

Language Basics - The creation of Java, How Java Impacted Internet?, Java's Magic – Bytecode, The Java Buzzwords, A First Simple Program, Using blocks of Code, Lexical Issues, The Primitive Types, Integers, Floating-Point Types, Characters, Booleans, A Closer Look at Literals, Variables, The Scope and Lifetime of Variables, Type Conversion and Casting, Arrays, Arithmetic Operators, Relational Operators, Boolean Logical Operators, The Assignment Operator, The ? Operator, Java's Selection Statements, Iteration Statements, Jump Statements. **Class & Objects** - Class Fundamentals, Declaring Objects, Assigning Object Reference Variables, Introducing Methods, Constructors, The 'this' keyword, Overloading Methods, Using Objects as Parameters, Returning Objects, Recursion, Understanding 'static', Introducing 'final', Introducing Nested and Inner Classes, Using Command-Line Arguments, Varargs : Variable-Length Arguments.

12 Hrs**UNIT II**

Inheritance - Inheritance Basics, Using 'super', Creating Multilevel hierarchy, Method Overriding, Using Abstract Classes, Using final with Inheritance. **Packages & Interfaces** - Packages, Importing Packages, Interfaces. **Exception Handling** - Exception Handling Fundamentals – Exception Types, Uncaught Exceptions, Using try and catch, Multiple catch clauses, throw, throws, finally, Java's built-in Exceptions. **Multithreaded Programming** - The Java Thread Model, The Main Thread, Creating a Thread, Creating Multiple Threads, Thread Priorities, Synchronization.

12 Hrs**UNIT III**

Networking – Networking Basics, InetAddress, Inet4Address and Inet6Address, TCP/IP Sockets, URL, URL Connection. **Event Handling** - Two Event Handling Mechanisms, The Delegation Event Model, Event Classes, The KeyEvent Class, Sources of Events, Event Listener Interface, Using Delegation Event Model, Adapter Classes, Inner Classes. **Swings** - The origins of Swing, Two key Swing features, Components and Containers, The Swing Packages, A simple Swing Application, Event Handling, JLabel and ImageIcon; JTextField, The Swing Buttons, JTabbedPane, JScrollPane, JList, JComboBox, Trees, JTable.

12 Hrs**UNIT IV**

Swing Menus – Menu Basics, An Overview of JMenuBar, JMenu and JMenuItem, Create a Main Menu, Create a Toolbar. **JDBC Objects** - The Concept of JDBC, JDBC Driver Types, JDBC Packages, A Brief Overview of the JDBC process, Database Connection, Associating the JDBC/ODBC Bridge with the Database, Statement Objects, ResultSet, Transaction Processing; Metadata, Data types, Exceptions. **JDBC & Embedded SQL** – Tables, Inserting Data into Tables, Selecting Data from Table, Updating Tables, Deleting Data from a Table.

Text Books

1. Sagayraj Denis, Karthik, and Gajalakshi, Java Programming for Core and Advanced Learners, Universities Press, 2018.
2. Herbert Schildt, Java The Complete Reference, 10th Edition, McGrawHill, 2018
3. Jim Keogh, The Complete Reference J2EEMcGrawHill, 2014,

Reference Books

1. Introduction to Java Programming: Brief Version, Pearson, 2014,
2. R. Nageswara Rao, Core Java: An Integrated Approach, dreamTech, 2016,

Group I**Course-12****Theory : 4 hrs/week****Credits : 2****BCAC 283-E1: Data Mining****48 Hours****IA : 20****Exam : 80****Learning Objectives :**

- To introduce students to the basic concepts and techniques of Data Mining
- To study the methodology of engineering legacy databases for data warehousing and data mining to derive business rules for decision support systems
- Develop and apply critical thinking, problem-solving, and decision-making skills

Learning Outcome :

- On Successful completion of subject students will learn
- Various Data Mining concepts , Association rules and Clustering techniques , Web mining Concepts & Decision tress.
- Ability to select and implement data mining techniques suitable for the applications under consideration

UNIT I**12 Hrs**

Introduction: Data Mining: Introduction, What is data mining, Data Mining Definitions, KDD Vs Data Mining, DBMS Vs Data Mining, Other related areas, DM techniques, Other Mining Problems, Issues and Challenges in DM, DM application areas, DM applications. **Data Warehouse:** Introduction, What is Data Warehouse, Definition, Multidimensional Data Model, OLAP operations, Warehouse Schema, Data Warehouse Architecture, Warehouse Server, Meta Data, Data Warehouse backend process.

UNIT II**12 Hrs**

Association Rules: Introduction, Association Rule, Methods to discover association rules, a priori algorithm, partition algorithm, pincer-search algorithm(only concept p-84), **Decision Trees** :Introduction, Decision Tree, Tree Construction Principle, Best Split, Splitting Indices (only definitions of Entropy, (p-169,170),Decision Tree Construction Algorithms, CART, ID3. **Rough Set Theory** :Introduction, Definition(up to -Rough Set p-210,211), Rough Sets and Fuzzy Sets (concept, definition of rough set member function-p226), **Other Techniques** :Introduction, Neural Network, Learning in NN, Unsupervised Learning, Genetic Algorithm, Support Vector Machines (concept p-250,251)

UNIT III**12 Hrs**

Clustering Techniques: Introduction, Clustering Paradigms, Partitioning, Algorithms, k-Medoid Algorithms (PAM concept, Partitioning concepts. p-123), CLARA, Hierarchical Clustering, DBSCAN (concept Only, No definitions. p- 129), Categorical Clustering Algorithms, STIRR (concept p-143-excluding example)

UNIT IV**12 Hrs**

Web Mining: Introduction, Web Mining, Web Content Mining, Web Structure Mining (exclude example), Web Usage Mining, Text Mining, Unstructured Text, Episode Rule Discovery for Texts. **Temporal And Spatial Advanced Data Mining: Introduction,** Temporal Data Mining, Temporal Association Rules, Sequence Mining, The GSP Algorithm, Episode Discovery, Spatial Mining.

Text Book:

1. Arun K. Pujari, Data Mining Techniques, , Universities Press India, 4th Edition 2016
2. Han, Jiawei and Kamber, Michelin, *Data Mining: Concepts and Techniques*. Morgan Kaufman Publishers, 2012.

Reference Books :

1. M Ramakrishna Murthy, Introduction to Data Mining and Soft Computing Techniques, Laxmi Publications Pvt Ltd, 2017.
2. Paul Teetor, R Cookbook: Proven Recipes for Data Analysis, Statistics, and Graphics, O'reilly Cookbooks, 2011

Group I	BCAC 284-E2: COMPUTER ORIENTED NEUMARICAL	48 hours
Course-13	ANALYSIS	
Theory/Week:4 Hrs		I.A: 20
Credits:2		Exam: 80

Learning Objectives :

- To provide conceptual understanding of various numerical methods, in particular, with reference to numerical solution of non linear equations and system of linear equations, interpolation, numerical differentiation and integration and numerical solution of ordinary differential equations

Learning Outcomes

At the end of the course students will be able to

- solve an algebraic or transcendental equation using an appropriate numerical method
- solve a differential equation using an appropriate numerical method
- solve a linear system of equations using an appropriate numerical method
- Apply Numerical Concepts in Coding

12 Hrs.**UNIT I**

Errors in numerical computation – Errors and their computation. **Solution of Algebraic and Transcendental equations:** Introduction, the Bisection method, the method of False position, the Iterative method, Newton-Raphson method, Ramanujan's method. **Interpolation:** Introduction Finite differences- forward differences, backward differences, central differences, Newton's formula for interpolation, Lagrange's interpolation formula. **Divided differences** – Newton's general interpolation formula.

UNIT II**12 Hrs.**

Least Squares- Introduction, least squares curve fitting procedures – fitting a straight line, non-linear curve fitting, curve fitting by a some of exponentials. **Numerical differentiation and integration** – Numerical differentiation, integration – Trapezoidal rule, Simpson's 1/3 rule and Simpsons 3/8 rule.

UNIT III**12 Hrs.**

Matrices and linear system of equation : Basic definitions, matrix operations, transpose of a matrix, the inverse of a matrix, matrix norms. **Solution of linear system: Direct methods-** Matrix inversion method, Gaussian elimination method, Gauss-Jordan method, LU decomposition. **Solution of linear systems – Iterative methods-** Gauss-Seidal methods Jacobi's method.

UNIT IV**12 Hrs.**

Numerical solution of ordinary differential equation: Solution by Taylor's series, Euler's method, Modified Euler's method, Runge – Kutta methods, Predictor- corrector methods - Adams – Moulton method, Milne's method, and Boundary value problems – Finite difference method. Bidirectional shift register.

Text Book:

1. S.S. Sastry, **Numerical Analysis**, 3rd edition, PHI publication

References Books:

1. V Rajaraman, **Computer Oriented Numerical Methods**, 3rd Edition, PHI, 2006.
2. David Kincaid and Ward Cheney, **Numerical Analysis: Mathematics of Scientific Computing**, Universities, 3rd Edition, 2010.
3. M. K. Jain, S.R.K. Iyenger & R. K. Jain, **Numerical method for Scientific and Engineering computation**, 5th edition, New Age International publishers.

**Group-I
Course-14****Theory : 4 hrs/week
Credits : 2****BCAC 285-E3: Business Mathematics & Statistics****48 Hours****IA : 20
Exam : 80****Learning Objectives:** Students will learn basic mathematical concepts like Set Theory & Vector Algebra and calculus and basic concepts on Statistics & Probability.**Learning Outcome:**

This foundation will help students in understanding analytical procedures used in Business Analytics.

UNIT I**12 Hrs**

Introduction to Sets, Sets, elements of a set, methods of describing a set, Tabular or Roster Method, Rule Method or Set Builder, Empty or Void or Null Set, Types of sets : Finite sets and Infinite sets, singleton, equal sets, subsets, Proper Subset, Power Set, Universal Set, Venn Diagrams, Operations on Sets, Union, Intersection of Sets, Disjoint Sets, Difference of two Sets, Symmetric Difference of Sets, Complement of a Set, De-Morgan's laws, Algebra of sets.

UNIT II**12 Hrs**

Vector Algebra: Vectors, Types of Vectors, Operations on Vectors, Addition of Vectors, Properties of Operation of Addition, Subtraction, Properties of Operation of Subtraction, Multiplication by a scalar, Orthonormal Bases, Product of Two Vectors, Scalar Product or Dot Product of Two Vectors, Properties of Scalar Product, Vector Product or Cross Product, Properties of Vector Product

UNIT III**12 Hrs**

Statistics: Introduction to Statistics, functions, importance of statistics, limitations. Scale of Measurement, Nominal, Ordinal, Interval & Ratio. Frequency Distribution, Bar Chart, Pie Chart, Histogram, Frequency Polygon, Ogive, Pareto Chart, Stem-and-leaf Chart, Scatter Plot, Measure of Central Tendency, Properties, Advantages and Disadvantages of Arithmetic Mean, Geometric Mean, Harmonic Mean. Positional Averages, Median, Quartiles, Deciles, Percentiles & Mode. Measure of Dispersion, Range, Interquartile Range, Standard Deviation.

UNIT IV**12 Hrs**

Probability: Introduction to Probability, Experiment, Event, Compound Event, Independent and Dependent Events, Mutually Exclusive Events, Equally Likely Events, Marginal, Union, Joint, Conditional Probability, Basic Probability Rules, General Rule of Addition, General Rule of Multiplication, Concept of Baye's Theorem.

Text Books

1. **Dr Padmalochan Hazarika, Business Mathematics: A Textbook Of Business Mathematics**, 4/ed. Chand publication, 2014 .
2. Sancheti and Kapoor's *Business Mathematics*, published by Sultan Chand and Sons, 2010
3. Sancheti Kapoor, *Business Statistics*, Sultan Chand & Sons,

References Books

1. Zameeruddin, Khanna & Bhambri *Business Mathematics*, Vikas publishing House, 2009
2. **Mittal , Sathyaprasad and Pradeep Kumar Rao**, *Mathematics and Statistics for Management*, Himalaya publisher, 2018.
3. Naval Bajpai, *Business Statistics*, Pearson Education, 2013.

Group-I Practical-VII	BCAP 286: Computer Graphics and Animation Lab	48 Hours
Practical/Week: 4 Hrs Credits: 2	Exercises on Computer Graphics and Animation programming	IA: 20 Exam: 80
Practical-VIII	BCAP 287: JAVA Lab	48 Hrs
Practical/Week: 6 Hrs Credits: 2	Exercises on JAVA Programming	IA: 20 Exam: 80

Group II
Cpourse-9

24 Hours

Elective -IV: Other Domain /Discipline

Theory/Week 2 Hrs
Credit :1

BCAOE 288-E1: Fundamentals of ICT

IA :10
Exam :40

Learning Objectives:

- To make the students understand and learn the basics of computer for its effective use in day to day life.

Learning Outcomes:

- Be able to apply knowledge of computing analyze a problem, and identify and define the computing requirements appropriate to its solution
- Be able to design, implement, and evaluate a computer based system, process, component, or program to meet desired needs

UNIT I

12 Hours

Computer Basics: Introduction, Characteristics computers, Evolution computers, Generation of computers, Classification of computers, the computer system, Application of computers. **Computer Architecture:** Introduction, Central processing unit- ALU, Registers, Control unit, system bus, main memory unit, cache memory, communication between various units of a computer system. **Number system :** Conversion between binary, decimal , octal and hexadecimal integers. **Computer software:** Introduction, software definition, relationship between software and hardware, software categories, Installing and uninstalling software, software piracy, software terminologies.

UNIT II

12 Hours

Computer programming languages: Introduction, Developing a program, Program development cycle, Types of programming languages, generation of programming languages, Features of a good programming language. Word processing software, **Presentation software:** Introduction, , Powerpoint environment, creating a new presentation, working with different views, using masters, adding animation, adding transition, running slides. **Microsoft Access :** Access environment, Database objects.

Spreadsheet software: Excel environment, Copying cells using Fill handle, dragging cells, Formulas and functions, Inserting Charts, sorting. **The Internet :** Introduction, Evolution, basic internet terms, Internet applications, Data over the internet. **Internet tools:** Web browser, Web browser features, Internet Explorer environment, Electronic mail, Email address structure, checking email, sending email, email attachment, How email works, advantages and disadvantages of email, searching

Text Book:

I TL Education Solution Limited, **Introduction to Information Technology**, Pearson- Second Edition, 2008.

Reference Books:

1. Peter Norton, **Introduction to Computers**, 7th edition, Tata McGraw Hill Publication, 2011
2. Anita Goel, **Computer Fundamentals**, Pearson Education, 2011.

Group II
Course-10

Elective -IV: Other Domain /Discipline

24 Hours

Theory/Week 2 Hrs
Credit :1

BCAOE 289-E2: E-COMMERCE

IA :10
Exam :40

Learning Objectives:

Introduce concepts and principles E-commerce, modern technologies used to simplify business and banking processes through e- commerce, provision of E-commerce services.

Learning Outcomes

At the end of the course the students will be fully aware of:

- the principles and practice of Electronic Commerce
- the components, functions and roles of the Electronic Commerce environment
- E-Commerce payment systems.

12 Hours

UNIT I

Overview of Electronic Commerce: Main Activities, definition, Goals, Components, Advantages and disadvantages, Technical architecture, E-Com applications, E-Com and Electronic business. **Network infrastructure:** Evolution of the Internet, Business use, LAN, MAN, WANs. **OSI Model:** Introduction to OSI Model, Seven Layers, Overview of TCP/IP reference model.

12 Hours

UNIT II

Electronic Data Interchange: Introduction to EDI, Definition, Applications, EDI Model. **Electronic Payment System:** Introduction to payment system, Types, The traditional payment system, Modern Payment system. **Payment Security:** Different techniques. **Electronic Security:** Introduction, Classification of intruders, Attacking methods, Security practices, Cryptography. **Cryptology:** Encryption and decryption, Secret key and Public key encryption

Text Book:

1. C. S. V. Murthy, **E-commerce: Concepts, Models, Strategies**, Himalaya Publishing House, 2012

Reference Books:

1. Bharat Bhaskar, **Electronic Commerce: Framework, Technologies and Applications**, 4th edition, McGraw Hill company, 2014
2. Ravi Kalakota, Andrew B. Whinston, **Frontiers of Electronic Commerce**, Addison-Wesley Publications, 2000

MANGALORE UNIVERSITY
Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

V SEMESTER BCA

Group	Course Code	Course Particulars	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC331	Software Engineering	4	3	20	80	100	2
	BCAC332	Computer & Communication Networks	4	3	20	80	100	2
	BCAC333	Distributed Computing	4	3	20	80	100	2
	BCAC334	Web Technology	4	3	20	80	100	2
	BCAC335	Python Programming	4	3	20	80	100	2
	BCAC336	E1:Accounting & Financial Management	4	3	20	80	100	2
	BCAC337	E2: Android Application Development						
	BCAC338	E3: SciLab Programming						
	BCAP339	Web Applications Lab	3	3	20	80	100	2
	BCAP340	Python Programming Lab	3	3	20	80	100	2
	BCAP341	E1:AFM Lab /	3	3	20	80	100	2
BCAP342	E2: AAD Lab /							
BCAP343	E3: SciLab							
		Total	33	27	180	720	900	18

Group I**Course-15****Theory : 4 hrs/week****Credits : 2****BCAC 331: Software Engineering****48 Hours****IA : 20****Exam : 80****Learning Objective:-**

- To prepare students for successful careers in *software engineering* and graduate education with a thorough understanding of *software engineering*.
- To develop skills in software development so as to enable to take up self.

Learning Outcome:

- Be successful professionals in the field with fundamental knowledge of software engineering.
- Analyze and resolve information technology problems through the application of systematic approaches and diagnostic tools.

UNIT I**12 Hrs**

Introduction: The Problem Domain- Industrial Strength Software, Software is Expensive, Late and Unreliable, Maintenance and Rework, Software Engineering Challenges-Scale, Quality and Productivity, Consistency and Repeatability, Change, The Software Engineering Approach-Phased Development Process, Managing the process. **Software Processes:** Software Process-Processes and Process Models, Component Software Processes, ETVX Approach for Process Specification, Desired Characteristics of a Software Process-Predictability, Support Testability and Maintainability, Support Change, Early Defect Removal, Process Improvement and Feedback, Software Development Process Models- Waterfall Model, Prototyping, Iterative Development, Timeboxing Model, Comparison of Models, Other software Processes-Project Management Process, The Inspection Process, Software Configuration Management Process, Requirements Change Management Process, Process Management Process.

UNIT II**12 Hrs**

Software Requirements Analysis and Specification: Software Requirements-Needs for SRS, Requirement Process, Problem Analysis -Informal Approach, Data Flow Modeling, Prototyping, Requirements Specification-Characteristics of an SRS, Components of an SRS, Specification Language, Structure of a Requirement Document, Validation. **Function Oriented Design:** Design Principles-Problem Partitioning and Hierarchy, Abstraction, Modularity, Top-down and Bottom-up strategies, Module- Level Concepts-Coupling, Cohesion,, Design Notation and Specification-Structure Charts, Specification, Structured Design Methodology-Restate the Problem as a DFD, Identify the Most Abstract Input and Output Data Elements, First Level Factoring, Factoring the Input, Output and Transform Branches, Design Heuristics, Transaction Analysis, Verification.

UNIT III**12 Hrs**

Detailed Design: Detailed Design and PDL-PDL, Logic/Algorithm Design, State Modeling of Classes, Verification-Design Walkthroughs, Critical Design Review, and Consistency Checkers.

Coding: Programming Principles and Guidelines-Common Coding Errors, Structured Programming, Information Hiding, Some Programming Practices, Coding Standards, Verification-Code Inspections, Static Analysis, Proving Correctness, Unit Testing, Combining Different Techniques.

UNIT IV**12 Hrs**

Testing and Testing Tools: Testing Fundamentals-Error, Fault and Failure, Test Oracles, Test Cases and Test Criteria, Psychology of Testing, Black Box Testing- Equivalence Class Partitioning, Boundary Value Analysis, Cause-Effect Graphing, Pairwise Testing, Special Cases, State-Based Testing, White Box Testing-Control Flow Based Criteria, Data Flow Based Testing, Mutation Testing, Test Case Generation and Tool Support, Testing Process-Levels of Testing, Test Plan, Test Case Specification, Test Case Execution and Analysis, Defect Logging and Tracking. **Introduction to Testing tools:** Overview of WinRunner, Silk Test, SQA Robot, LoadRunner, JMeter and Test Director (*relevant sections only*).

Text Books:

1. Pankaj Jalote, **An Integrated Approach to Software Engineering**, 3rd Edition, Narosa Publishing House.
2. Dr. K.V.K.K. Prasad, **Software Testing tools**, Dreamtech Press.

Reference Books:

1. Roger S. Pressman, **Software Engineering: A Practioner's Approach**, McGraw Hill, 2009
2. K K Aggarwal, Yogesh Singh, **Software Engineering**, 1st edition, New Age International Pvt Ltd Publishers
3. Renu Rajni, **Software Testing: Methodologies, Tools and Processes**, Tata McGraw hill education.

Group I**Course-16****Theory : 4 hrs/week****Credits : 2****BCAC 332: Computer & Communication Networks****48 Hours****IA : 20****Exam : 80****Learning Objectives**

- To introduces students to computer networks and concentrates on building a firm foundation for understanding Data Communications and Computer Networks.
- To introduce the student to the major concepts involved in wide-area networks (WANs), local area networks (LANs) and Wireless LANs (WLANs).

Learning Outcome :

At the end of the course the students will be able to

- Understand the architectural principles of computer networking and compare different approaches to organising networks
- Explain key networking protocols and their hierarchical relationship in the context of a conceptual model such as the OSI and TCP/IP framework
- Identify core networking and infrastructure components and the roles they serve.

UNIT I**12 Hrs**

Introduction – Computer Network, Elements of CN, Internet, Fundamentals of Data & Signals, Network Topologies, Network OS, Transmission Medium, Types of Networks, Connection-oriented & Connection-less services, Segmentation & Multiplexing, Network Performance, Network Switching. **OSI and TCP/IP Models** –Protocol Stack, OSI Model, TCP/IP Model, Difference between OSI & TCP/IP Models, How does TCP/IP Model Work?, Understanding Ports, **Networking Devices** – End Devices, Intermediary Devices, Connectivity Devices, Internetworking Devices

UNIT II**12 Hrs**

LAN Technologies – Introduction, Types of Network Links, Medium Access Control Techniques, Random Access Techniques, Static Channelization Techniques, Ethernet, Token Ring. **ARP & RARP** – ARP, RARP. **IP Addressing** – Introduction, What is an IP Address, Understanding IP Address, Why do we need IP Addresses?, IPv4 vs IPv6, Classful Addressing, IPv4 Addressing Types, IPv4 Reserved Addresses, Packet Flow in an IPv4 Network, IPv4 Datagram Header Format, IPv4 Fragmentation, Limitations of IPv4 Classful Addressing, Subnet Masks and Subnetting, Supernetting and classless Inter-Domain Routing, IPv6, IPv6 Addressing Notation, IPv6 Addressing Types, Unicast IPv6 Addresses, Multicast IPv6 Addresses, Anycast IPv6 Addresses, IPv6 Datagram Header Format

UNIT III**12 Hrs**

Wireless Networks and Mobile IP – Infrastructure of Wireless Network, Wireless LAN Technologies, IEEE 802.11 Wireless Standard, Cellular Networks & Connectivity, Generations of Cellular Systems, Mobile IP, Wireless Mesh Networks (WMNs). **IP Routing** – Introduction, Classification of Routing Algorithms, Routing Algorithm Metrics, Internet Architecture, Autonomous Systems, Routing Protocols, RIP, OSPF, BGP. **TCP & UDP** – Introduction, TCP & UDP, TCP/IP Terminology, Ports and Sockets, User Datagram Protocol, Transmission Control Protocol, Comparison of TCP & UD

UNIT IV**12 Hrs**

Session Layer - Introduction, Session Layer Tasks, Session Layer Services, RPC Protocol, Major Session Layer Protocols. **Presentation Layer** – Introduction, Presentation Layer Tasks, Data Conversion, Data Representation, Data Compression, Data Encryption. **Application Layer Protocols** – Introduction, HTTP, SNMP, FTP, DNS, TFTP, DHCP, **Network Security** – History of network security, Pillars of Network security, Glossary of Network Security Terms, Network Security Components, Types of Attacks, Known security attacks, Cryptography, Types of Ciphers, Encryption and Decryption, Hashing, Digital Signature, Firewalls

Text Books

1. Narasimha Karumachi, A Damodaran, M. Sreenivasa Rao, Elements of Computer Networking – An Integrated Approach, CareerMonk Publications, 2014
2. Nader F. Mir, Computer and Communication Networks, Pearson, 2015

Reference Books

1. Andrew S. Tanenbaum, David J. Wetherall, Computer Networks, Pearson, 5th Edition, 2014.
2. Douglas E. Comer, Internetworking with TCP/IP Volume One, Pearson, 6th Edition, 2014.

Group I**Course-17****Theory : 4 hrs/week****Credits : 2****BCAC 333: Distributed Computing****48 Hours****IA : 20****Exam : 80****Learning Objectives**

- To study concurrent, Client Server, distributed paradigms
- To learn Interposes Communication and Remote procedure calls.

Learning Outcomes :

At the end of the course the students will be able to

- Understand Concepts behind Distributed Systems
- Design and build application programs on distributed systems.
- Develop, test and debug RPC based client-server programs

12 Hrs**UNIT I**

Introduction, Definition, History, Different Forms of Computing, Strengths And Weakness, Basics of Operating System, Network Basics, Software engineering basics, Interprocess Communications, An archetypal IPC Program interface, event synchronization, timeouts and threading, deadlocks and timeouts, data representation, data encoding, text based protocols, request response protocols, event diagram and sequence diagram, connection oriented versus connectionless IPC, The evolution of paradigm for interprocess communication.

UNIT II**12 Hrs**

Distributed computing paradigms, Paradigms and abstraction, An example application, paradigms for distributed applications, tradeoffs, The socket API, Background, the socket metaphor in IPC, The datagram socket API, The stream mode socket API, The socket with non-blocking I/O operations, secure socket API.

UNIT III**12 Hrs**

Client server paradigm-issues, software engineering for a network service, connection oriented and connectionless servers, iterative server and concurrent server, tasteful servers, Group communication-unicasting and multicasting, multicast API, connection oriented versus connectionless multicast, reliable multicast versus unreliable multicasting, the java based multicast API, reliable multicast API.

UNIT IV**12 Hrs**

Distributed objects-message passing versus distributed objects, an archetypal distributed object architecture, Distributed object system, remote procedure calls, Remote method invocation, The Java RMI architecture, The API for Java RMI, A sample RMI Application, Steps for building an RMI applications, testing and debugging, comparison of RMI and socket and socket APIs, Advanced RMI - client callback, stub downloading, RMI security manager.

Text Book

M.L.Liu, Distributed Computing-Principles and Applications , Pearson Education, 2004.

Reference Books

1. Mukesh Singhal, Niranjana G.Shivaratri, Advanced Concepts in Operating System, Tata McGraw Hill
2. Willaim Grosso, Java RMI, Shroff/O'reilly, 2002

Group I**48 Hours****Course -18****BCAC 334: Web Technology****Theory : 4 hrs/week****IA : 20****Credits : 2****Exam : 80**

To educate students in web application development and make them aware on programming web application in different technologies like ASP .NET with C# and PHP

Learning Objectives:

- To provide in-depth understanding of the tools and technologies necessary for Web application design and development.
- To make the students understand client side scripting like HTML, server side scripting like s, ASP,PHP and database interfacing.

Learning Outcomes:

- Have a sound knowledge of Web Application Terminologies, Internet Tools
- Select and apply markup languages for processing, identifying, and presenting information in web pages.
- Use scripting languages and web services to add interactive components to web pages. • Design and implement websites with good aesthetic sense of designing
- Design to be reusable the software components in a variety of different environments.

UNIT I**12 Hrs**

An Introduction to HTML5: What is HTML5, New Structural Elements, New Inline Elements New Form Input Types. The HTML5 Doctype Element. **Drawing with the canvas Element:** Using the HTML5 Element – Canvas, Drawing Rectangles, Drawing Line Art, Filling Line Art, Drawing Arcs, Drawing Text, Drawing With Bezier Curves, Drawing with Quadratic Curves. **Video on Web:** Video Codecs, Audio Codecs, HTML5 <video> Markup. **Building Forms In HTML5:** Placeholder Text, Autofocus Fields, Email Addresses, Web Address, Using Numbers, Numbers as sliders, Date Pickers, Search Boxes, Color Pickers. **Overview of C#:** Introduction to C#, A sample C# program, namespaces, Using aliases for namespace classes. Literals Variables and Data types, Operators and Expressions, Decision making and branching, Decision making and looping, Methods in C#, Classes and Objects.

UNIT II**12 Hrs**

Introduction to ASP .NET: ASP .NET Definition, Features of ASP .NET, Characteristics of ASP .NET web Forms, Types of ASP .NET Web Server Controls. **ASP .NET Standard Controls** – TextBox, Button, Label, Image, ImageButton, DropDownList, CheckBox, CheckBoxList, RadioButton, RadioButtonList, Panel, AdRotator, Calendar, HyperLink Controls. **Validation Controls** – BaseValidator Class, Required Field Validator, RangeValidator, CompareValidator, RegularExpression Validator, Validation Summary Control. **ADO .NET** – ADO .NET objects, DataSource Controls, DataBound Controls (Except Repeater and Chart Controls)

UNIT III**12 Hrs**

PHP Crash Course : Creating a Sample Application: Bob's Auto Parts, Embedding PHP in HTML, Adding Dynamic Content, Accessing Form Variables, Understanding Identifiers, Examining Variable Types, Declaring and Using Constants, Understanding Variable Scope. The Error Suppression Operator, the Execution Operator, The Type Operator. Testing and Setting Variable Types (only gettype() and settype()). Breaking Out of a Control Structure or Script, Using declare, Next. **Storing and Retrieving Data:** Processing Files : Opening a File, Writing to a File, Closing a File, Reading from a File. **Using Arrays, String Manipulation and Regular Expressions:** Numerically Indexed Arrays, Arrays with Different Indices, Array Operators, Multidimensional Arrays, Sorting Arrays, Sorting Multidimensional Arrays, Reordering Arrays, Loading Arrays from Files, Performing Other Array Manipulations, Counting Elements in an Array: count(), sizeof(), and array_count_values(). **String manipulation and Regular expressions:** Formatting Strings, Joining and Splitting Strings with String Functions, Comparing Strings, Matching and Replacing Substrings with String Functions, Introducing Regular Expressions.

UNIT IV**12 Hrs**

Object-Oriented PHP : Creating Classes, Attributes, and Operations in PHP. Implementing Inheritance in PHP, Overriding, Implementing Interfaces (excluding Preventing Inheritance and Overriding with final, Understanding Multiple Inheritance), Understanding Advanced Object-Oriented Functionality in PHP. **Accessing Your MySQL Database from the Web with PHP :** How Web Database Architectures Work, Querying a Database from the Web, Putting New Information in the Database, Using Prepared Statements, Using Other PHP-Database Interfaces. **Interacting with the File System and the Server :** Uploading Files, Using Directory Functions, Interacting with the File System, Using Program Execution Functions.

Text Books:

1. Ivan Bayross, HTML5 and CSS3 made simple, BPB Publications.
2. E Balagurusamy, Programming in C#, 3rd Edition, TMH
3. ASP .NET 4.0 in simple steps, Kogent publications
4. Luke Welling, Laura Thomson, PHP and MySQL Web Development, Developer's Library, Sams Publishing

Reference Books:

1. Jason Hamilton, C# Programming: Quickly Learn C# Programming, 2016
2. C. Komalavalli and Sanjib K. Sahu, Essentials of .NET programming, Ane' Student Edition, 2015
3. Steven Holzner, Sams Teach Yourself HTML5, SAMS publication, 2011
4. Bill Evjen, Scott Hanselman, Devin Rader, Professional ASP .NET 4 with C# and VB., Wiley publishing Incorporation, 2010
5. Steven Holzner, PHP the Complete Reference, Mc Graw Hill , 2007

Group I
Course-19

BCAC 335:Python Programming

48 hours

Theory : 4 hrs/week

IA: 20, Exam: 80

Credits : 2

Learning Objectives:

To Study Python Fundamentals to advanced concepts like OOPS , Exception handling, multi-threading ,Networking , Database Connectivity and Graphical User Interface

Learning outcomes:

Be skilled at creating, debugging and testing a software application using the Python programming language.

UNIT I

12 Hrs

Introduction to Python :Features of Python , , Flavors of python , Python Virtual machine , Memory management , Garbage Collection , Comparison between Python and C , Java and Python. Installing Python for windows , Writing and executing Python program . **Datatypes & Operators in Python** : Writing comments , docstrings , Built in data types –None type , numeric type , sequences ,sets and mappings. Literals ,Determining data types of variable ,naming conventions in Python, **Operators:** Arithmetic, Assignment , relational ,logical ,Boolean , Bitwise, membership & Identity Operators. Using Python interpreter as Calculator Mathematical functions. **Input & Output:** Input/output Statements, Command line arguments. **Control Statements** – if , if..else , if..elif , while loop , for loop , else suite, break , continue ,assert , return Statements. **Arrays in Python-** Creating arrays , Importing array module , Indexing and slicing on arrays ,Processing the arrays , types of arrays , working with arrays using numpy. Creating array using linspace() , logspace() , arrange() , zeros() and ones() functions. Mathematical operations on arrays, Comparing arrays, Aliasing ,viewing and copying arrays. Dimensions and attributes of Array. Working with multidimensional arrays, indexing and slicing, matrices in numpy.

UNIT II

12 Hrs

Strings and characters-Creating, indexing , slicing ,repeating , concatenating & comparing strings. Finding and counting substrings in string ,Replacing ,splitting and joining strings, Working with characters.

Functions – Functions and methods , Defining , calling functions, returning multiple values , formal and actual parameters , Keyword argument Default arguments and variable argument. , Local and Global variables , Anonymous functions and Lambdas, **Lists and Tuples** : Creating , updating ,concatenating lists ,Repetition of list ,Aliasing and cloning lists , Sorting lists , Nested lists , Tuples ,Creating and accessing tuple elements, Basic operations on tuples ,Functions to process tuples , Nesting ,inserting ,modifying and deleting tuple elements. **Dictionaries:** Operations on Dictionaries , Dictionary methods ,Sorting elements of dictionary ,Converting list and strings into Dictionary.

UNIT III

12 Hrs

Classes and Objects-Defining class & Objects, constructors , type of methods and variables , Inner classes.

Inheritance and Polymorphism : Type of Inheritance , super() method , method overloading & Overriding ,Abstract classes and interfaces. **Exception Handling** –Type of exceptions , assert Statement , Except Block ,User defined exceptions , logging the exceptions. **Regular expressions:** Sequence characters , Quantifiers & Special characters in regular expressions. **Creating Threads** –Different ways of creating threads , Thread class methods ,Thread Synchronization-Locks ,semaphore ,Communication between threads , Daemon Threads.

UNIT IV

12 Hrs

Graphical User Interface : Root window ,font& colors , Canvas and frames. Widgets: Button , Label ,Message , Text, Scrollbar, Chekcbutton,Radiobutton ,Entry,Spinbox,Listbox and Menu ,Creating Tables.

Networking in Python : Reading source code of web page , Downloading webpage and images ,TCP/IP server , TCP/IP Client , UDP Server, UDP client , File Server , File Client ,two way communication between server and client , Sending simple mail. **Database Connectivity:** Types of databases used with Python , Using MySQL from Python ,Retrieving and Inserting , updating and deleting data in a table ,Creating Database tables through Python. Using Oracle database from Python Stored Procedures.

Text Book:

1. Ch Satynarayana, M Radhika Mani, ands B N Jagadeesh, Python Programming, Universities Press, 2018.

Reference Books :

1. Python The Complete Reference by Martin C. Brown ,McGraw Hill Education Programming in Python
2. Complete Introduction to Python Language By Mark Summerfield , Second Edition.
3. Dr. R. Nageshwara Rao , Core Python Programming , , Dreamtech Press , Second Addition

Group I**48 hours****Course-20****Theory : 4 hrs/week****BCAC 336-E1:Account & Financial
Management****IA: 20, Exam: 80****Credits : 2****Learning Objectives :**

- To provide Basic knowledge of Accounting , competency to enter accounting transactions in the accounting software and generate different accounting reports/documents.
- Abilities to make cost analysis reports, profit & loss accounts, balance sheets, and cash flow statements etc.
- skills in maintaining accounting records, provides in-depth exposure to accounts receivable/ accounts payable, payroll and inventory modules.

Learning Outcomes :

- Apply skills in Computerized Accounting for maintaining accounting records, making management decisions, and processing common business applications

UNIT I**12 Hrs****Excel Advanced Concepts**

Excel & the Internet: E Mail Merge from Excel, Functions: Drop Down List, Dates, Whole Numbers, Decimals, VLOOKUP, Macros, IF Functions, Using Functions to Clean & Crunch data: Protection, Locked Cells, Hidden Cells, Links to other worksheets or workbooks, Data Commands, Solver, Using Excel with Your Accounting System.

UNIT II**12 Hrs**

Manual Accounting: Need for accounting, types of accounts, rules for debit and credit, accounting principles and standards, accounting systems, definitions and terms, recording transaction in a journal, ledger, trial balance, final accounts, adjustment entries. Feature of Tally, requirements for installing, procedure for installing. Salient Features - Company Creation - Ledger Creation with predefined Primary Groups, Predefined Sub Groups and New Sub Groups, cost categories (single mode, expert usage) and cost centers.

12 Hrs

Inventory Masters and Reports in Stock Summary and Statements of Inventory - Accounting Voucher Entries - Creation of additional voucher types - Simple classes in Accounting Vouchers - Inventory Voucher Entries -Using Various references in Bill wise Accounting for Trading and Non Trading Accounts

UNIT IV**12 Hrs**

Age wise Analysis - Payment Performance of debtors - Bank Reconciliation Statement - Reporting and Printing: Trial balance, balance sheet, profit and loss account, stock summary, ratio analysis, display menu, day book. **Important features of Tally:** Multiple currencies and foreign exchanges, rates of exchange, budget, scenario management, security control in tally, splitting company data, group companies, tally audit, tally interface, tally ODBC, backup and restore. **TDS Module:** Enabling TDS in tally, ledger pertaining to TDS, creating TDS voucher types, voucher entry, TDS reports, challan, TDS computation, TDS payables, ledger out standings

Text Book:

1. Kogent Learning Solutions mc, Tally. ERP 9 in Simple Steps, Dreamtech Press *
2. Tally 7.2 course kit - Namrata Agrawal, Sanjay Kumar, Dreamtech Press*
3. Tally 9.0 - Dinesh Maidasani, Laxmi Publication

References Books:

1. Nadhani, Tally. ERP 9 Training Guide, BPB
2. Vikas Gupta, Comdex Computer and Financial Accounting with Tally 9.0, Wiley India Pvt Ltd, 2010

Group I
Course-21
Theory : 4 hrs/week
Credits : 2

**BCAC 337-E2:Android Application
Development**

48 hours

IA: 20, Exam: 80

Learning Objectives :

- To provide the basic knowledge about mobile application development in Android platform.
- To make the students aware about how to build applications to mobile devices and thus preparing them to be ready for the industry.

Learning Outcomes :

- Apply the skills for creating, deploying Android applications, with particular emphasis on software engineering topics including software architecture, software process, usability, and deployment.
- To use the knowledge of android architecture and the tools for developing android applications

UNIT I

12 Hrs

Getting an Overview of Android: Introducing Android: Listing the Version History of Android Platform, Discussing Android APIs, Describing the Android Architecture, Application Framework, Exploring the Features of Android. Discussing about Android Applications: The Application Components, The Manifest File. Downloading and Installing Android: Downloading and Installing the Android SDK, Setting up Android Virtual Device, Setting up Android Physical Device. Exploring the Development Environment: The Java Perspective Using Eclipse, The DDMS Perspective. Developing and Executing the First Android Application: Using Eclipse IDE to Create an Application, Running Your Application, Exploring the Application.

Using Activities, Fragments, and Intents in Android: Working with Activities: Creating an Activity, Starting an Activity, Managing the Lifecycle of an Activity, Applying Themes and Styles to an Activity, Displaying a Dialog in the Activity, Hiding the Title of the Activity.

Using Intents: Exploring Intent Objects, Exploring Intent Resolution, Exploring Intent Filters, Resolving Intent Filter Collision, Linking the Activities Using Intent, Obtaining Results from Intent, Passing Data Using an Intent Object. Fragments: Fragment Implementation, Finding Fragments, Adding, Removing, and Replacing Fragments, Finding Activity Using Fragment, Using the Intent Object to Invoke Built-in Application.

Working with the User Interface Using ViewGroups: Working with View Groups: The LinearLayout Layout, The RelativeLayout Layout, The ScrollView Layout, The TableLayout Layout, The FrameLayout Layout, The TabLayout Using the Action Bar.

UNIT II

12 Hrs

Working with the User Interface Using Views: Working with Views: Using the TextView, Using the EditText View, Using the Button View, Using the RadioButton View, Using the CheckBox View, Using the ImageButton View, Using the ToggleButton View, Using the RatingBar View. Binding Data with the AdapterView Class: Using the ListView Class, Using the Spinner, Using the Gallery View. Designing the AutoTextView Implementing Screen Orientation: Anchoring the Views of the Current Activity, Customizing the Size and Position of the Views. Designing the Views Programmatically Handling UI Events: Handling User Interaction with Activities, Handling User Interaction with the View. Specialized Fragments: ListFragment, DialogFragment, PreferenceFragment. Creating Menus: The Options Menu, The Context Menu, The SubMenus.

Handling Pictures and Menus with Views: Working with Image Views: Displaying Images in the Gallery View, Displaying Images in the Grid View, Using the ImageSwitcher View. Designing Context Menu for Image View. Using the AnalogClock and DigitalClock Views Embedding Web Browser in an Activity Notifying the User: Creating the Toast Notification, Creating the Status Bar Notification, Creating the Dialog Notification.

Storing the Data Persistently: Introducing the Data Storage Options: Using Preferences, Using the Internal Storage: Exploring the Methods Used for Internal Storage, Developing an Application to Save User Data Persistently in File. Using the External Storage: Exploring the Methods Used for External Storage, Developing Application to Save File in SD Card. Using the SQLite Database: Creating the Database Helper Class, Creating the Layout and Main Activity Class, Creating the Layout and Activity for the Insert Operation, Creating the Layout and Activity to Search a Record, Creating the Activity Class to Fetch All Records, Creating the Layout and Activity for the Update Operation, Creating the Layout and Activity for the Delete Operation, Executing the Database Operations. Working with Content Providers: Exploring the

android provider Package, Creating User-Defined Content Provider, Consuming User-Defined Content Provider.

UNIT III

12 Hrs

Working with Location Services and Maps: Working with Google Maps: Exploring Google Maps External Library, Creating an Application Using Google Maps Android API, Disabling the Zoom Control Button, Changing the Map Type, Displaying the Specific Location and Adding Markers, Handling Map Gestures Interaction, Getting the Current Location of a User. Working with Geocoding and Reverse Geocoding.

Working with Graphics and Animation: Working with Graphics: Drawing Graphics to Canvas Using the Drawable Object: Referencing an Image File, Defining Drawable in XML. Using the ShapeDrawable Object. Working with the NinePatchDrawable Graphics. Understanding the Concept of Hardware Acceleration. Working with Animations: The Property Animation, View Animation, Drawable Animation.

Audio, Video, and Camera: Role of Media Playback, Using Media Player: Media Formats Supported by Media Player, Preparing Audio for Playback, Preparing Video for Playback, Creating Application to Play Audio and Video Using MediaPlayer. Recording and Playing Sound: Use of Media Store, Audio Recording Application. Creating a Sound Pool. Using Camera for Taking Pictures. Recording Video: Creating Video Recording Application.

Threads and Services: Introducing Threads: Worker Threads, Using AsyncTask, Introducing Services: Exploring Services Essentials, Understanding the Lifecycle of a Service, Exploring the Service Class, Introducing the Service Class, Creating a Bound Service.

UNIT IV

12 Hrs

Telephony and SMS: Handling Telephony: Displaying Phone Information Application, Receiving Phone Calls Application, Making Outgoing Phone Calls Application. Handling SMS: Sending SMS Using SmsManager. Sending SMS Using Intent: Receiving SMS Using the BroadcastReceiver Object, Role of Default SMS Providers.

Hardware Sensors: Introducing Sensors: Exploring the Sensor Framework, Managing Various Sensor Configurations, Understanding the Sensor Coordinate System. Using Sensors.

Widgets and Live Wallpapers in Android: Home Screen Widgets: Adding the Broadcast Receiver Class to an Android Manifest, Using the RemoteViews and AppWidgetManager Classes, Creating a Customized Clock Widget. Collection View Widgets: Collection View Widget Layouts, Creating the Remote Views Service Class, Creating a Remote Views Factory Interface, Populating Collection View Widgets. Live Wallpaper: Creating Live Wallpaper Resource and Service, Configuring Wallpaper Service, Creating Live Wallpaper Application.

Text Book:

1. Pradeep Kothari, Android Application Development (With KitKat Support) – Black Book, DreamTech Press.

References Books:

1. Barry Burd, Android Application Development for Dummies
2. Brian Hardy, Bill Phillips, Android Programming: The Big Nerd Ranch Guide

Group I**BCAC 338-E3: SCI LAB PROGRAMMING****48 hours****Course-22****Theory : 4 hrs/week****IA: 20, Exam: 80****Credits : 2****Learning Objectives :**

- Familiarization of the syntax, semantics, data-types and library functions of numerical computing language such as MATLAB and/or SCILAB, and application of such languages for implementation/simulation and visualization of basic mathematical functions relevant to electronics applications.

Learning Outcomes :

On successful completion of the course, the students should be able to

- . Understand the need for simulation/implementation for the verification of mathematical functions.
- . Understand the main features of the SCILAB program development environment to enable their usage in the higher learning
- Analyze the program for correctness and determine/estimate/predict the output and verify it under simulation environment using /SCILAB tools.

12 Hrs**UNIT I**

Overview of Scilab: How to get and install Scilab, Installing Scilab under Windows, Installing Scilab under Linux, Installing Scilab under Mac OS, Mailing lists, wiki and bug reports, Getting help from Scilab demonstrations and Macros. **Basic element of the language:** Creating Real Variables, Variable names, Comments and continuation lines, Elementary mathematical functions, Pre-defined mathematical variables, Booleans, Complex Numbers, Integers, Floating of integers, The answer variable, Strings, Dynamic types of variables. **Matrices:** Overview, Create a matrix of Real value, The empty matrix “[]”, Query matrices, Accessing the elements of matrix, The colon “:” operator, The eye matrix, Matrices are Dynamic, The Dollars “\$” operator, Low-level operations, Element wise operations, Conjugate transpose and non- conjugate transpose, Multiplication of two vectors, Comparing two real matrices, Issues with floating point integers, More on elementary functions, Higher- level linear algebra features.

Looping and Branching: The if- statement, The select statement, The for statement, The while statement, The break and continuous statement .

UNIT II**12 Hrs**

Functions: Defining a Function, Function libraries, Managing Output Argument, The level in the call stack, The Return statement, Debugging functions with pause. **Plotting:** Overview, 2D plots, Contour plots, Titles, Axes and Legends, Exports. **Scilab GUI:** How a graphical user interface works, creating and displaying a graphical user interface, Object properties, Graphical user interface components, Additional containers: Panels and button groups, Dialog Boxes, Menus, Tips for creating efficient GUIs. **Data Analysis:** Basic Statistical Analysis, Basic Data Analysis, Data Analysis and Statistical Functions **Data Interpolation:** One dimensional Interpolation , two dimensional Interpolation, Triangulation and Scattered Data **Cubic Splines:** Basic Features Piecewise polynomials, Cubic Hermite Polynomials, Integration, Differentiation, Spline Interpolation on a Plane. **Fourier Analysis:** Discrete Fourier Transform, Fourier Series. **Differential Equations:** IVP Format, ODE Suite Solvers, Basic use, Setting options, BVPs, PDEs and DDEs.

UNIT III**12 Hrs**

Digital Image Fundamentals: Light, Brightness adoption and discrimination, Human visual system, Image as a 2D data, Image representation. Gray scale and color images, Image sampling, And quantization,

Image Enhancement and filtering in spatial Domain: Intensity transformation function: Construct stretching, Thresholding, Image negative, Log transformation, Power-law transformation, Intensity level slicing & bit – plane slicing, Image histogram. Histogram equalization process fundamentals of spatial filtering. Correlation and convolution spatial filtering. Mask for low pass-filtering(smoothing). High pass filtering (sharpening). **Image filtering in the frequency domain:** Preliminary concepts, extension to functions of two variables, Image smoothing, Image sharpening, Homomorphic filtering, 2D-DFT, 2D-FFT, 2D-DCT, Fundamentals of 2D- wavelet transform, Image pyramids, Sub-band coding. **Image Restoration:** Reason for image degradation, Model of image degradation/restoration process, Noise probability density function, Image restoration using spatial filtering (Mean filters, Order Statistic filters and Adaptive filters), Inverse filtering, MMSE (wiener) filtering.

UNIT IV**12 Hrs****Color Image Processing:** Color Fundamentals, Color Modals, Pseudo-color image processing.

Image compression: fundamentals of redundancies, basic compression method-Huffman coding, arithmetic coding, LZE coding, JPGE compression standard, Wavelet based image compression. **Image Segmentation:** Edge based segmentation, Region based segmentation, Region split and merges techniques, Region growing by pixel aggregation, Optimal thresholding. **Morphologic image processing:** Basic Morphological operations, Erosion, Dilution, Opening, Closing, Structuring elements, Hit-or-miss transform basic Morphological algorithms: Hole filling, Connected components, thinning, Skeletons, Reconstruction by erosion and dilation.

Text Books:

1. Nagar, Sandeep, Introduction to Scilab For Engineers and Scientists, Apress Publication, 2017
2. **Kothari**, Ashish M, Digital Image Processing using SCILAB, Springer publication, 2019.
3. Duane Hanselman Bruce Littlefield, Mastering MATLAB7, Pearson Education India, 2005

References Books:

1. Tejas Sheth, A Practical Introduction to Programming and Problem Solving using Scilab, Create Space Independent Publishing Platform, 2016
2. Stephen J Chapman, Programming in MATLAB for Engineers, Thomson Publication, 2008
3. Jayadeep Chakaravorty, Introduction To MATLAB Programming TOOLBOX AND SIMULINK, Orient Black Swan, 2014

Group-I Practical-IX	BCAP 339-: Web Application Lab	36 Hours
Practical/Week: 3 Hrs Credits: 2	Exercises on Web Application programming	I.A: 20 Exam: 80
Practical-X	BCAP 340-: Python Programming Lab	36 Hours
Practical/Week: 4 Hrs Credits: 2	Exercises on Python Programming	I.A: 20 Exam: 80
Practical-XI	BCAP 341-E1:AFM Lab / BCAP 342-E2: AAD Lab / BCAP 343-E3: SciLab	36 Hours
Practical/Week: 3 Hrs Credits: 2	Exercises on any one of the above selected Elective	I.A: 20 Exam: 80

MANGALORE UNIVERSITY
Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

VI. SEMESTER BCA

Group	Course Code	Course Particulars	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC381	E-Commerce	4	3	20	80	100	2
	BCAC382	Network Security & Management	4	3	20	80	100	2
	BCAC383	Software Testing	4	3	20	80	100	2
	BCAC384 BCAC385 BCAC386	E1: Programming for Analytics E2: Business Statistics with R E3: Multivariate Data Analysis	4	3	20	80	100	2
	BCAC387	Project Work	20	3	100	Reports - 300 Presentation and Viva - 100 Total: 400	500	10
		Total	36	27	180	720	900	18

Total Marks : 5200

Grand Total Credit for three year BCA Degree Programme : 104

Group I
Course -23
Theory/Week 4 Hrs
Credit :2

BCAC 381: E-COMMERCE

48 hours

I A: 20
Exam: 80

Learning Objectives

Introduce concepts and principles E-commerce, modern technologies used to simplify business and banking processes through e-commerce, provision of E-commerce services, infrastructure, frameworks of web based and mobile systems for E-Commerce applications

Learning Outcome :

At the end of the course the students will be fully aware of:

- the principles and practice of Electronic Commerce
- the components, functions and roles of the Electronic Commerce environment
- E-Commerce payment systems.

UNIT I

12 Hrs

Introduction to Electronic Commerce: The meaning, benefits, impact, Classification (B2B, B2C, C2C, B2G), application of Electronic Commerce technologies. **Electronic Commerce:** What is Business model, Taxonomy of business models of E-Com.

UNIT II

12 Hrs

Electronic Data Interchange: The meaning of EDI, building blocks of EDI system, layered architecture, value added networks, benefits and application of EDI. **Electronic Commerce:** Architectural framework.

Electronic Payment System: Introduction to payment system, online payment system, prepaid and postpaid (e-Cash and Cyber Cash) electronic payment systems, requirement metrics of a payment system.

UNIT III

12 Hrs

Electronic Commerce: Network infrastructure: LAN, Ethernet LAN, WANs, Internet, TCP/IP reference model, Domain Name systems, and Internet industry structure. **Information distribution and messaging:** FTP application, Email, WWW server, HTTP, Web Servers implementation.

UNIT IV

12 Hrs

Electronic Commerce: securing the business on Internet: Vulnerability of information on Internet, security policy, procedures and practices, site security, protecting the network – Denial of service, Sniffing, Spoofing and Firewalls. **Electronic Commerce: Securing the business on Internet:** transaction security, Cryptology- Conventional Encryption model, Public key cryptosystems, digital signature, email security.

Mobile Commerce: Introduction, Architectural Framework and models, meaning, benefits, impediments, 1G, 2G and 3G networks.

Text Book:

1. Bharat Bhaskar, **Electronic Commerce: Framework, Technologies and Applications**, 4th edition, McGraw Hill company, 2014

Reference Books:

1. C. S. V. Murthy, **E-commerce: Concepts, Models, Strategies**, Himalaya Publishing House, 2011
2. Ravi Kalakota, Andrew B. Whinston, **Frontiers of Electronic Commerce**, Addison-Wesley Publications, 2000

Group I
Course-24
Theory/Week 4 Hrs
Credit :2

BCAC 382: Network Security & Management

48 hours
I A: 20
Exam: 80

Learning Objectives:

- To provide in-depth knowledge of network Security , Database Security , information Security and Security laws.
- Provide knowledge Basic cryptography Concepts.
- To provide knowledge of Network Security Management

Learning Outcomes :

At the end of the course, students will be aware of

- Various factors driving the need for network , Database and information security
- Physical points of vulnerability in a networks
- Various laws related to Information Security

UNIT I

12 Hrs

Introduction to Network Security : why network security is needed , management principles ,security principles ,network management ,security attacks , organizational policy & security – security policies ,standards & guidelines ,information policy , Security policy , Physical security ,Security procedures , Network security planning , implementing a security policy. **Security infrastructure** – Components ,Goals ,design guidelines ,models. **Cryptography** – Terminology & background ,Data encryption methods ,cryptographic algorithms ,secret key cryptography – Stream ciphers ,Block ciphers (DES algorithm ,Triple DES) , Code –Book ciphers , Message digest , Digital signatures ,Speech cryptography.

UNIT II

12 Hrs

Hardware & Software security – Hardware security ,Smart card , Biometrics, Virtual Private networks - Types ,Software security .Trusted Operating systems ,KERBEROS. **Database Security** –Issues ,requirements , database security ,Vendor –specific security ,Database Backup ,Data ware house control & security . **Information security** –Distributed systems security ,Distributed computing environment ,System Vulnerability & abuse , management framework of security & control ,E-commerce security ,E-security Vs E-thieves. **Network security** – Fundamental concepts ,Identification & authentication ,Access control , Model for network security ,malicious software , Firewalls.

UNIT III

12 Hrs

Wireless network and application ,purpose of WAP ,WAP security **Web Security** – Importance of web security in business ,client/server architecture ,web traffic security approaches , **SSL/TLS for secure web services** , secure hypertext transfer protocol (S-HTTP) , Secure electronic transaction (SET). **Network security Management** – Goal of network management ,network management model ,simple network management (SNMP). **Security management** - Goals of network security system ,security plan , Security analysis , Change management , Disaster Recovery , Protecting storage media ,Protection of system documentation .

UNIT IV

12 Hrs

Risk management – What is Risk? Identify the Risk to an organization, Risk analysis ,Incident management ,Incident Response , Incident response process. **Security & law** – Information Technology Act 2000 , Indian contract act 1872 , Indian Penal code ,Indian copy right act ,Consumer Protection act 1986 . E-mail threats to organization, Email policy, electronic mail security . **Internet Banking system** – steps, layered approaches to security.

Text Book:

Brijendra Singh,Network Security and Management , 3rd edition, PHI Learning Pvt. Ltd.,2011,

Reference Books:

1. Behrouz A. Forouzan ,Debdeep Mukhopadhyay, Cryptography and Network Security , 2nd edition, Mcgraw Hill Education, 2011.
2. Charlie Kaufman , Radia Perlman & Mike Speciner , Network Security -Private Communication in Public World ,2nd edition, PHI Learning.

Group 1
Course -25
Theory : 4 hrs/week
Credits : 2

BCAC 383: Software Testing

48 Hours
IA : 20
Exam : 80

Learning Objectives

- To understand the necessity of software testing
- To analyze risks associated with software testing
- To familiarize with different tools available for software testing

Learning Outcome :

At the end of the course the students will be able to

- Understand the importance of software testing, different testing techniques and use of various test tools
- Create test strategies and plans, design test cases, prioritize and execute them.
- Contribute to efficient delivery of software solutions and implement improvements in the software development processes.

UNIT I

12 Hrs

Fundamentals of Software testing: Introduction, Historical Perspective of Testing, Definition of Testing, Approaches to Testing, Essentials of Software Testing, Important Features of Testing Process, Misconceptions About Testing, Principles of Software Testing, Salient Features of Good Testing, Test Policy, Test Strategy or Test Approach, Test Team Efficiency, Challenges in Testing, Test Team Approach, Establishing Testing Policy, Structured Approach to Testing, Defect, Error or Mistake in Software, Testing Process, Test Methodologies/Approaches, Skills Required by Tester. **Software Verification and Validation:** Introduction, Verification, Verification Work Bench, Methods of Verification, Types of Reviews on the Basic Stage/Phase, Reviews in Testing Life Cycle, Coverage in Verification, Validation, Validation Work Bench, Levels of Validation, Acceptance Testing.

UNIT II

12 Hrs

Levels of Testing: Introduction, Proposal Testing, Requirement Testing, Design Testing, Code Reviews, Unit Testing, Module Testing, Integration Testing, Big Bang Testing, Sandwich Testing, Critical Path First, Subsystem Testing, System Testing, Testing Stages. **Acceptance Testing:** Introduction, Acceptance Testing Criteria, Importance of Acceptance Criteria, Alpha Testing, Beta Testing, Gamma Testing, Acceptance Testing During Each Phase of Software Development, Consideration of Alpha and Beta Acceptance Testing Process, What Does Software Acceptance Enable?, Customer's Responsibilities in Acceptance Testing, Fits for Acceptance Testing, Define Acceptance Criteria, Criticality of Requirements, Factors Affecting Criticality of the Requirements, User Responsibilities in Acceptance Test Plan, Executing Acceptance Plan.

UNIT III

12 Hrs

Special Tests: Introduction, Complexity Testing, Graphical User Interface Testing, Compatibility Testing, Security Testing, Performance Testing, Volume Testing and Stress Testing, Recovery Testing, Installation Testing, Requirement Testing, Regression Testing, Error Handling Testing, Manual Support Testing, Intersystem Testing, Control Testing, Smoke Testing, Sanity Testing, Adhoc Testing, Parallel Testing, Execution Testing, Operations Testing, Usability Testing, Documentation Testing, Training Testing, Rapid Testing. **Testing Tools:** Introduction, Features of Test Tools, Guidelines for Selecting a Tool, Tools and Skills of Testers, Static Testing Tools, Dynamic Testing Tools, Advantages of Using Tools, Disadvantages of Using Tools, When to Use Automated Test Tools, Testing Using Automated Tools, Difficulties While Introducing New Tools, Process of Procurement of COTS (Readily available tool from Market).

UNIT IV

12 Hrs

Test Planning: Introduction, Test Policy, Test Strategy, Test Planning, Test Plan, Quality Plan and Test Plan, Guidelines for Developing the Test Plan, Test Estimation, Test Standards, Building Test Data and Test Cases, Test Scenario, Test Cases, Essential Activities in Testing, Test Scripts, Test Log Document, Test File, Building Test Data, Generation of Test Data, Tools Used to Build Test Data. **Test Metrics and Test Reports:** Introduction, Testing Related Data, Estimated, Budgeted, Approved and Actual, Test Reports, Test Reports, Integration Test Report, System Test Report, Acceptance Test Report, Guidelines for Writing and Using Report, Final Test Reporting, Test Status Report, Benchmarking

Text Book

1. M G Limaye, Software Testing- Principles, Techniques and Tools, McGraw Hill Education, 2009

Reference Books

1. Ron Patton, Software Testing, Sams Publishing; 2 edition, 2005.
2. Srinivasan Desikan, Gopalaswamy Ramesh, Software Testing- Principles and Practices, Pearson Education India, 2006

Group-I
Course-26
Theory : 4 hrs/week
Credits: 2

BCAC 384-E1: Programming for Analytics

48 Hours
IA : 20
Exam : 80

Learning Objectives

Learning Objectives: This module introduces Students to various programming languages in the field of Analytics like SQL, SAS, R and form foundation for further analysis of Datasets. Students will learn the basics of these programming languages and learn data manipulation techniques.

Learning Outcome : At the end of the course the students will be able to

- Obtain, clean/process and transform data
- Analyze and interpret data using an ethically responsible approach.
- Use appropriate models of analysis, assess the quality of input, derive insight from results, and investigate potential issues. Formulate and use appropriate models of data analysis to solve hidden solutions to business-related challenges.

12 Hrs

UNIT I

Introduction to R Programming : R and R Studio, Logical Arguments, Missing Values, Characters, Factors and Numeric, Help in R, Vector to Matrix, Matrix Access, Data Frames, Data Frame Access, Basic Data Manipulation Techniques, Usage of various apply functions – apply, lapply, sapply and tapply, Outliers treatment. **Descriptive Statistics :** Types of Data, Nominal, Ordinal, Scale and Ratio, Measures of Central Tendency, Mean, Mode and Median, Bar Chart, Pie Chart and Box Plot, Measures of Variability, Range, Inter-Quartile-Range, Standard Deviation, Skewness and Kurtosis, Histogram, Stem and Leaf Diagram, Standard Error of Mean and Confidence Intervals.

12 Hrs

UNIT II

Introduction: Database Management Systems: Definition, Characteristics of DBMS, Architecture & Security, Types of Data Models, Concepts and constraints of RDBMS, Introduction to Structured Query Language, MySql Installer, and Download sample Database, Loading Sample Database.

12 Hrs

UNIT III

Data Definition and Manipulation: SQL Process, SQL Commands – DDL, DML, DCL, DQL, SQL Constraints, Data Integrity, Data Types, SQL Operators, Expressions, Querying Database, Retrieving result sets, Sub Queries, Syntax for various Clauses of SQL, Functions and Joins, Indexes, Views, Transactions.

UNIT IV

12 Hrs

Basics of SAS : Introduction to SAS, Installation of SAS university Edition, prerequisites for data analysis using SAS, SAS Architecture, Data Types, Formats and Informats, SAS coding- Data step and proc step, Libraries, Importing external data, Reading and Manipulating Data, Functions, Data Transformations, Conditional Statements.

Reference Books:

1. Dyer, MYSQL in a nutshell. O' Reilly, 2008.
2. DuBois, MySQL cookbook. O' Reilly, 2014
3. Delwiche & Slaughter, SAS: The little SAS Book. SAS Institute, 2012
4. Hemedinger & McDaniel, SAS for dummies. Wiley, 210
5. Madhavan, Mastering Python for Data Science. Packt, 2015
6. McKinney, Python for Data Analysis. O' Reilly, 2017
7. Grolemund, R : Hands-on Programming; Garrett, O' Reilly, 2014
8. Paul, R Cookbook. O' Reilly, 2011

Group-I
Course-27

Theory : 4 hrs/week

Credits: 2

BCAC 385-E2: Multivariate Data Analysis

48 Hours

IA : 20

Exam : 80

Learning Objectives: This course will enable students to exercise Multivariate Techniques in R environment in different Business Cases. They will know the different techniques covered under the scope of Multivariate Analysis and will be able to apply and build select Predictive Models in the context of Binary Classification and Time Series.

Learning Outcome : At the end of the course the students will be able to

- Obtain, clean/process and transform data
- Analyze and interpret data using an ethically responsible approach.
- Use appropriate models of analysis, assess the quality of input, derive insight from results, and investigate potential issues. Formulate and use appropriate models of data analysis to solve hidden solutions to business-related challenges.

12 Hrs

UNIT I

Overview of Multivariate Statistics: Nature of Multivariate Analysis, Validity and Reliability, Types of Multivariate Techniques, PCA and Factor Analysis, Multiple Regression, Logistic Regression, Canonical Correlation, Conjoint Analysis, Cluster Analysis, Multi-Dimensional Scaling, Correspondence Analysis, Structural Equation Modeling, Multivariate Model Building.

12 Hrs

UNIT II

Data Cleaning and Multivariate Techniques: Graphical Examination of Data, Convert Un-Tidy Data into Tidy Data. Missing Data, Imputation of Missing Data by Central Tendency and kNN Method. Outliers, Winsorization of Outliers, Testing the Assumptions of Multivariate Analysis, Incorporating Nonmetric Data with Dummy Variables, Managerial Overview of the Results.

12 Hrs

UNIT III

Logistic Regression : Binary Classification versus Point Estimation, Odds versus Probability, Logit Function, Classification Matrix, Individual Group Classification Efficiency, Overall Classification Efficiency, Nagelkerke R Square, Receiver Operating Characteristic Curve, Sensitivity, Specificity, Area Under ROC Curve, Cut-Offs, True Positive Rate and False Positive Rate.

12 Hrs

UNIT IV

Introduction to Time Series : Nature of Time Series, Components of Time Series, Secular Trend, Seasonal Variations, Cyclical Variations, Irregular Variations, Time Series Decomposition, Smoothing Techniques, Moving Average, Weighted Moving Average, Exponential Smoothing, Double Exponential Smoothing, Regression Trend Analysis, Autocorrelation and Autoregression.

Reference Books:

1. Hair, J. F. et al., *Multivariate Data Analysis*, 6th edition. NJ: Prentice Hall, 2015
2. Aiken, L. S., & West, S. G, *Multiple Regressions: Testing and Interpreting Interactions*. Newbury Park, CA: Sage, 1991.
3. Hamilton, J. D, *Time Series Analysis*. Princeton University Press, 1994
4. Enders, W, *Applied Econometric Time Series*. Hoboken, NJ: John Wiley & Sons, 2010
5. Menard, S, *Applied Logistic Regression Analysis*. Thousand Oaks, CA: Sage, 2002
6. Tabachnick, B. and Fidell, L, *Using Multivariate Statistics*, New York: Allyn & Bacon, 2007.

Group-I**Course-28****Theory : 4 hrs/week****Credits: 2****BCAC 386-E3: Business Statistics with R****48 Hours****IA : 20****Exam : 80**

Learning Objectives: The objective of this module to make students exercise the fundamentals of statistical analysis in R environment. They would be able to analysis data for the purpose of exploration using descriptive and inferential statistics. Students will understand probability and sampling distributions and learn the creative application of linear regression in multivariate context for predictive purpose.

Learning Outcome : At the end of the course the students will be able to

- Obtain, clean/process and transform data
- Analyze and interpret data using an ethically responsible approach.
- Use appropriate models of analysis, assess the quality of input, derive insight from results, and investigate potential issues. Formulate and use appropriate models of data analysis to solve hidden solutions to business-related challenges.

UNIT I**12 Hrs**

Introduction to R Programming : R and R Studio, Logical Arguments, Missing Values, Characters, Factors and Numeric, Help in R, Vector to Matrix, Matrix Access, Data Frames, Data Frame Access, Basic Data Manipulation Techniques, Usage of various apply functions – apply, lapply, sapply and tapply, Outliers treatment. **Descriptive Statistics :** Types of Data, Nominal, Ordinal, Scale and Ratio, Measures of Central Tendency, Mean, Mode and Median, Bar Chart, Pie Chart and Box Plot, Measures of Variability, Range, Inter-Quartile-Range, Standard Deviation, Skewness and Kurtosis, Histogram, Stem and Leaf Diagram, Standard Error of Mean and Confidence Intervals.

UNIT II**12 Hrs**

Probability, Probability & Sampling Distribution : Experiment, Sample Space and Events, Classical Probability, General Rules Of Addition, Conditional Probability, General Rules For Multiplication, Independent Events, Bayes' Theorem, Discrete Probability Distributions: Binomial, Poisson, Continuous Probability Distribution, Normal Distribution & *t*-distribution, Sampling Distribution and Central Limit Theorem.

UNIT III**12 Hrs**

Statistical Inference and Hypothesis Testing : Population and Sample, Null and Alternate Hypothesis, Level of Significance, Type I and Type II Errors, One Sample *t* Test, Confidence Intervals, One Sample Proportion Test, Paired Sample *t* Test, Independent Samples *t* Test, Two Sample Proportion Tests, One Way Analysis of Variance and Chi Square Test.

UNIT IV**12 Hrs**

Correlation and Regression : Analysis of Relationship, Positive and Negative Correlation, Perfect Correlation, Correlation Matrix, Scatter Plots, Simple Linear Regression, R Square, Adjusted R Square, Testing of Slope, Standard Error of Estimate, Overall Model Fitness, Assumptions of Linear Regression, Multiple Regression, Coefficients of Partial Determination, Durbin Watson Statistics, Variance Inflation Factor.

Reference Books:

1. Grolemond, R : Hands-on Programming; Garrett, O' Reilly, 2014.
2. Paul, R: R Cookbook. O' Reilly, 2011.
3. Ken Black, Business Statistics, New Delhi, Wiley, 2013.
4. Anderson, David R., Thomas A. Williams and Dennis J. Sweeney, Statistics for Business and Economics. New Delhi: South Western, 2012.
5. Levin, Richard I. and David S. Rubin, Statistics for Management. New Delhi: Prentice Hall, 1994
6. Waller, Derek, Statistics for Business. London: BH Publications, 2008.
7. Lee, Cheng. et al, Statistics for Business and Financial Economics. New York: Heidelberg Dordrecht 2013.

Group-I	BCAC 387: Project Work	Credits : 10
Course-29		
Theory : 4 hrs/week Credits: 2		IA : 100 Exam : 400

PROJECT GUIDELINES

Preamble: Project work has been made a part of BCA course to give students exposure to Software development exercises. The primary emphasis of the project work is to understand and gain the knowledge of the principles of software engineering practices. As such, during the development of the project students shall involve themselves in all the stages of the software development life cycle (SDLC) like requirements analysis, systems design, software development/coding, testing and documentation, with an overall emphasis on the development of reliable software systems. Since, the project work spans over the entire final semester, the students shall be advised to take up projects for solving problems of software industry or any research organization or the real life problems suggested by the faculty in-charge of BCA project work in the Institutions. Topic chosen of work must be nontrivial, analytical and application-oriented. It must involve substantial original work and/or development effort based on the theme. Solved, off-the-shelf and pirated work is not entertained. Any attempt of plagiarism or use of unfair means will result in rejection of the work. All activities of the Project Development must be time-bound and the equal participation of the team members expected throughout the Development process.

GENERAL GUIDELINES TO THE INSTITUTIONS

- Calendar of Project Work shall be announced before the commencement of the Sixth semester. Calendar should contain tentative schedules for the submission of Project Proposal, Project Acceptance, Project Synopsis, Problem Analysis Document, System Design Document, Database Design, Detailed Design, Coding and Testing, Final Report, Internal Assessment exams (at least two), Viva/Voce etc.
- Students shall undertake projects with real life problems (that has direct relevance in day-to-day activities or to knowledge extension) either in their Colleges or in industry/research and development laboratories/software companies as recommended by the faculty in-charge of BCA project work in the Institutions. If a student intends to do industry project, the faculty in-charge shall ensure that the projects are genuine and original in nature.
- There shall be not more than three members in a Project team.
- At least two internal assessment exams shall be conducted to evaluate the progress made by the students at different stages of project work. Such exams may include written tests, document verification and presentations, work demonstration, group discussion, viva-voce etc. so as to objectively assess the understanding gained by the students in course of their project work.

PROJECT VALUATION

External and Internal Examiners together conduct project valuation objectively. To begin with, the finer details about various points contained in the scheme of valuation may be conclusively agreed upon through mutual consultation. During project evaluation, a student shall present his/her work through live demonstration of the software application developed as a part of project. However, if live demonstration is not possible due to the reason that some companies do not divulge source code on account of ownership rights or copyrights, students may be allowed to make PPT presentation of their authentic works. In such cases, candidates shall produce necessary declarations issued by the companies to this effect. However, students shall be enabled to present their work in entirety. The primary objective of project evaluation shall be to assess the extent of effort that was put in to meet the objectives of the project and also to gauge the understanding gained by the students in course of their project works. While evaluating Project Reports, examiners shall scrutinize whether Software Development Life Cycle (SDLC) principles have been consistently followed in the project work and the same are documented well in the Reports. However, the

relative and overall emphasis of these principles to a particular problem domain chosen may be taken into account so that project evaluations remain fair and objective.

SCHEME OF VALUATION and Marks Distribution

	Particulars	Marks
Internal Assessment		
	Progress assessment for Four Times @ 25 marks at each time	100
Project Report Valuation : 300 marks		
1	Innovativeness and utility of the project for Industry/Academic or Society (Utility)	25
2	Related studies about the project (Adequacy)	20
3	Project plan & implementation - target achieved / output delivered (effectiveness)	
	3.1 Problem Analysis	40
	3.2 System Design	40
	3.3 Database Design	40
	3.4 Detailed Design	40
	3.5 Implementation	40
	3.6 Testing	40
4	Other mandatory documents & information (certificates, contents, tables, figures, bibliography etc.)	15
Viva-Voce : 100 marks		
1	Live Demonstration (Software execution) or Dry runs (Presentation of authentic screenshots or captured videos may be used to walk through complete scenarios) - consistency and completeness	60
2	Question and Answer (Oral only or Oral and written)	40
Total Marks		400

FORMAT OF PROJECT SYNOPSIS

Synopsis is a brief outline or general view, as of a subject or written work; an abstract or a summary of the Project Work. It must be as brief (NOT MORE THAN 20 A4 sized paper pages) as is sufficient enough to explain the objective and implementation of the project that the candidate is going to take up.

The write up must adhere to the guidelines and should include the following :

1. Title of the Project.
2. Introduction, objectives and scope of the Project.
3. Project Category (Database/Web Application/ Client-server/Networking/ Multimedia/gaming etc.).
4. Tools / Platform, Hardware and Software Requirement specifications.
5. Analysis (DFDs at least up to second level, ER Diagrams/ Class Diagrams, Database Design etc. as per the project requirements).
6. A complete structure which includes: Number of modules and their description to provide an estimation of the student's effort on the project, Data Structures as per the project requirements for all the modules, Process logic of each module, testing process to be used, reports generation (Mention tentative content of report).
7. Whether Industry Defined/Client Defined/User Defined Project? Mention the type. Mention the Name and Address of the Industry/Client.
8. Limitation of the project.
9. Future scope and further enhancement of the project.

GUIDELINES FOR PREPARATION OF DISSERTATION

1. ORGANISATION OF THE DISSERTATION

The dissertation shall be presented in a number of *chapters*, starting with **Introduction** and ending with **Conclusion**. Each of the chapters will have precise title reflecting the contents of the chapter. A chapter can be subdivided into *sections*, *sub- sections* and *sub-sub-section* so as to present the content discretely and with due emphasis.

Sequence of items in Dissertation Report

The following sequence may be followed in the preparation of the final dissertation report:

- Cover Page (On the **hardbound** cover)
- Title Page (Inner Cover Page)
- Certificate from the Institute
- Certificate from the Company
- Declaration
- Acknowledgement
- (Detailed) Table of Contents (with page numbers).
- List of Figures (with figure number, figure titles and page numbers)
- List of Tables with table number, table title and page number.
- Chapters
 - 1. Introduction**
 - i. Introduction of the System
 - a. Project Title
 - b. Category
 - c. Overview
 - ii. Background
 - a. Introduction of the Company
 - b. Brief note on Existing System
 - iii. Objectives of the System
 - iv. Scope of the System
 - v. Structure of the System
 - vi. System Architecture
 - vii. End Users
 - viii. Software/Hardware used for the development
 - ix. Software/Hardware required for the implementation
 - 2. SRS**
 - i. Introduction (Brief write-up about SRS)
 - ii. Overall Description
 - a. Product perspective
 - b. Product Functions
 - c. User characteristics
 - d. General constraints
 - e. Assumptions
 - iii. Special Requirements (Software / Hardware - if any)
 - iv. Functional requirements
 - a. Module 1
 - b. Module 2
 - c.
 - v. Design Constraints
 - vi. System Attributes
 - vii. Other Requirements (if any)

3. **System Design** (Functional Design)
 - i. Introduction (brief write-up about System Design)
 - ii. Assumptions and Constraints
 - iii. Functional decomposition
 - a. System software architecture
 - b. System technical architecture
 - c. System hardware architecture
 - d. External interfaces (if any)
 - iv. Description of Programs
 - a. Context Flow Diagram (CFD)
 - b. Data Flow Diagrams (DFDs – Level 0, Level 1, Level 2)
 - v. Description of components
 - a. Functional component 1
 - b. Functional component 2
 - c.
4. **Database Design** (or Data structure)
 - i. Introduction (brief write-up about Database design)
 - ii. Purpose and scope
 - iii. Database Identification
 - iv. Schema information
 - v. Table Definition
 - vi. Physical design
 - vii. Data Dictionary
 - viii. ER diagram
 - ix. Database Administration
 - a. System information
 - b. DBMS configuration
 - c. Support software required
 - d. Storage requirements
 - e. Backup and recovery
5. **Detailed Design** (Logic design of modules)
 - i. Introduction (brief write-up about Database design)
 - ii. Structure of the software package (structure chart)
 - iii. Modular decomposition of the System
 - a. Module 1
 - a. Inputs
 - b. Procedural details
 - c. File I/O interfaces
 - d. Outputs
 - e. Implementation aspects (if any)
 - b. Module 2
 1.
6. **Program code listing**
 - i. Database connection
 - ii. Authorization / Authentication
 - iii. Data store / retrieval / update
 - iv. Data validation
 - v. Search
 - vi. Named procedures / functions
 - vii. Interfacing with external devices (if any)
 - viii. Passing of parameters
 - ix. Backup/recovery
 - x. Internal documentation
 - xi.
7. **User Interface** (Screens and Reports)
 - i. Login
 - ii. Main Screen / Home page

- iii. Menu
- iv. Data store / retrieval / update
- v. Validation
- vi. View
- vii. On screen reports
- viii. Data Reports
- ix. Alerts
- x. Error messages
- xi.

8. Testing

- i. Introduction (brief write-up about Software Testing)
- ii. Test Reports
 - a. Unit Testing
 - b. Integrate Testing
 - c. System Testing

- Conclusion
- Limitations
- Scope for enhancement (future scope)
- Abbreviations and Acronyms (list)
- Bibliography / References (list in specified format)

Do not include any header or footer in any page of the report. Only page numbers should be mentioned at the bottom center of each page. 'n' copies of dissertation along with soft copy in CD should be prepared by the candidate.

2. DISSERTATION FORMAT

2.1 Paper

2.1.1 Quality

The dissertation shall be printed on white bond paper, whiteness 95% or above, weight 70 gram or more per square meter.

2.1.2 Size

The size of the paper shall be standard A4; height 297 mm, width 210 mm.

2.1.3 Type-Setting, Text Processing and Printing

The text shall be printed employing Laserjet or Inkjet printer, the text having been processed using a standard text processor. The standard font shall be Times New Roman of 12 pts with 1.5 line spacing.

2.1.4 Page Format

The printed sheets shall have the following writing area and margins:

Top margin	.5"
Bottom margin	.5"
Left margin	1"
Right margin	.75"

2.1.5 Pagination

Page numbering in the text of the dissertation shall be numerals starting from '**1**' **at the center of the footer**. The text of the written dissertation shall not be *less than 60 pages excluding references, tables, questionnaires and other annexure*.

Pagination for pages before the Introduction chapter shall be in lower case Roman numerals, e.g., 'iv'.

2.1.6 Paragraph format

Vertical space between paragraphs shall be about 2.5 line spacing.

The first line of each paragraph should normally be indented by five characters or 12 mm. A candidate may, however, choose not to indent if (s) he has provided sufficient paragraph separation.

A paragraph should normally comprise more than one line. A single line of a paragraph shall not be left at the top or bottom of a page (that is, no windows or orphans should be left).

The word at the right end of the first line of a page or paragraph should, as far as possible, not be hyphenated.

2.2 Chapter and Section format

2.2.1 Chapter

Each chapter shall begin on a fresh page with an additional top margin of about 75 mm. Chapter number (in Hindu- Arabic) and title shall be printed at the center of the line in 6 mm font size (18 pt) in bold face using both upper and lower case (all capitals or small capitals shall not be used). A vertical gap of about 25 mm shall be left between the chapter number and chapter title lines and between chapter title line and the first paragraph.

2.2.2 Sections and Sub- sections

A chapter can be divided into **Sections, Sub-sections and Sub-sub-sections** so as to present different concepts separately. Sections and sub-sections can be numbered using decimal points, e.g., 2.2 for the second Section in Chapter 2 and 2.3.4 for the fourth Sub-section in third Section of Chapter 2. Chapters, Sections and Sub-Sections shall be included in the **Contents** with page numbers flushed to the right. Further subsections need not be numbered or included in the contents. The Sections and Sub-sections titles along with their numbers in 5 and 4mm (16 and 14 pt) fonts, respectively, in bold face shall be flushed to the left (not centered) with 15 mm space above and below these lines. In further subdivisions character size of 3 and 3.5 with bold face, small caps, all caps and italics may be used for the titles flushed left or centered. These shall not feature in the contents.

2.2.3 Table / Figure Format

As far as possible tables and figures should be presented in portrait style. Small size table and figures (less than half of writing area of a page) should be incorporated within the text, while larger ones may be presented in separate pages. Table and figures shall be numbered chapter-wise. For example, the fourth figure in Chapter 5 will bear the number **Figure 5.4** or *Fig.5.4*

Table number and title will be placed above the table while the figure number and caption will be located below the figure. Reference for Table and Figures reproduced from elsewhere shall be cited in the last and separate line in the table and figure caption, e.g. (after McGregor [12]).

3 AUXILIARY FORMAT

3.1 Binding

The dissertation shall be hard cover bound in leather or rexin.

3.2 Front Covers

The front cover shall contain the following details:

- Full title of dissertation in 6 mm 22 point size font properly centered and positioned at the top.
- Full name of the candidate in 4.5 mm 15 point size font properly centered at the middle of the page.
- A 40 mm dia replica of the college emblem followed by the name of the Department and the year of submission, each in a separate line and properly centered and located at the bottom of the page.

3.2.1 Lettering

All lettering shall be embossed in gold.

3.2.2 Bound back

The degree, the name of the candidate and the year of submission shall also be embossed on the bound (side) in gold.

3.3 Blank sheets

In addition to the white sheets (binding requirement) two white shall be put at the beginning and end of the dissertation.

3.4 Title sheet

This shall be the first printed page of the dissertation and shall contain the submission statement: the Dissertation submitted in partial fulfillment of the requirements of the BCA, the name and Roll No. Of the candidate, name (s) of the supervisor and co-supervisor (s) (if any), Department and year of submission.



ಎಂಕ/No. :MU/ACC/CR.17/2018-19/A8

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ಮಂಗಳಗಂಗೋತ್ರಿ - 574 199
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Mangalagangothri - 574 199
ದಿನಾಂಕ/Date:25.01.2021

NOTIFICATION

Sub: Changes in the syllabus of History, a core course for BA degree programme.

Ref: 1. This office notification of even No. dated: 03.05.2019
& 21.03.2020
2. Decision of the Academic Council meeting held on
23.12.2020

Pursuant to the above, change in title & minor changes in the syllabus of BASHTC 231 of III semester and the shifting of a core course BASHTC 383 of VI semester to V semester with code No. BASHTC 333 is hereby notified for implementation from the academic year 2020-21.

Copy of the Syllabus shall be downloaded from the Mangalore University Website.
www.mangaloreuniversity.ac.in

REGISTRAR

To:

- 1) The Principals of the Colleges Concerned.
- 2) The Registrar (Evaluation), Mangalore University.
- 3) Prof. Lokesh K.M, Chairman, UG BOS in History, Department of History, Mangalore University.
- 4) The Assistant Registrar, Superintendents, Academic Section, O/o the Registrar, Mangalore University.
- 5) The Director, DUIMS, Mangalore University – with a request to publish in the Website.
- 6) Guard File.

BA DEGREE PROGRAMME UNDER CBCS

SYLLABUS (2020-2021)

(With partial modification in the Group-I Core Courses in Vth and VIth Semesters)

MANGALORE UNIVERSITY
Choice Based Credit Systems 2019
Semester -wise History Courses, Under B.A. Degree Programmes

Groups	Course	Teaching hours/ week	Marks			Credits
			IA	Semester Exams	Total	
I Year B.A. First Semester						
Group-I (Core Course)	BASHTC-131 India in the early Historical Period up to A.D.300	6	30	120	150	3
Group-II (Elective Courses)	BASHTCE-131 Historical Method	2	10	40	50	1
I Year B.A. Second Semester						
Group-I (Core Course)	BASHTC-181 India in the Early Medieval Period (A.D. 300-1300)	6	30	120	150	3
Group-II (Elective Courses)	BASHTCE-181 Debates in Indian History	2	10	40	50	1
II Year B.A. Third Semester						
Group-I (Core Course)	BASHTC-231 Medieval India (A.D. 1206-1605)	6	30	120	150	3
Group-II (Elective Courses)	BASHTCE-231 Current issues & their Historical Perspective	2	10	40	50	1
II Year B.A. Fourth Semester						
Group-I (Core Course)	BASHTC-281 Early Modern India (A.D. 1605-1856)	6	30	120	150	3
Group-II (Elective Courses)	BASHTOE-281 Tourism In India	2	10	40	50	1
III Year B.A. Fifth Semester						
Group-I (Core Course)	BASHTC-331 Colonial India (A.D. 1856-1885)	5	30	120	150	3
	BASHTC-332 History of Europe (A.D. 1789-1990)	5	30	120	150	3
	BASHTC-333 History of Modern Asia(1900-1980)	5	30	120	150	3
III Year B.A. Sixth Semester						
Group-I (Core Course)	BASHTC – 381 Making of Indian Nation (A.D. 1885 – 1947)	5	30	120	150	3
	BASHTC-382 History of Karnataka (A.D. 1565-1956)	5	30	120	150	3
	BASHTC-383 Art and Architecture in Pre- Modern India	5	30	120	150	3
	BASHTC-384 History of Tulunadu	5	30	120	150	3

MANGALORE UNIVERSITY
CHOICE BASED CREDIT SYSTEM
Subject: HISTORY
MODEL QUESTION PAPER

Time: 3 hours

Max.Marks: 120

SECTION-A

I. Answer any THREE of the following

3x16=48

- 1.
- 2.
- 3.
- 4.
- 5.

SECTION-B

II. Answer any SIX of the following.

6x8=48

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

SECTION-C

III. On the outline map below

- | | |
|----------------------------------|-----|
| a. Mark the extent of the empire | - 6 |
| b. Locate the following places | - 6 |

SECTION-D

IV Answer the following questions in 3-4 sentences each 3x4= 12

- 1.
- 2.
- 3.
- 4.

MANGALORE UNIVERSITY
DEPARTMENT OF HISTORY
CHOICE BASED CREDIT SYSTEM
(CORE ELECTIVE AND OPEN ELECTIVE)

SEMESTER-1
MODEL QUESTION PAPER

Time: 3 hours

Max.Marks: 40

SECTION-A

I. Answer any TWO of the following .

2x10=20

- 1.
- 2.
- 3.
- 4.

SECTION-B

II. Answer any FOUR of the following

4x5=20

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

BA Programme
Subject History
New Choice Based Credit System

List of papers with codes

Marks : 30+120 Credits -3

Group I Core Courses I-IV Semesters: 9-10 credits in each Semester
V-VI Semesters 18 credits in each Semester

Group II Elective Courses I-IV Semesters: 1 credit in each Semester

Group III- Foundation courses

a) Compulsory Foundation I-IV Semesters - 4 credits in each Semester

b) Elective Foundation I-IV -1 credit in each Semester

Group IV – Extra and Co-curricular Activities: I-IV Semesters
-1 credit in each Semester

Group I: Core Courses

- I** Semester: BASHTC-131: India in the early Historical Period (to A.D.300)
II Semester :BASHTC-181: India in the Early Medieval Period (A.D. 300-1300)
III Semester BASHTC-231: Medieval India (A.D. 1206-1605)
IV Semester BASHTC-281: Early Modern India (A.D. 1605- 1856)
V Semester BASHTC-331: Colonial India (A.D. 1856-1885)
V Semester BASHTC-332: History of Europe (A.D. 1789-1990)
V Semester BASHTC-333: History of Modern Asia (A.D. 1900-1980)
VI Semester BASHTC-381: Making of Indian Nation (A>D. 1885-1947)
VI Semester BASHTC-382 : History of Karnataka (A.D. 1565-1956)
VI Semester BASHTC-383 Art and Architecture in Pre- Modern India
VI Semester BASHTC-384 History of Tulunadu

- Core Elective BASHTCE-131 : Historical Method
Core Elective BASHTCE-181 : Debates in Indian History
Open Elective BASHTCE -231 : Current Issues and their Historical perspective
Core Elective BASHTOE -281 : Tourism in India

I Semester
BASHTC-131: India in the early Historical Period (to A.D.300)

6 hrs per week

Mark:30=120

Credits-3

Section-A

1. Instruction:

- a) Historical writings on India-changing approaches to Indian history.
- b) Sources:- Archaeology- epigraphy. Numismatics: Literature- indigenous and foreign: their nature and functions.
- c) Geographical features and their impact.

2. Pre-historic beginnings and the Harappan Civilization:

- a) Stone Age culture
- b) The Harappan culture:- major sites-rural and urban centres- details of town planning.
- c) Harappan economy: agriculture and craft- social structure- political organization- religion script.

Section-B

3. The Vedic Age:

- a) The Aryan Problem: Indo-European Languages- archaeological records of the Land of the Seven Rivers- Interface of Harappan and post- Harappan cultures.
- b) The Vedic literature: the Samhita and later texts, nature of the literature.
- c) The early Vedic period: nature of economy- pastoralism and its social organization- political forms – religious ideas and practices.
- d) Later Vedic Age Geographical shift- the advent of iron- Painted Grey Ware Culture (PGW)- agriculture and its role- social changes and the emergence of Varna division- break-up of old political forms- changes in religion and philosophy.

4. The Age of Mahajanapadas:

- a) Agrarian expansion- the archaeology of Second Urbanization- the rise of gahapatis and settis- the emergence of mahajanapadas- the political forms- Greek contacts.
- b) The rise of heterodox religions- the material background- questioning of orthodoxy- Jainism and its doctrines- Buddhism and its doctrines- the fortunes of Jainism and Buddhism- their contributions.

Section- C

5. The Age of the Mauryas:

- a) Rise of the kingdom of Magadha- The Nandas- Chandragupta Maurya- Asoka and his successors.
- b) The Arthasastra, Indica and Asokan edicts- categories and importance of the Edicts.
- c) Economy and society- the administration of the Mauryan empire.

d) Asoka's policy of dhamma- its sources and function.

e) The decline of the Mauryas.

- 6. Post- Mauryan India: the Regional States:** The North west:- The Indo Greeks- Kushanas- Kanishka; Trade,- inland and foreign; Mahayanism and the Gandhara school of Art.

MAP STUDY:

1. Asoka's Empire and Edict Sites: Girnar, Kalsi, Brahmagiri, Maski, Gavimatha, Palkigunda, Jatingaramesvara, Sannathi, Dhauri, Jaugada, Shahbazgarhi, Sanchi, Saranath, Sasaram, Pataliputra, Rummindei.
2. Kushana territories and site: Purushapura, Takshashila, Mathura, Kashgar, Kapisa, Manikyala, Sravasti, Kaushambi, Saranath.

BOOKS SUGGESTED:

Allchin, B&R, Rise of Civilization in India and Pakistan. (New Delhi 1983). Allchin, Bridget and Raymond, The Birth of India Civilization, (Pelican 1986). Basham, A.L. The wonder that was India, (Delhi 1971).

Davies C.C, A Historical Atlas of India, (OUP, 1957)

Comprehensive History of India Series, Indian History Congress, Calcutta (relevant Volumes).

Kosambi D.D., The Culture and civilization of Ancient India, (New Delhi 1994) Kosambi

D.D., An Introduction to the Study of Indian History (Bombay, 1956) Gregory Possel, The Indus Civilization, A Recent Prospective (New Delhi)

Jha D.N, Ancient India: in Historical outline (New Delhi 1998). Sastri

K.A.N, Age of Nandas and Mauryas (Delhi-1965)

KAN Sastri, A history of South India Revised edition, OUP, 1999.

Majumdar, R.C. (ed.) History and Culture of the Indian people. (Bombay) First two vols.

Desai, P.B. Ritti S.H. and Gopal B.R, Pracheena Bharatada Charitre, Karnataka University.

Sali S.A Stone Age in India, (Aurangabad 1990) Sankalia H.D

Prehistory of India (New Delhi-1977) Sharma R.S, Aryarigaagi

Hudukaata (Bangalore 1993) Sharma, R.S, Pracheena Bharata

(Bangalore. 1997) Sharma, R.S, Ancient India, NCERT.

Sharma, R.S, India's Ancient Past, (OUP 2005)

Shereen Ranagar, Understanding Hararappa (New Delhi-2001) Sinha, N.K and

Ray N.R, History of India and Pakistan. (Poona 1973) Thapar, Romila, Early India

(Penguin 2002)

Thapar, Romila, Asoka and the Decline of the Mauryas. Oxford University Press 1993.

Tripathi RS, History of Ancient India (Delhi 1960).

Upinder Singh, A History of Ancient and Early Medieval India, from the Stone age to the 12th century.

II Semester
BASHTC-181: India in the Early Medieval Period (A.D. 300-1300)

6hrs per week

Mark-30+120

Credits-3

Section – A

1. The Age of the Gupta and after:

- a) The rise of the Guptas- Samudragupta and the Allahabad Prasasti- Chandragupta II- Huna Invasions- disintegration of the empire- Gupta administration.
- b) Economy and Society- agriculture and land grants- decline of trade and decay of town- “Indian feudalism” – Proliferation of Jati.
- c) Cultural contributions- literature and Sciences, religion; was it a Golden Age?
- d) Harsha of Kanauj – Buddhism- Hieun Tsang- Education- nalanda Mahavihara.

Section – B

2. The Age of the Chalukyas and Pallavas:

- a) The rise of Chalukyas- Pulakesin II- relations with Kanauj- relations with Pallavas.
- b) The rise of the Pallavas- Mahendravarman and Narasimhavarman- relations with other Tamil powers.
- c) The Rashtrakutas- Govinda III- Amoghavarsha- relations with North India powers- Southern expedition.
- d) Art and architecture – Basami, Aihole, Pattadakal, Mahabalipuram, Kanchipuram, Ellora- Literature- Tamil Bhakti Movement- Alvars and Nayanars.

Section- C

3. The Age of the Rajputs:

- a) The rise of Rajput states- Origin Society, economy and Polity- literature, art and architecture.
- b) Arab expedition to Sindh- “A triumph without result?”
- c) Mahmud of Ghazni and the nature of his invasions- Results.
- d) Ghorian conquests- India on the eve of the sultanate- The formation of the sultanate.

4. The Age of the Cholas:

- a) The rise of the Cholas- Rajaraja I- Rajendra I- expansion to Sri Lanka and Sri Vijaya – Decline the Cholas.
- b) Economy and Society- trade and agriculture – castes.
- c) Administration of the Cholas- Central Government- “Feudatories”- Local Governments.
- d) Architecture and sculpture- Brihadesvara Temple- Gangaikkondacholapuram.

MAP STUDY:

1. The Gupta territories under Samudragupta.
→ Pataliputra
2. South India Under the Imperial Cholas:
Tanjore, Gangaikkondacholapuram, Kumbhakonam, Uttaramerur, Nagapattinam, Kanchipuram, Srirangam, Vizhinjam, Tiruvidaimarudur, Madurai.

BOOK SUGGESTED:

Basham, A.L, The Wonder that was India, Delhi 1971.
Majumdar, R.C Ancient India, 6th rev. ed. 1971
“(ed) History and Culture of the Indian People, Vol. III-V, Bombay, 1970 Sharma, R.S
Ancient India, NCERT.
Sinha, N.K and Ray N.R, A History of India, Bombay 1973 Thapar, Romila,
Early India 2002.
Hermann Kulke and Dietmar Rothermund, A History of India, Rupa Reprint. Comprehensive
History of India Series. India History Congress, Calcutta. Relevant
Volumes.
Sastri K.A.N, A History of South India OUP
Jha D.N, Ancient India: An Introductory Outline. People’s Publishing House. Davies C.C, A
Historical Atlas of India, OUP, 1973.
Kosambi D.D, An Introduction to the Study of Indian History.
Desai, Ritti and Gopal, Pracheena Bharatada Charitre, Karnataka University. Sharma, R.S
Pracheena Bharata, Navakarnataka, Bangalore, 1997 Majumdar, Raychaudhuri and
Datta- Bharatiya Proudha Itihasa Mysore University.

III Semester
BASHTC-231: Medieval India (A.D. 1206-1605)

6 hrs per week

Marks-30+120

Credits-3

Section-A

1. **The Delhi Sultanate:** Struggle for the establishment of a strong monarchy- Iltutmish- Razia- Balban-the problem of Northwest frontier- eastward expansion- consolidation of the Sultanate.
2. **The Khaljis and Tughluqs:** The expansion of the Sultanate Under Alauddin Khilji- internal reforms- agrarian policy and market experiments- Muhammed bin Tughluq- his experiments- Firuz Tughluq and the road to disintegration.

Section-B

3. **Economy, Society and Polity under the Delhi Sultanate:** Economy and social life; trade – Nobles- the “Forty” slaves- social movements and customs- Bhakti movement- Sufi tradition- Delhi Sultanate and the Caliphate- The central administration- the Sultan- provincial and local administration-art and architecture.

Section- C

4. **The Afghan- Mughal struggle for supremacy :** Central Asia and Babur- Battle of Panipat- Battle of Khanwa- Humayun and his struggle against Afghans- The “Sur interregnum”; Sher Sha’s administration and achievements.
5. **Consolidation of Mughal Empire:** Akbar- early years- religious policy- Rajput Policy- Akbar’s place in India History.

MAP STUDY:

1. Alauddin Khilji’s Empire: Thaneshwar, Delhi, Badaun, Kanauj, Chittor, Ranthambhor, Mathu Ujjain, Chanderi, Kara, Devagiri, Dwarasamudra, Warangal, Madurai.
2. Mughal Empire in 1605 Peshwar, Panipat, Delhi, Agra, Fatehpur-Sikri, Chittor, Gwalior, Udaipur, Kalinjar, Surat, Kanauj, Amarkot, Ayodhya, Chanderi, Ranthamboor.

BOOKS SUGGESTED :

Shivastava A.L, The Sultanate of Delhi (Agra 1982) Sharma S.R,
The Crescent in India (Agra 1933) Srivastava A.L, Medieval
Indian Culture (Agra 1975) Sharma L.P, The Sultanate of Delhi
(Delhi, 1996)
Edwards S.M & Garratt, Mughal Rule in India (New Delhi 1974) Basavaraj
K.R, History and Culture of Karnataka (Darwad 1984) Desai P.B (ed), A
History of Karnataka (Dharwar 1981)
Burton Stein, Vijayanagara (Cambridge 1999)
Banerjee A.C, A New History of Medieval India (New Delhi 1983) Lane Poole S,
Medieval India under Muhammadan Rule (London)
Majumdar R.C (ed), History and Culture of the Indian people, Vol.V & VI (Bhavan’s
Series)
Majumdar R.C (ed), Bharatiya Janateya Itihasa Mattu Samskriti (Bhavan’s Series)
Sathish Chandra, History of Medieval India, Vol 1 and Vol 2. Irfan Habib,
Medieval India.

IV Semester
BASHTC-281: Early Modern India (A.D. 1605- 1856)
6 hrs per week
Marks- 30+120
Credits -3

Section- A

1. Mughal Domination: Jahangir and Nurjahan- Shah Jahan and the return to orthodoxy- Mughals and the Northwestern frontier policy – Aurangazeb- the Rajput policy- religious attitude- decline of the Mughal empire.
2. Polity and Society: The king and the court- Mughal nobility- the mansabdari and jagirdari- arm- bureaucracy- revenue system- Todarmal- contest in the Mughal nobility after Akbar's time- the Rajput element- provincial and local government- economy- agriculture and land tenures- trade and industries- society and culture – literature, architecture, music and painting.

Section- B

3. Rise of the Marathas: Shivaji and the rise of the Marathas Peshwas - third battle of Panipath.
4. The Early phase of European domination: Advent of the Europeans- Rise and fall of Portuguese power in India. Rise of the French & British power in India- Battle of Plassey – Buxar- and the French in India Dual Government in Bengal.

Section-C

5. Consolidation of British Empire. Warren Hasting- Expansion of the company territories- administrative reforms Cornwallis- Anglo- Mysore war- revenue settlements- Expansion under Wellesley- Subsidiary alliance- Lord Hastings- Forward Policy Willam Bentinck- Mysore- Expansion- Dalhousie- Doctrine of lapse- India in 1856.

MAP STUDY:

1. Maratha Empire under Shivaji: Pune, Satara, Rajgarh, Kolhapur, Ahmadnagar, Bellary, Sira, Bangalore, Vellore, Jinji, Tanjore.
2. India in 1850: Calcutta, Bombay, Madras, Poona, Srirangapatnam, Mangalore, Madikeri, Tellicherry, Delhi, Laswari, Nagapur, Gwalior, Kolhapur, Mysore, Trichinopoly, Hyderabad.

BOOKS SUGGESTED:

Edwards S.M and Garratt, Mughal Rule in India (New Delhi 1974) Banerjee A.C , A New History of Medieval India (New Delhi 1983) Anirudda Ray, Some Aspects of Mughal Administration (New Delhi 1984)

Tripathi R.S, The Rise and Fall of the Mughal Empire (Allahabad 1963) Majumdar R.C (ed), History and Culture of the India People Vol. V & VI (Bhavan's Series) Ranade M.G, Rise of the Marata's Power (New Delhi 1947)

Edward Thompson and Garratt, Rise and Fulfilment of British Rule in India (Allahabad 1976)

Moreland W.H , Akbaraninda Aurangazebanavarege (Kannada Translation,Mysore – 1985)

Sinha N.K, Haidar Ali (New Delhi 1873) Sheik

Ali- Tipu Sultan (NBT 1982)

Arfan Hanib, Atlas of the Mughal Empire (Oxford 1992) Satish

Chandra, Medieval India, 2 Vols, NCERT

Tapen Ray Chaudhury and Irfan Habib, Cambridge Economic History of India Vol. I Orient Longman.

Lakshmi Subramanian, History of India 1707-1857, New Delhi, 2010.

V Semester
BASHTC-331: Colonial India (A.D. 1856-1885)
5 Hrs. Per Week
Marks- 30+120
Credits- 3

Section- A

1. **What is Colonialism?:** Forms of domination; Economic, Political, Social and Cultural- Colonial knowledge; its forms and its impact.
2. **Government under English East India Company:** The evolution of government and system of control- army- police- civil service and judiciary- racial relations- economic policies- transport and communication- princely states.

Section- B

3. **Society and Culture:** Macaulay- Western liberalism and social reforms- Brahma Samaj- "The Indian Renaissance".
4. **The 1857 movement:** - historiography- cause and course- the Queen Proclamation- end of the British East India company- changes in British policy.

Section- C

5. **Genesis of India Nationalism:-** contradiction of colonial rule- economic exploitation- social and cultural bases; the reform movements- Arya Samaj, Ramakrishna Mission, Aligarh Movement- press and literature- The Early Associations and the birth of Indian National Congress.
6. **Colonial Policy in the post Mutiny India:** Agrarian Policy- Famine policy- Viceroyalties of Lytton and Ripon- Indian reaction.

MAP STUDY:

1. **India in 1856:** Calcutta, Dacca, Serampore, Murshidabad, Kathmandu, Simla, Meerut, Delhi, Kanpur, Lucknow, Gwalior, Jhansi, Faizabad, Amritsar, Dindigul, Mysore, Hyderabad.
2. **The Revolt of 1857:** Meerut, Delhi, Lucknow, Kanpur, Barrackpore, Jhansi, Kalpi, Gwalior, Faizabad, Gorakhpur, Allahabad, Ambala, Saharanpur.

BOOK SUGGESTED:

Edward Thompson and Garratt, Rise and Fulfilment of British in India (Allahabad 1976)
Robert P.E, History of British India (OUP)S. Gopal, British Policy in India 1858- 1905 (Orier Longman)
Manjumdar R.C (ed) British Paramountcy and Indian Renaissance Part I &II (Bharatiya vidya Bhavan)
"History of Freedom Movement in India Vol. 1"
Chaudhuri S.B, Civil Rebellion in Indian Mutinies (Calcutta 1957) "Theories of the Indian Mutiny (Calcutta 1965)
Bipan Chandra, India's Stuggle for Independence (Penguin) " Modern India (NCERT)
Tara Chand, History of Freedom Movement in India Vol. I & II Perseval Sphere,
History of India Vol. III
Shekar Badyopadya, Plassey to Part ion Sumith
Sarkar, Modern India

V Semester
BASHTC-332: History of Europe (A.D. 1789-1990)
5 hrs per week
Marks : 30+120
Credits-3

Section – A

1. **The French Revolution:** causes- Work of the National Assembly-national Convention- Results
2. **Rise of Napoleon:** Domestic reforms- continental system.
3. **Age of Reaction (1815-1848):** Congress of Vienna and Metternich- Concert of Europe- Fall of Metternich.

Section- B

4. **Rise of Nationalism:** Unification of early Italian associations- Mazzini and Garibaldi- The Sardinian Leadership- Victor Emmanuel II and Cavour.
5. **The Making of the German Nation:** early attempts at German Unification- the Prussian Lead the work of Bismarck- the three wars and the birth of the German Empire.

Section- C

6. **The First World War:** the causes of the World War-I the Paris Peace Conference and the Treaties.
7. **Europe Between the Wars:** Failure of League of Nations- The Great Depression; Italy goes Fascist- domestic and foreign policies of Mussolini – the Weimar Republic and the rise of the Nazi Party – the ideology and methods of the Nazi party- the foreign policy of Hitler- Formation of UNO
8. **The Second World War and After:** the causes and consequences- Fall of Communism.

MAP STUDY:

1. Napoleon Empire (1810): Paris, Warsaw, Lisbon, Madrid, Amsterdam, Berlin, Rome, Brussels, Moscow, Austerlitz.
2. Unification of Germany: Frankfurt, Berlin, Munich, Schleswig, Holstein, Alsace, Lorraine, Ems.

BOOKS SUGGESTED:

Ergang, R and Donald G. Rohr, Europe since Waterloo, Delhi 1981.
Gottschalk, Louis and Donald Lach, Europe and the Modern World, Vol. I-II, Bombay, 1962.
Hayes, C.J.H. Modern Europe to 1870,
Hayes, C.J.H Contemporary Europe since 1870. Hazen,
CD, Modern Europe upto 1945,
(also Kannada translation by Dr. S.U Ghatapanadi, Adhunka Europe) Ketelbey,
CDM, A History of Modern Times Form 1789.
Peacock, H. A History of Modern Europe, 1789-198, Landon, 7th Edition, 1982. Ramm,
Agatha, Grant and Temperley's Europe in the Nineteen Century Thomson, D, Europe since
Napoleon,
Hobsbawn E.J, The Age of Revolutions.
Hobsbawn E.J, The Age of Capital Hobsbawn
E.J, The Age of Empire.
Lane P, Europe since 1915.

V Semester
BASHTC-333 History of Modern Asia (1900-1980)
5 hrs per week
Marks-30+120
Credits- 3

Section – A

1. China:

- a) Condition of China at the close of the 19th Century-Boxer Rebellion- Revolution of 1911.
- b) Life, philosophy and achievement of Chiang Kaishek.
- c) Rise of the Kuomintang and China, achievement of the nationalist government.
- d) Emergence and Growth of Communism- Civil War, 1943-49.
- e) Communist China, Mao Zedong- early reforms (1949-1957)- the Great Leap Forward- the Great Cultural Revolution (1966-76)- end of Maoism.

Section-B

2. Japan:

- a) Meiji restoration.
- b) Rise of modern Japan- Anglo- Japanese Alliance, 1902- Russo- Japanese War, 1904-05- Expansions policy- Japan and the I World War- Twenty- one Demands- Washington Conference, 1921-22- Growth of Militant nationalism.
- c) Japan and the World War II.

Section- C

3. Afghanistan:- Amanullah Khan (1919-1929) Domestic and Foreign policy- Najibullah- Problem of Pushtoonistan.

4. Iran:

- a) Anglo- Russian interest in Iran- Ahmed Shah, 1909-25- Iran during World War I
- b) Rise of Reza Shah Pahlavi and his reforms
- c) Iran and World II- Mohammad Shahpur Reza Shah Pahlavi.
- d) Post- War Iran- Rise of Dr. Mohammad Mossoadeq- nationalization of oil companies- Far of Dr. Mossadeq- Shah's agrarian reforms- foreign affairs- policy towards America – Petroleum and gas developments- the Western Consortium.
- e) Revolution of 1978-79- Rise of Ayotollah Khomeini.

5. The Arab Middle East:

- a) Arabism and the rise of Arab Nationalism.
- b) The struggle for Arab unity and the contemporary Arab states
- c) The Palestinian Movement- Arab Nationalism and Islam

MAP STUDY

- 1. China in 1911
- 2. Japanese expansion during the World War-II
- 3. Historical Place: Manchuria, Liotung Peninsula, Mukden, Bijing, Port Arthur, Seoul, Nanking, Shanghai, Canton, Macao, Taipei, Hong Kong, Shantung, Tokyo, Hiroshima, Nagasaki.

BOOKS SUGGESTED:

Panikkar K.M, Asia and Western Dominance, London 1953.
Harold M. Vinacke, A History of the Far East in Modern Times London, 1960 Clyde C.H, The Far East, New York, 1948.
athaniel Pepper, The Far East, New Delhi, 1985.
Khoo Kye Kim, History of South – East and East- Asia, New Delhi, 1982. Fisher S.N, The Middle East: A History, London 1960
Phillip Hitti, The Arabs London 1978. Anthony Nutting, The Arabs, New York, 1965 William Yale, The Near East, New Delhi, 1992
Kirk, George, A History of the Middle East, New Delhi 1990. Rodinson, Maxime, The Arabs, Harmondsworth, 1961
Richard Allen, Imperialism and Nationalism in the Fertile Crescent, London 1978.
Ira M. Lapidus, History of Islamic Societies, London 1992.

VI Semester
BASHTC-381: Making of the Indian Nation (A.D. 1885-1947)

5 hrs per week

Marks-30+120

Credits-3

Section – A

1. **Indian Nationalist Movement:** the Moderates- the constitutional methods of agitation- economic critique of colonialism and the Drain Theory- the British attitude towards congress- extremist.
2. **The Widening Horizons of nationalist Agitation:** Curzon and the Partition of Bengal- Swadeshi and Boycott- Revolutionary terrorism- Muslim League- origin of the communal politics- The Act of 1909- Lucknow pact – Home Rule Leagues.

Section- B

3. **Gandhi in India Politics:** Gandhi in South Africa- Early experiments in India- The Act of 1919- Rowlatt Act- Jalianwallah Bagh- Non co-operation and Khilafat Movements- Swarajist Party- Simon Commission- Civil disobedience Movement- Revolutionary Terrorism- Gandhi- Irwin Pact Poonapact and Dr. B.R Ambedker- Round Table Conferences.
4. **Struggle for Swaraj:** The Act of 1935- The work of Congress Ministries- The growth of Socialist ideas- Peasants and Workers Movements- Growth of Hindu and Muslim Communalisms and Second World War- Cripps Mission
– Quit India Movement.

Section – C

5. **Towards Freedom:** Subhas Chandra Bose and I.N.A- Wavell Plan- Cabinet Mission Plan- Mountbatten Plan- Naval Revolt- I.N.A. Trials- Partition and Independence.
6. **Social and Cultural awakening:** Role of Women in National movement – Anni Beasant, Sarojini Naidu, Kamaladevi Chattopadhyaya - Jyothiba Phule in Maharastra and Narayana Guru in the South and Ambedkar.

MAP STUDY:

1. **Partition of Bengal:** Calcutta, Dacca, Chittagong, Rajshahi, Mymensingh, Puralia, Murshidabad, Patna, Bhagalpur, Darbhanga, Burdwan.
2. **Congress Ministries:1937(** Different provinces where Congress was in office and their headquarters)

BOOKS SUGGESTED:

Bernard Cohn, Colonialism and its forms of Knowledge (OUP) Bipan Chandra, India's Struggle for Independence.

Modern India, NCERT

The Rise and Growth of Economic Nationalism in India, New Delhi, 1966. Bipan Chandra, Amal Tripathi and Barun De, Freedom Struggle (NBT) Desai, A.R, Social Background of Indian Nationalism Bombay, 1976.

Majumdar, R.C, History of Freedom Movement in Indian People, Vol. IX –XI, Bombay 1963-69.

Menon, VP, The Story of the Integration of India State, Calcutta. 1956. Menon, VP, The Transfer of Power in India, New Delhi, 1967.

Ram Gopal, Indian Muslims: A Political History, 1858-1947. Sarkar, Sumit, Modern India, 1885-1947, Delhi, 1983

Tara Chand, History of Freedom Movement in India, I-IV, New Delhi, 1965-72. Thomas Metcalf, Ideologies of the Raj (New Cambridge History of India), Foundation Books.

VI Semester
BASHTC-382 History of Karnataka (A.D. 1565-1956)

5 hrs per week

Marks- 30+120

Credits-3

Section- A

- 1. Karnataka in the 16th Century-Cultural constitutions of the Adil Shah.**
- 2. Karnataka after Vijayanagara:** Decline of Vijayanagara- Palegaras- the rise of the Nayakas Kingdoms - The Keladi Nayakas ; their political expansion to the west coast- their relations with the Portuguese- the Keladi Polity. Rise of Mysore: the early Wodeyars- Chikkadevaraja Wodeyar- the consolidation of the Mysore kingdom.

Section- B

- 3. Towards Colonial Domination:** the Dalvoys of Mysore- The Rise of Haider Ali- his relation with the Marathas and the Nizam- Relations with the British- the First and Second Anglo- Mysore Wars. Tipu Sultan; expansion- the Third Anglo- Mysore war and the treaty Srirangapattana. The Fourth Angle – Mysore War.
- 4. Karnataka Under the British:** Regions under the direct Company Rule- the regions under indirect control- Mysore under Krishnaraja Wodeyar III- the work of Diwan Purnaiah- the British influence in Mysore- the Nagar Revolt- the British take – over- the Commissioners Rule – Cubb and Bowring- The British annexation of Kodagu- anti- British rebellions in south Kanara a Kodagu- rebellion of 1837- revolt in Kittur- echoes of 1857 in Karnataka.
- 5. The Rendition of Mysore and the workings of the Indirect Rule:** the rule of the Diwan, Rangacharlu, Seshadri Iyer, M. Vishweshwariah, Mirza Ismail- Modernisation of Mysore Industrialization- ‘ Model State Concept’ – the State attitude towards Indian Nationalism.

Section- C

- 6. Social, Cultural and Political Developments:** Missionary work- education- Congress in Karnataka- Backwards cl Movement- Freedom Movement and its expressions in Karnataka – Mysore Chalo Movement.
- 7. Unification of Karnataka:** Political divisions before the Unification- Role of the Press and Writers- organizations- Fazl Ali Commission and the Formation of the State.

MAP STUDY:

- 1. The Five Sultanates:** Berar, Bidar, Golconda, Bijapur, Ahmednagar.
- 2. Tipu's Possession in 1789:** Mysore, Srirangapatna, Madikeri, Cannanore, Sringeri, Mangalore, Bangalore, Periyapatna, Chitradurga, Doddaballapur.

BOOKS SUGGESTED:

Desai P.M, Ritti S.H Gopal B.R, A History of Karnataka, Dharwad, 1970. Basavaraja K. R, History and Culture of Karnataka, Dharwad, 1984.
Sreenivasa Murty H.V and Ramakrishnan R., A History of Karnataka, Delhi 1980.
Suryanath U. Kamath, A Concise History of Karnataka, Bangalore 1997. Quit India Movement in Karnataka, Hubli, 1988
Diwakar, R.R (Ed.) Karnataka Through the Ages, Bangalore, 1968. Sinha N.K, Haidar Ali, Calcutta, 1965.
Sheik Ali B., Tipu Sultan, 1982
Sheik Ali B, (General Editor), Karnataka Charitre, Vos 6-7, Hampi, 1997. Sharma T.T, Karnatakadalli Swatantra Sangrama, 1957.

VI Semester
BASHTC-383 Art and Architecture in Pre- Modern India

5 hrs per week

Marks- 30+120

Credits- 3

Section- A

- 1 Pre- Historic Art: Cave Paintings- Bhimbedka. Art of the Harappan Culture.
- 2 Early historic art and architecture: North India- Asokan Pillars- Stupas of Sanchi and Saranath- the Gandhara Tradition- Deccan and South India – the Satavahana Caves of Western Ghats- Amaravati and Nagarjunakonda

Section- B

- 3 Early Medieval Art and Architecture: North India- Gupta Art and Architecture Mathura School of Sculpture.
- 4 Deccan and South India: Nagara, Vesara & Dravida Style – Chalukya, Pallava, Rastrakuta, Chola, Hoysala style of Art & Architecture.

Section- C

- 5 Medieval Art and Architecture: North India- the Sultanate Art and Architecture- The Mughal Art and Architecture- the Rajput traditions.
- 6 Deccan and South India: Vijayanagara and Bahmani traditions of Art and Architecture.

MAP STUDY:

1. Bhimbedka, Dholavira, Lothal, Lauriya- Nandangarh, Saranath, Sanchi, Bagh, Karle, Barhut, Bodhgaya, Amaravati, Bhaja, Nagarjunakonda, Jaggayapeta, Kanheri, Mathura, Taxila, Deogarh, Bhitragoan, Kondapur, Dharanikota, Ajanta Ellora, Badami, Aihole, Pattadakal, Mahakuta, Elephanta, Shraavanabelgola, Mahabalipuram, Kanchipuram, Tanjore, Gangaikondacholapuram, Kumbhakonam, Chidambaram, Beleur, Halebeedu, Somanathpur, Sringeri, Lahore, Agra, Fatehpur-Sikri, Khajuraho, Konark, Mount Abu, Hampi, Tirupati, Bijapur, Golkonda, Gulbarga, Daulatabad.

BOOKS SUGGESTED:

James Fergusson: History of Indian and Eastern Architecture 1876- 2 Vol (Reprint, Delhi 1967)

Percy Brown, Indian Architecture-2 Vols Bombay, 1956.

Coomaraswamy A.K, History of Indian and Indonesian Art (London 1927) Goetz H., India: Five Thousand Years of Indian Art (London, 1959) Zimmer H., The Art of India Asia (New York, 1955)

Zimmer H., Myths and Symbols in Indian Art and Civilization (New York, 1946) Rowland B., Art and Architecture of India (London, 1967)

Havell E.B, Indian Architecture (London, 1989)

Stella Kramrisch, The Hindu Temple 2 Vols, Delhi, 1976.

Vincent Smith, History of Fine Art in India and Ceylon (Revised, Oxford 1930) Nihar Ranjan Ray, Maurya and Post Maurya Art (New Delhi, 1975)

Nath R, Some Aspects of Mughal Architecture (New Delhi, 1976) Rizvi S. A.A. & Flynn V.J. Fatehpur- Sikri (Bombay, 1975) Ghurye G.S, Rajput Architecture (Bombay, 1968)

Settar S, Hoysaleswara Temple 2 Vols, (Dharwad, 1983) Longhurst A H, Hampi Ruins (Calcutta, 1917)

Filliozat V, Splendour of the Vijayanagara Empire 2 Vols. (Bombay 1981) Dellapiccola A, (ed) Vijayanagara – City and Empire 2 Vols. (Stuttgart, 1985) Srinivasan K R, South Indian Temples, (New Delhi : 1975)

Balasubramaniam S.R, Early Chola Temples (New Delhi 1974) Balasubramaniam S.R, Middle Chola Temples (New Delhi 1976) Anila Varghese, Vijayanagara Art and Architecture (OUP 1999)

VI Semester
BASHTC-384 History of Tulunadu

5 hrs per week

Marks-30+120

Credits-3

PART-A

1. Historiography and Sources: Archaeology- relics and monuments- epigraphy nature and contents of the records- records from other regions- foreign notices and accounts Kannada and Tulu works- folklore.

PART- B

2. Political history: Kadambas and Alupas- Hoysalas and Tulunadu- Political structure.
3. Economic and Social Developments: the emergence of the agrarian order- landowning group and institutions- social stratification – trade, trade routes, trading centres and trading groups and their religion- Madhva- Religious architecture culture; Bhuta cult.

PART- C

4. The Vijayanagara Presence: The coastal factor- trade, inland and maritime- political expressions- the rajyas of Mangaluru and Barakuru- the simes- lesser divisions- Social changes; assimilation and acculturation- the Portuguese element- Christianity and Islam.
5. Keladi presence in Tulunadu: Portuguese factor- Haidar and Tippu in Tulunadu British takeover.
6. Colonial administration: regional response- the local chiefs and peasantry- koot rebellion- Kalyanaswamy rebellion- economy- trade and commerce- industries- role of missionaries- impact of reform movements in the region- national movement- Gandhian phase- regional identity – Tulu movement- integration with Karnataka.

MAP STUDY: (Places of Historical importance)

Uppinangady, Mani, Kukkunduru, Haradi, Kotatattu, Gavali, Badaga, Kajekaru, Konaje, Kakkunje, Putturu, Uddandadka, Beluru, Belman, Udyavara, Udupi, Mangalore, Barkuru, Polali, Koteswara, Hattiyangady, Varanga, Dharmasthala, Subrahmanya, Moodbidri, Gandhian phase- regional identity- Tulu movement- integration with Karnataka.

BOOKS SUGGESTED:

1. Ramesh K.V, A History of South Kanara, 1975
2. Ramesh K.V, Tulunadina Itihasa, 1968
3. Ramesh K.V, & Sharma M.J. Tulunadina Arasumanetanagalu mattu Dharma Samanvaya, 1985.
4. Ramesh K. V and Sharma M.J, Tulunadina Sasanagalu.
5. Saletore B.A, Ancient Karnataka, Vol. 1 History of Tuluva, 1936.

Core Elective
BASHTCE-131: Historical Method

UNIT	CONTENT
I	HISTORY AS A DISCIPLINE
II	TOOLS OF WRITING HISTORY
III	ELEMENTS OF HISTORICAL RESEARCH AND STUDY
IV	TECHNIQUES OF HISTORICAL RESEARCH

Books

E.H. Car, What is History?
Arthur Marwick, The Nature of History
Richard Evans, In Defense of History
Renier. G. J, History : Its Purpose and Method
Sheik Ali, History: Its Theory and Method
Collingwood R.G, , Idea of History

1. The Aryan Debate
2. The State in India History : 3 Stage State formation in Ancient India
 - a) Ancient India
 - i. Pre- State Formation- Mahajanapadas
 - ii. State formation – Mauryan State and Gupta Empire
 - iii. Decline of the Mauryan State
 - b) Medieval State
 - i. Chola and Vijayanagara – Segmentary
3. Urbanization and Urban Decay
4. Feudalism
 - a) Concept
 - b) 'Feudalism Debate'
5. Orientalism
 - a) Meaning
 - b) Contribution of Scholars
6. 18th Century Debate

Select Readings:

Alam, M ., and Subramanyam, S (ed.), The Mughal State, OUP, 2000
Alavi, Seema, The Eighteenth Century in India, OUP, New Delhi, 2002
Aloysius, G nationalism Without a Nation, Habib, Irfan, Essays in Indian History : Towards a Marxist Perspective, Tulika, New Delhi, 1995
Hilton, Rodney, etc., The Transition from Feudalism to Capitalism.
Gadgil D.R., The Industrial Evolution of India in Recent Times: 1860-1939, OUP, Delhi, Fifth edition, Fifth impression, 1982.
Kosambi, D.D., Culture and Civilization of Ancient India in Historical Outline, Vikas, 1981.
Kosambi, D.D., Myth and Reality
Kulke, H. (ed) The State in India, 1000-1700, OUP, 1998
Marshall, PJ (ed.) The Eighteenth Century in India- Evolution or Revolution?, OUP, 2002
Mukhia, H., Perspectives on Medieval India, Delhi, 1994
Said, Edward, Orientalism, Penguin, 1978.
Shah, KK and Meherjyoti Sangle (ed.), Historiography : Past and Present, Rawat Publishers, Jaipur 2005
Sharma, R.S., Aspects of Ancient India Political Ideas and Institutions, Manohar, reprint, 1999
Sharma, R.S., Indian Feudalism, Calcutta, 1965.
Sharma, R.S., Urban Decay in Indi, Munshiram Manoharlal, Delhi.
Thapar, R., Ancient India Social History: Some Interpretations, Orient Longman reprint 1996.
Thapar, R., Early India, Penguin, 2003
Thapar Romila (ed.) The Aryan Debate, National Book Trust.

Core Elective

BASHTCE-231

Current Issues and their Historical perspective

1. Human Rights :Origin, nature and evolution -Greek Concept – Emanuel Kant -Hobbes ,John Locke. French Revolution, Declaration of Rights of Man –Promotion of Human Rights under U.N.O.
2. Refugee Problem-Nazi persecution – Jewish emigration – Settlement in Palestine Post – world war -2 Scenario – Palestinian Refugee problem– Recent development in Syria-migration to Europe – Rohingya Refugees – Historical background and nature of the problem-Afghan refugees in Pakistan – Tamil Refugees from Srilanka and Tibetan refugees.
3. Terrorism – Origin of terrorism – French Revolution - Neo- terrorism –Irish Republican Army – Nationalism and Terrorism – Terrorism as an instrument of fighting against colonial regime Terrorism on global scale – 9/11 – War on Terrorism – its limitations.
4. Problem of Separatism in Asia –Kashmir Problem –Historical Legacy—Unghyr separatist movement in China—Baluchi Nationalism in Pakistan – Kurdish struggle for statehood

Books for reference

Jason Burke, The New Threat: The Past, Present, and Future of Islamic Militancy

Jonathan Sacks, Not in God's Name: Confronting Religious Violence

Gil Loescher and Ann Dull Loescher, The Global Refugee Crisis : A REFERENCE HAND BOOK

William Easterly, Tyranny of Experts: Economists, Dictators, and the Forgotten Rights of the Poor

Carol Bohmer and Amy Shuman, Rejecting Refugees: Political Asylum in the 21st century.

Jack Donnelly, Universal Human Rights in Theory and Practice

K.K.Ghai, Indian Constitution and Human Rights

Soli A. Sorabjee, World of All Human Rights

Open Elective

BASHTOE-281

Tourism in India

I. Historical writings- Historical writing in Ancient, Medieval, Modern. History of Museums – Documentation, Preservation & Interpretation.

II. Type of Tourism – Eco Tourism, Cultural Tourism, Marine Tourism

III. Impact of Tourism- Socio- Cultural aspects of Tourism

IV. Heritage Tourism- Conservation Preservation & Maintenance of Heritage sites. Funding Agencies Government ASI, SA Survey of India, NGO.

References;

1. Kapoor Bimal Kumar, Murali (2005), Travel Agency and Ticketing, Sterling Publishers Pvt Ltd. New Delhi.
2. Negi Jag Mohan, Travel Agency Operations: Concepts and Principles, Kanishka Publishers, New Delhi.
3. Negi Jag Mohan, Air Travel, Ticketing and fare Construction, Kanishka Publishers, New Delhi.
4. Mahinder, Travel Agency Management, Anmol Publishers, New Delhi.
5. Jag Mohan Negi, Tourist Guide & Tour Operation, Kanishka Publishers, New Delhi.
6. Bhatia AK (2004) Tourism Development; Principles and Practices, Sterling Publication, New Delhi.
7. Dennis L. & Foseter Glencoe (2001), an Introduction to Travel & Tourism, McGraw – Hill International.
8. Tourism: Socio – economic and ecological impact – ICFAL Books - Hyderabad.
9. Husain Masjid, World Geography -4th Edition, JBC Publishers & Distributors.
10. Husain Masjid, Indian and World Geography, JBC Publishers & Distributors.
11. J.K Chopra World Geography.
12. Shalini Singh, Cultural tourism and Heritage Management, Rawat Publication.
13. Gupta I.C. et.al, Tourism Products of India.
14. Gupta V.K, Tourism in India, Gian Publications House, Delhi.
15. Sunil Sharma, Emerging International Tourism Markets, Rajat Publications.
16. Premnath Dhar, International Tourism Emerging Challenge and failure prospects, Kanishka Publications & Distributions.
17. Babu P George, et.al; International Tourism- world-geography & Development- Prospective Abhijeeth publications.
18. Sharma K.K, Tourism in India, Classic publication House, Jaipur.

Mangalore University

Syllabus for B.Com Course as per CBCS

Regulations 2018-19:

Programme Objectives:

1. The Course focuses mainly on enhancing the employability skills of the Commerce students
2. The introduction of updated and the need of the hour concepts and contents will make a student employable and at the same time confident in his/her day to day transactions.
3. The course also meets the requirement of the young and enterprising Indians to nurture their dreams of entrepreneurship.
4. Overall the course touches upon the humane aspect of every student pursuing it and encourages them to contribute to nation building through their intellect and social capital.

Eligibility for Teaching:

All the Courses under Group I and Group II shall be taught by the Faculty members having M.Com qualification with B.Com/BBM/BBA degrees only. However the following subjects can be taught by the faculty members having M.A(Economics) qualifications.

1. Business Economics (I Semester)
2. Money and Public Finance (II Semester)
3. Modern Bank Management (III Semester)
4. International Trade (IV Semester)

Teaching Pedagogy:

The programme consists of Lectures and Practical sessions both inside and outside the classroom. Lectures will be supplemented with tutorial classes which encompass Student Seminars, Case Studies, Group Discussions, Role Play activities and hands on Computer use.

Proposed Semester wise Subjects for B.Com Degree

I year B Com, I Semester						
	Subjects/Courses	Teaching Hours/ Week	Marks			Credits
			I A	U Exam	Total	
Group I: Core Courses (Commerce Subjects)	BCMCMC 131: Quantitative Techniques- I	4	20	80	100	02
	BCMCMC 132 : Financial Accounting – I	6	30	120	150	03
	BCMCMC 133: Strategic Management and Organization Behaviour	6	30	120	150	03
	BCMCMC 134 : Business Economics	4	20	80	100	02
Group II Elective Courses	Elective Courses BCMCCE 135 BCMCCE 136 BCMCCE 137 BCMCCE 138	2	10	40	50	01
Group III a) Compulsory Foundation	Language I BCMENL 131 : English	4	20	80	100	02
	Language II BCMKA131 : Kannada	4	20	80	100	02
Group III b) Elective Foundation	BCMCIF 131 : Indian Constitution /Human Rights/Gender equity/ Environmental Studies	2	10	40	50	01
Group IV	CC & EC : Co-curricular and Extra- curricular Activities	-	-	-	50	01
					850	17
I year B Com, II Semester						
	Subjects/Courses	Teaching Hours/ Week	Marks			Credits
			I A	U Exam	Total	
Group I: Core Courses (Commerce Subjects)	BCMCMC 181 : Quantitative Techniques- II	4	20	80	100	02
	BCMCMC 182 : Financial Accounting - II	6	30	120	150	03
	BCMCMC 183 : Human Resource Management	6	30	120	150	03
	BCMCMC 184 : Money and Public Finance	4	20	80	100	02
Group II Elective Courses	Elective Courses BCMCCE 185 BCMCCE 186 BCMCCE 187	2	10	40	50	01
Group III a) Compulsory Foundation	Language I BCMENL 181 : English	4	20	80	100	02
	Language II BCMKA181: Kannada	4	20	80	100	02
	BCM HGF181 : Indian Constitution/Human Rights/Gender equity/ Environmental Studies	2	10	40	50	01
Group IV	CC & EC : Co-curricular and Extra- curricular Activities	-	-	-	50	01
					850	17

II year B Com, III Semester						
	Subjects/Courses	Teaching Hours/ Week	Marks			Credits
			I A	U Exam	Total	
Group I: Core Courses (Commerce Subjects)	BCMCMC 231:Direct Tax- I	4	20	80	100	02
	BCMCMC 232 : Financial Accounting - III	6	30	120	150	03
	BCMCMC 233:Modern Bank Management	4	20	80	100	02
	BCMCMC 234 :Cost & Management Accounting – I	6	30	120	150	03
	Group II Elective Courses Elective Courses BCMCE 235 BCMCE 236 BCMCE 237 BCMCE 238	2	10	40	50	01
Group III a) Compulsory Foundation	Language I BCMENL 231 : English	4	20	80	100	02
	Language II BCMKA 231: Kannada	4	20	80	100	02
	BCMGEF231 : Indian Constitution/Human Rights/Gender equity/ Environmental Studies	2	10	40	50	01
Group IV	CC & EC : Co-curricular and Extra- curricular Activities	-	-	-	50	01
					850	17
II year B Com, IV Semester						
	Subjects/Courses	Teaching Hours/ Week	Marks			Credits
			I A	U Exam	Total	
Group I: Core Courses (Commerce Subjects)	BCMCMC 281: Direct Tax- II	4	20	80	100	02
	BCMCMC 282 :Financial Accounting - IV	6	30	120	150	03
	BCMCMC 283 :International Trade	4	20	80	100	02
	BCMCMC 284 : Cost & Management Accounting – II	6	30	120	150	03
	Group II Elective Courses Elective Courses BCMCE 285 BCMCE 286 BCMCE 287 BCMCE 288	2	10	40	50	01
Group III a) Compulsory Foundation	Language I BCMENL 281 : English	4	20	80	100	02
	Language II BCMKA 281 : Kannada	4	20	80	100	02
	BCMESF281 : Indian Constitution/Human Rights/Gender equity/ Environmental Studies	2	10	40	50	01
Group IV	CC & EC : Co-curricular and Extra- curricular Activities	-	-	-	50	01
					850	

						17
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III year B Com, V Semester						
Group I: Core Courses (Commerce Subjects)	Subjects/Courses	Teaching Hours/ Week	Marks			Credits
			I A	U Exam	Total	
	BCMCMC 331 :Direct Tax- III	5	30	120	150	03
	BCMCMC 332: Corporate Accounting – I	5	30	120	150	03
	BCMCMC 333 :Financial Management - I	5	30	120	150	03
	BCMCMC 334 : Cost & Management Accounting – III	5	30	120	150	03
	BCMCMC 335 :Business Law	5	30	120	150	03
	BCMCMC 336 : Modern Marketing	5	30	120	150	03
			900	18		
Group II	Not applicable					
Group III	Not applicable					
Group IV	Not applicable					
III year B Com, VI Semester						
Group I: Core Courses (Commerce Subjects)	Subjects/Courses	Teaching Hours/ Week	Marks			Credits
			I A	U Exam	Total	
	BCMCMC 381:GST & Customs Duty	5	30	120	150	03
	BCMCMC 382 : Corporate Accounting - II	5	30	120	150	03
	BCMCMC 383 : Financial Management - II	5	30	120	150	03
	BCMCMC 384 : Cost & Management Accounting – IV	5	30	120	150	03
	BCMCMC 385 : Indian Corporate Law	5	30	120	150	03
	BCMCMC 386 :Auditing	5	30	120	150	03
			900	18		
Group II	Not applicable					
Group III	Not applicable					
Group IV	Not applicable					
Total					5200	104

Electives courses to be offered under Group II for I, II, III & IV Semester B.Com programme under following four categories are as follows: (50 marks & 2 hours)

I. Supportive to the Discipline of study:

- BCMCCE 135 : Corporate Secretaryship
- BCMCCE 136 : Principles and Practice of Tourism
- BCMCCE 137 : E-Commerce
- BCMCCE 138 :Intellectual property Rights

II. Providing an Expanded Scope:

- BCMCCE 185 : Real Estate Management
- BCMCCE 186 : Agricultural Marketing
- BCMCCE 187 : Retail Management
- BCMCCE 188 : Logistics Management.

III. Nurturing Students Proficiency/Skills:

- BCMCCE 235 : Computerised Accounting
- BCMCCE 236 : Tax Procedure & Tax Planning
- BCMCCE 237 : Personal Investment Management
- BCMCCE 238 : Life Skills

IV. Enabling an exposure to some other discipline & domain:

- BCMCCE 285:Basic Accounting
- BCMCCE 286 : Personal Taxation
- BCMCCE 287 : Personal Investment Management
- BCMCCE 288 :Banking Practices.

I BCOM- I SEMESTER
BCMCMC 131 :QUANTITATIVE TECHNIQUES – I

4 hours per week

48 Hours : No of Credits: 2

Unit 1: Introduction and basic concepts

10 Hrs

Introduction to Statistics: Meaning and definitions, Measures of Central Tendency- Arithmetic mean-properties, Geometric mean and Harmonic mean- properties and applications, mode and median.

UNIT 2 : Descriptive statistics of Univariate distributions

8 Hrs

Standard deviation: calculation and properties, CV and variance.

Unit 3: Index numbers

10 Hrs

Definition, limitations and uses of index numbers, Steps in the construction of index number, Construction of whole sale price index numbers – Simple and weighted average of price relatives, weighted aggregate method – Laspeyre's, Paasche's and Fisher's index numbers, cost of living index number, Construction of index number by using aggregate expenditure method and family budget method.

Unit4: Commercial Arithmetic

10 Hrs

Percentage, problem on profit and loss ,Trade discount, Cash discount.

Simple interest - Compound interest: including for fraction of period- Half yearly, Quarterly problems, Nominal rate and Effective rate of interest.

Unit 5: Ratio and proportions

10 Hrs

Definition-Equality of ratio –Simple problems; Proportion-definition –Direct Proportion-Inverse Proportion-Continued Proportion –Problems on proportions

Reference books:

1. Business Mathematics - Dr. Amarnath Dikshit and Dr. Jinendra kumar jain Himalaya publication house.
2. Business Mathematics - Kashyap Trivedi, Chirag Trivedi Pearson publication.
3. Business Mathematics - D.C Sanchete, V.K Kapoor, Sulthan chand and sons
4. Business Mathematics - Madappa and Shreedhara Rao, Shubhash publications.
5. Business Statistics - S P Gupta, S E Gupta, B N Gupta
6. Comprehensive Statistical Methods - P.N.Arora, Sumeet Arora & S.Arora, Chand publication

I BCOM- I SEMESTER
BCMCMC 132: FINANCIAL ACCOUNTING I

6 hours per week

72 hours : No of Credits: 3

UNIT 1: Introduction to Accounting. **12 Hrs**

Accounting Concepts: Going Concern Concept, Accounting Period Concept, Business entity concept, Accrual Concept, Convention of Consistency ;**Indian Accounting Standards ; Accounting Policies.**

UNIT II: Accounting for Professionals. **12 Hrs**

UNIT III: Rectification of Errors: **12 Hrs**

Classification of Errors- Rectification of Errors- After preparing the Trial Balance and before preparing Final Accounts – Suspense Account; After preparing the Final Accounts – Rectification in the next Trading period – Profit & Loss Adjustment Account.

UNIT – IV: Depreciation Accounting **12 Hrs**

Assets that are not covered by AS - Meaning of depreciable assets ;Factors determining economic life of the asset;Methods of depreciation (Change of method of depreciation excluded);Straight Line Method ,Reducing Balance Method, Sinking Fund Method

UNIT V: Final Accounts of Sole Trading Concerns: **12 Hrs**

Preparation of Trading Account and Profit & Loss Account, Balance Sheet

UNIT VI: Final Accounts of Non-Trading Concerns: **12 Hrs**

Meaning and Treatment of Revenue and Capital items -Preparation of Income and Expenditure Account and the Balance Sheet with the given Receipts and Payments Accounts and other information.

Books for Reference:

1. Advanced Accounting Shukla M.C., Grewal T.S.
2. – do - Gupta R.L.
3. – do - Jain & Narang
4. – do - Maheswari S.W. & Maheshwari S.K.
5. – do - B.S.Raman
6. – do - Basu & Das

I BCOM- I SEMESTER

BCMCMC 133 :STRATEGIC MANAGEMENT AND ORGANIZATIONAL BEHAVIOUR

6 hours per week

72 hours : No of Credits: 3

Objectives: The Objectives are to acquaint students with basic concepts and practice of Strategic Management.

Unit 1: Introduction to Strategies: (12 Hours)

Meaning and introduction, Fundamentals of strategy – Scope and importance- Differences between goals and objectives of business- Strategic Intent through Vision and Mission statements. Types of Strategies – Generic Strategies.

Unit 2: Strategic Management: (12 hours)

Need, Scope, Key features and importance. Role of Top Management in Strategic Decision Making. Limitations of Strategic Management; Strategic Management Process.

Unit 3: Environmental Analysis: (12 hours)

External environment – General, Economic, Socio-political, Technological and Legal environment.

Internal Environment- Structure, Culture, Core-Competencies, Stake-holders and Resources. SWOC Analysis & SOAR Analysis.

Unit 4: Strategy Formulation and Implementation: (12 hours)

Introduction to Strategy Formulation – Process in Strategy Formulation – Strategy implementation Stages – Reasons for Strategy failure & methods to overcome failure. Strategic Business Unit – BCG Matrix.

Unit 5: Introduction to Organizational Behaviour: (12 hrs)

Concept of organizational Behaviour (OB) – Importance of Organizational Behaviour – Key Elements of Organizational Behaviour, Role of Managers in OB – Interpersonal Roles – Informational Roles – Decisional Roles, Foundations or Approaches to OB, Challenges and Opportunities for OB.

Unit 6: Foundations of Individual Behaviour : (12 hrs)

Factors affecting individual behaviour - personal, environmental and organizational factors.

Personality: Definition and Meaning of Personality- Determinants of Personality, Personality Traits Influencing OB.

Attitudes, Job Satisfaction, Emotions and Moods:Major Job attitudes – Measuring Job satisfaction – causes and impacts of Job satisfaction – Emotions and Moods – Emotional Labour – Emotional Intelligence – OB applications of emotions and moods .

Perception and Individual decision making-Factors that influence perception – Link between perception and individual decision making – Decision-making in organizations.

Learning -Learning and Learning Cycle, Components of Learning

BOOKS FOR REFERENCE:

- | | | |
|---|---|---|
| 1. Strategic Management
(Indian Context) | : | Srinivasan (PHI Learning Private
Limited, New Delhi) |
| 2. Business Strategy and Management | : | Subba Rao P |
| 3. Strategic Management | : | P.K. Ghosh |
| 4. Strategic Management
(Conceptual Framework) | : | Dr. Arabinda Bhandari (McGraw-Hill) |
| 5. Business Environment and Policy | : | Dr. Francis Cherunilam |
| 6. Essentials of Business Environment | : | Dr. K. Ashwathappa |
| 7. Strategic Management | : | Azhar Kazmi and Adela Kazmi |
| 8. Strategic Management | : | Dr. Francis Cherunilam (Himalaya) |
| 9. Strategic Management | : | V S P Rao and V Hari Krishna |
| 10. Strategic Management | : | M Karmarkar (Book House of
India Pvt Ltd, Mumbai. |
| 11. Organisational Behaviour | : | Keith Davis, John W. Newstrom |
| 12. Organisational Behaviour | : | Fred Lutans,12/e, McGraw Hill |

I BCOM- I SEMESTER

BCMCMC 134 :Business Economics

4 Hours per week

48 Hours : No of Credits: 2

Objectives of the Course:

- Have consistent and coherent command of the language of Economics, its standard terms and basic concepts.
- Analyse how economic agents make decisions and choices using theoretical knowledge & practical approach.

CONTENTS

Unit - I: Nature and Scope of Economics

(12 Hours)

Subject-matter of economics – Distinction between microeconomics and macroeconomics – Basic Terms: Economy (economic system), Economic Goods, Scarcity and Choice, Consumers & Producers (Firms), Risk & Uncertainty, Value & Price. Cost: Marginal cost, average cost and opportunity cost. Revenue: marginal revenue, average revenue and total revenue. Equilibrium – Methods of economic analysis – Role of an Economist – Application of economic knowledge in decision-making and planning.

Unit - II: Demand and Supply Analysis

(12 Hours)

Utility as the basis of demand – Distinction between cardinal utility & ordinal utility – Demand Function – Law of Demand: assumptions, demand curve and exceptions – Uses in pricing and demand forecasting – Elasticity of Demand: Price, and Promotional Elasticity – Methods of Measurement: Point Method, Income Method and Mathematical Method
Distinction between supply, stock and surplus – Law of Supply: assumptions, supply curve, Degrees of price elasticity of supply.

Unit - III: Production Analysis and Market

(12 Hours)

Production Analysis: Law of variable proportions and Law of returns to scale.
Perfect Competition: concept and features – Monopoly: concept, features & types, price discrimination – Imperfect Competition: (i) Monopolistic Competition: Assumptions; Short-run Equilibrium; Group Equilibrium; concept of excess capacity. (ii) Oligopoly: types, features, dilemma of oligopolistic firms.

Unit - IV: Macroeconomic Analysis

(12 Hours)

National Income: concepts, measurement – Trade Cycles: features, types and control – Keynes consumption function and investment function – Macroeconomic Policy: objectives and instruments.

Suggested Readings:

1. Pindyck, R.S., D. L. Rubinfeld and P. L. Mehta; Microeconomics, Pearson Education.
2. N. Gregory Mankiw, Principles of Micro Economics, Cengage Learning
3. Maddala G.S. and E. Miller; Microeconomics: Theory and Applications, McGraw-Hill Education.
4. Salvatore, D. Schaum's Outline: Microeconomic Theory, McGraw-Hill, Education.
5. Case and Fair, Principles of Micro Economics, Pearson Education
6. Koutsiyannis, Modern Micro Economic Theory.

7. C Snyder, Microeconomic Theory: Basic Principles and Extensions, Cengage Learning
8. Bilas, Richard A., Microeconomics Theory: A Graphical Analysis, McGraw-Hill Education.
9. Paul A Samuelson, William D Nordhaus, Microeconomics, McGraw-Hill Education.
10. Amit Sachdeva, Micro Economics, Kusum Lata Publishers
11. Mankiw, N. Gregory. Principles of Economics, Thomson/South-Western.
12. C A Leeds Basic Economics Revision, Cassel Ltd., London.

Note: Latest Editions shall be used.

I B.COM – II SEMESTER

BCMCMC 181 :QUANTITATIVE TECHNIQUES – II

4 hours per week

48 hours : No of Credits: 2

Unit 1: Descriptive analysis of Bivariate data

10 Hrs

Correlation Analysis: Meaning of Correlation, linear and non-linear correlation, Correlation and Causation, Scatter diagram, Pearson's co-efficient of correlation; calculation and properties (proofs not required). Spearman's Rank Correlation

Unit 2 : Regression Analysis

10 Hrs

Regression Analysis: Principle of least squares and regression lines, Regression equations and estimation; Properties of regression coefficients; Relationship between Correlation and Regression coefficients.

Unit 3: Time series analysis

8 Hrs

Meaning and uses of time series, Various components of time series, determination of trend by using moving average and least square method.

Unit4: Permutation and Combinations

10 Hrs

Factorial Notations-permutations of n different things-Circular permutation-Permutation of things not all different –restricted permutation-simple problems Combinations-simple problems based on formula. Introduction to probability-definitions – various terminology used in probability (sample space, events, random experiment trial) – simple problems.

Unit 5: Number system and Theory of Equations

10 Hrs

Introduction –Natural numbers -Integers-Prime numbers-Rational and irrational numbers-Real numbers –HCL AND LCM (simple problems)

Equations - definition - Degree of the equation. Types of equations –linear equations and its solution- Simultaneous linear equations (2 variables only)-Quadratic equation-solution by method of factorisation and formula method.

Reference books:

1. Business Mathematics - Dr. Amarnath Dikshit and Dr. Jinendra kumar Jain, Himalaya publication house.
2. Business Mathematics - Kashyap Trivedi, Chirag Trivedi, Pearson Publication.
3. Business Mathematics - D.C Sanchete & V.K Kapoor, Sulthan chand and sons
4. Business Mathematics, Madappa and Shreedhara Rao, Shubhash Publications.
5. Business Statistics - S P Gupta, S E Gupta, B N Gupta
6. Comprehensive Statistical Methods - P.N.Arora, Sumeet Arora & S.Arora, Chand publication

I B.COM – II SEMESTER
BCMCMC 182: FINANCIAL ACCOUNTING – II

6 hours per week

72 Hours : No of Credits: 3

UNIT I: Accounting from incomplete records. 12 Hrs

Meaning, merits and limitations of Single Entry System. Analytical method of calculation of profit – Conversion into double entry system only.

UNIT II: Consignment Accounts: 12 Hrs

Meaning – Valuation of consignment stock and Abnormal Loss (including higher invoicing). Journal entries and Ledger Accounts in the books of Consignor and Consignee (memorandum method excluded).

UNIT III: Joint Venture Accounts 12 Hrs

Meaning and Characteristics of Joint Venture - Problems on Joint Venture : Recording Joint Venture transactions in a separate set of Books with a Joint Bank Account.

UNIT IV: Fire Insurance Claims: (Excluding loss of profit). Problems on loss of stock only (including average clause) 12 Hrs

UNIT V: Hire Purchase System: 12 Hrs

Entries and Ledger accounts in the Books of Hire Purchaser and Hire Vendor (including problems on full and partial re-acquisition).

Chapter VI: Instalment System: 12 Hrs

Journal Entries and Ledger accounts in the books of Purchaser and seller.

References:

- | | |
|-----------------------|----------------------------------|
| 1 Advanced Accounting | Shukla M.C., Grewal T. S. |
| 2 Advanced Accounting | Gupta R.L |
| 3 Advanced Accounting | Jain & Narang |
| 4 Advanced Accounting | Maheshwari S.W. & Maheshwari S.K |
| 5 Advanced Accounting | B.S. Raman |
| 6 Advanced Accounting | Basu & Das |

I B.COM – II SEMESTER

BCMCMC 183:HUMAN RESOURCE MANAGEMENT

6 Hours per week

72 hours : No of Credits: 3

Learning Objectives:

1. The objective is to familiarise the students with the concept of Human Resource Management.
2. The subject enables them to understand the core areas of HRM- Human Resource Planning, Process and Sources of employee recruitment, Selection procedure, Wage and salary administration, Motivation and Leadership.

Unit 1: Introduction to Human Resource Management:

12 hrs

Meaning and Definition, objectives, scope, Functions, Evolution and Development of HRM, Human Resource Manager- Changing role of HR Manager; Emerging issues in HRM; Human Resource Information System.

Unit 2: Human Resource Planning:

12 hrs

Meaning Definition, Objectives, Process, factors Affecting Human resource Plan; Job Analysis- Job Description- Process and methods of job Analysis; Business Process Outsourcing.

Unit 3: Recruitment and Selection:

12 hrs

Objectives and process of Recruitment; Sources of Man Power supply- Internal and External sources; Campus recruitment- Job Fair-E-Recruitment; Scientific selection procedure; Testing- types of written tests; Interview- types; Group Discussion- Case Studies; Placement and Induction. Recent trends in selection.

UNIT 4: Training and Development:

12 hrs

Meaning and definition, Need, Importance and Objectives, Methods of Training; Executive Development- Need and Techniques; Difference between Training and Development; Knowledge Management.

UNIT 5: Performance Appraisal:

12 hrs

Meaning, Objectives of Performance Appraisal, Methods of appraising performance- Trait base appraisals, Behaviour appraisals and Results Method; 360 Degree appraisal; Self- appraisal.

UNIT 6: Motivation and Leadership:

12 hours

Meaning and Definition of Motivation, Process of motivation, Theories of Motivation- Maslow's Theory, Herzberg's Two Factor Theory, McGregor's Theory, Theory Z (Ouchi's Theory).

Leadership- Meaning- Importance, styles of leadership and Modern theories of leadership.

Books for Reference:

1. Subba Rao P, Human Resource Management and Industrial Relations, Himalaya Publishing House.

2. Gaey Dessler and Biju Varkkey, Human Resource Management, Pearson Education Inc.
3. Gupta C. B., Human Resource Management, Sulthan Chand co.
4. Rao. V. S. P., Human Resource Management, Excel Books.
5. Seema Sanghi, Human Resource Management, MacMillan Publishers.
6. Prasad L. M, Human Resource Management, Sulthan Chand & Sons.
7. Narain Jain, Human Resource Management, Mittal Publications.
8. Shashi k. Gupta & Rosy Joshi, Human Resource Management, Kalyani Publishers.
9. Ashwathappa K., Human Resource Management, Tata McGraw Hills.
10. Khanka S. S., Human Resource Management, Allied Publishers.

I B.COM – II SEMESTER
BCMCMC 184 : MONEY AND PUBLIC FINANCE

4 Hours per week

48 Hours : No of Credits: 2

Objectives of the Course:

- To enable the students to understand the basic concepts of money & functioning of the money market.
- To help the students to acquire knowledge about the functioning of the economic system & about economic fluctuations.
- To make the students understand the working of the banking system & the monetary policy.
- To enable the students to understand the importance of Inter-National Finance.

CONTENTS

Module: I Money

(10 Hours)

Meaning, definitions, functions & classification - money and near money. Demand and supply of money: determinants; High – powered money and the money multiplier

Module: II Value of money and its application

(12 Hours)

Value of Money: meaning and theories - The quantity Theory of money – Fisher's Theory and the Cambridge Equations, Friedman's restatement of the quantity theory - Measurement of Value of money: Index Numbers – meaning, types and uses. Inflation: meaning, types, causes, effects and remedies - stagflation.

Module: III Business Cycles

(10 Hours)

Meaning features, phases- causes: Hawtrey's theory, Hick's theory and Schumpeter's Theory – Measures to control business cycles.

Module: IV Banking

(10 Hours)

Commercial Banks: Functions and Investment policy. Modern banking instruments- ATM, Debit card, Credit card, E-banking— NBFI. Central Banking – Functions- Monetary Policy – meaning and Instruments (Quantitative and qualitative methods of credit control)

Module: V International Financial Institutions

(06 Hours)

IMF - Objectives, Organization and Functions. IBRD - Objectives, Organizations and Functions.

Books for reference:

1. F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6th edition, 2009.
2. F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, Foundations of Financial Markets and Institutions, Pearson Education, 3rd edition, 2009.
3. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition, 2011.
4. M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7th edition, 2011.
5. N. Jadhav, Monetary Policy, Financial Stability and Central Banking in India, Macmillan, 2006.

II B.COM. – III SEMESTER

BCMCMC 231 :DIRECT TAX - I

4 Hours per Week

48 hours: No. of Credits 2

OBJECTIVES

The objective of this paper is to familiarize the students with the Legal Provisions and Procedural aspects of Income Tax. Hence, this subject is to be taught with reference to the relevant amendments made to Direct Tax Laws of India by Finance Acts passed in the Parliament from time to time.

Unit I: Introduction

08 Hours

Definitions – Assessee – Person- Assessment Year and Previous Year – Income- Agricultural Income, Partial integration of Agricultural Income with Non-agricultural Income - Gross Total Income- Taxable Income (also known as Total Income) –Permanent Account Number (PAN) - Income tax rates of relevant assessment year for an individual assessee. Exposure to applying for PAN online.

Unit II: Residential Status

10 Hours

Individual – HUF-Firm-Company-Determination of Residential Status of Individual-Incidence of Tax (scope of Total Income)-Meaning -Indian Income- Foreign Income- Deemed Income- Computation of Total Income based on residential status.

Unit III: Tax-free income under Sec.10 relating to computation of Salary Income

10 Hours

Death cum Retirement Gratuity, Commuted Pension, Leave Encashment, Receipts at the time of Voluntary Retirement, Retrenchment Compensation, Foreign Allowances and Perquisites, House Rent Allowance, Leave Travel Concession and Receipts from Life Insurance Policy.

Unit IV: Income from Salary

10 Hours

Characteristics of salary income, meaning of salary for various purposes -allowances-perquisites and their valuation -tax free perquisites- Deductions under sec.16; Provident Fund – meaning & income tax provisions relating to Statutory Provident Fund, Recognized Provident Fund, Unrecognized Provident Fund, Superannuation Fund and Public Provident Fund; Computation of Income from Salary.

Unit V: Computation of Taxable Salary and Relevant Deductions U/s 80

10 Hours

Problems on Computation of Taxable Salary and Deductions u/s 80C, 80CCC, 80CCD, 80CCE, 80CCG; Provisions relating to Deduction of Tax at Source (TDS) from Salaries u/s 192.

Books for References

1. Direct Taxes, Dr. Vinod K Singhania, Taxmann's Publications.
2. Income Tax Law and Practice, Dr. H.C.Mehrotra and Dr. S.P.Goyal, Sahitya Bhavan Publication.
3. Direct Tax Laws and International Taxation, T.N. Manoharan et al., Snow White Publications.

4. Practical Approach to Income Tax, Dr. Girish Ahuja and Dr. Ravi Gupta, Wolters Kluwer Publications.
5. Students Guide to Income Tax, Manjusha Goel, Bharath Publications.
6. Students Guide to Income Tax including GST, Dr. Vinod K Singhania and Dr. Monica Singhania, Taxmann's Publications.
7. Taxation, Jassprit S Johar, Bharath's Publications.
8. Business Taxation, K. Sadashiva Rao, Sushrutha Publications

II B.COM. – III SEMESTER
BCMCMC 232 : FINANCIAL ACCOUNTING III

6 hours per week

72 hours: No of Credits: 3

UNIT I: Partnership Accounts: Admission of a Partner: 12 hrs

Goodwill to be treated as per Indian AS

UNIT II: Partnership Accounts: Retirement of a Partner: 12 hrs

Goodwill to be treated as per Indian AS

UNIT III: Partnership Accounts: Admission cum Retirement of a Partner 12 hrs

Goodwill to be treated as per Indian AS

UNIT IV: Partnership Accounts: Death of a Partner 12 hrs

Preparation of Executors Account

Joint Life Policy and Individual Policies

UNIT V: Partnership Accounts: 12 hrs

Dissolution of Partnership Firm (Excluding Garner Vs Murray)

Simple Dissolution – Insolvency (Capital loss to be borne in the agreed ratios)

UNIT VI: Partnership Accounts: 12 Hrs

Sale of Partnership Firm to a Limited Company – Entries in the Firm.

Gradual realization of Assets and Piece Meal distribution of cash (Proportionate Capital Method only).

References:

- | | | |
|---|---------------------|----------------------------------|
| 1 | Advanced Accounting | Shukla M.C., Grewal T. S. |
| 2 | - do - | Gupta R.L |
| 3 | - do - | Jain & Narang |
| 4 | - do - | Maheshwari S.W. & Maheshwari S.K |
| 5 | - do - | B.S. Raman |
| 6 | - do - | Basu & Das |

II B.COM. – III SEMESTER

BCMCMC 233 :MODERN BANK MANAGEMENT

4 hours per week

48 hours :No of credits: 2

Learning objectives: To make the students understand the Concepts of Insurance & Banking and gain insights on the subject matter.

UNIT – I: Introduction to Banking.

12 hours

Origin – Evolution of banking – Definition of term bank and banking – Functions – Primary and subsidiary functions. Segment banking –Meaning – Merits and demerits. Retail Banking – Meaning – Objectives and features. Co-operative Banking – Functions and Features.

UNIT – II: Investment Policy and Delivery Channels.

12 hours

Principles of Investment Policy – Basic and allied principles. Financial Inclusion – Meaning – need and importance - PMJDY. Micro - finance – Need – Features – Importance. Negotiable Instruments – Meaning – Features. Cheques – features – types of Cheques. Demand drafts, Dishonour of Cheques Paying Banker and Collecting Banker (meaning only)

UNIT – III: Innovative and Digital Banking.

12 hours

ATM – Debit Cards – Credit Cards – Smart Cards – POS – Internet Banking – Mobile Banking – Wallet Banking – Digital Cash – IVR calling – Core Banking System – NEFT – RTGS – IFSC – NPC – UPI – IMPS – BHIM App – AEPS- APBS – Structured financial Messaging system-CTS.

UNIT – IV: Reserve Bank of India.

12 hours

RBI – Origin –Developmental and Financial functions - Role of RBI in Agricultural Finance – Role of RBI in Industrial finance .

Books for Reference:

1. Principles and practice of Life Insurance – P PeryaSwamy.
 2. Insurance Principles and Practice – Mishra M N.
 3. Insurance and Risk Management – P K Gupta.
 4. A Text Book on principles and Practice of life Insurance – G Krishna Swamy.
 5. Insurance & Risk Management – Koteswara
 6. Modern Banking – B.S.Raman
 7. Insurance & Bank Management – Ravi Prasad K G
 8. Banking Theory Law & Practice – Guruswamy S
- Indian Banking- Nataraj & Parameshwaram

II B.COM. – III SEMESTER

BCMCMC 234: COST & MANAGEMENT ACCOUNTING-I

6 Hours per week

72 hours :No of Credits: 3

Learning Objectives:

1. To make the students understand the basic concepts of elements of cost.
2. To enhance their knowledge on the elements of cost where cost control and cost reduction techniques are used.

UNIT I: BASIC CONCEPTS

12 hrs.

Meaning and definition: Cost, costing, cost accounting, cost accountancy and management accounting- Objectives of cost accounting-Limitations of Financial accounting- Relationship between Cost accounting and Financial accounting -Advantages of cost accounting- Systems, Methods and Techniques of cost accounting.

UNIT II: INTRODUCTION OF COSTING SYSTEM

12 hrs

Cost unit and Cost Centre- Classification of costs on the basis of Elements, Functions and Behaviour.

UNIT III: COST SHEET

12 hrs

Preparation of Cost Sheet as per Cost Accounting Standards- Tenders & Quotations.

UNIT IV: MATERIAL CONTROL

12 hrs

Material control: Meaning and objectives- Purchase of Materials: Types of purchasing: centralized and decentralized purchasing- Purchase procedure- Pricing of material purchases. Stores control-Meaning-Types of stores. Inventory control-Meaning and techniques. Fixation of stock levels-Periodic Inventory System- Perpetual Inventory System- Economic Order Quantity- ABC Analysis- Just In Time (JIT). Problems on Stock Levels, EOQ and Bin card.

UNIT V: PRICING OF MATERIAL ISSUES

12 hrs

Methods of pricing the material issues- Theory and Problems on FIFO, LIFO and Weighted Average Methods.

UNIT VI: LABOUR

12 hrs

Labour: Direct and Indirect labour- Time Keeping and Time Booking-Meaning, objectives and Methods- Idle time and Overtime: Causes and control- Labour Turnover: Meaning, causes and measurement of labour turnover- Systems of wage payment- Theory and problems on Time wage, Piece rate system, Taylor's differential piece rate system, Halsey's Incentive plan, Rowan's Incentive plan.

BOOKS FOR STUDY AND REFERENCE:

- Cost Accounting: Patten Setty and Dr. Palekar (R Chand & Co)
- Cost Accounting: Thukaram Rao. (New Age International Publishers)
- Cost and Management Accounting: Ravi M. Kishore (Taxmann Publications (P) Ltd.)
- Cost Accounting: S.P. Iyengar. (Sulthan Chand & Sons)
- Cost Accounting: K.S.Adiga. (Shubha Prakashana)
- Cost Accounting: M.N. Arora. (Vikas Publishing House)
- Cost Accounting: S.P. Jain and K.L. Narang. (Kalyani Publishers)

- Management Accounting: M.Y. Khan and P.K.Jain. (McGraw-Hill Education)
- Management Accounting: Robert N. Anthony. (Richard D Irwin)
- Management Accounting: I.M. Pandey. (Vikas Publishing House)
- Cost Accounting: B.S. Raman. (United Publishers)
- Cost Accounting: M.L. Agarwal. (Sahitya Bhawan Publications)
- Cost and Management Accounting: G. Balakrishna Shetty (Universal King Publishers)
- Cost Accounting: Pillai and Bagavathi (S. Chand Ltd.)

II B.COM. – IV SEMESTER

BCMCMC 281:DIRECT TAX - II

4 Hours per week

48 hours : No. of Credits: 2

OBJECTIVES

The objective of this paper is to familiarize the students with the Legal Provisions and Procedural aspects of Income Tax. Hence, this subject is to be taught with reference relevant amendments made to Direct Tax Laws of India by Finance Acts passed in the Parliament from time to time.

Unit I: Income from House Property

10 Hours

Composite Rent, Annual Value of let out property- Self occupied house property-concept of Unrealized Rent and Arrears of Rent and its treatment-recovery of arrears of rent, deductions from Annual Value.

Unit II: Depreciation

10 Hours

Rules governing Depreciation – Additional Depreciation - Computation of Depreciation and Written Down Value under Block of Assets Method.

Unit III: Profit and Gain from Business and Profession

10 Hours

Deduction Permissible u/s 30 to 37, Payments not Deductible - Computation of Professional Income and Business Income.

Unit IV: Capital Gains

10 Hours

Meaning –Transfer, Transactions not regarded as Transfer- Short Term and Long Term Capital Gains -Cost of Acquisition – Capital Gains Exempt u/s 54 –Problems on Computation of Taxable Capital Gains.

Unit V: Income from Other Sources

08 Hours

Interest on securities-Grossing up – Other Important Exemptions u/s10 including section 10(15) - Deductions u/s 57.

Books for References

1. Direct Taxes, Dr. Vinod K Singhania, Taxmann's Publications.
2. Income Tax Law and Practice, Dr. H.C.Mehrotra and Dr. S.P.Goyal, Sahithya Bhavan Publication.
3. Direct Tax Laws and International Taxation, T.N. Manoharan et al., Snow White Publications.
4. Practical Approach to Income Tax, Dr. Girish Ahuja and Dr. Ravi Gupta, Wolters Kluwer Publications.
5. Students Guide to Income Tax, Manjusha Goel, Bharath Publications.
6. Students Guide to Income Tax including GST, Dr. Vinod K Singhania and Dr. Monica Singhania, Taxmann's Publications.
7. Taxation, Jassprit S Johar, Bharath's Publications.
8. Business Taxation, K. Sadashiva Rao, Sushrutha Publications.

II B.COM. – IV SEMESTER
BCMCMC 282 : FINANCIAL ACCOUNTING - IV

6 hours per week

72 hours : No of Credits: 3

UNIT I: Royalty Accounts : Main Lease: 12 Hrs

Entries and Ledger Accounts in the books of Lessee and Lessor

UNIT II: Royalty Accounts: Sub – Lease: 12 Hrs

Entries and Ledger Accounts in the books of Original Lessor, Sub – Lessor and Sub–Lessee.

UNIT III: Branch Accounts: 12 Hrs

Dependent Branch is (including higher invoicing): Problems on Debtors Method and Stock and Debtors Method.

UNIT IV: Branch Accounts: 12 Hrs

Independent Branches :Incorporating Entries – Preparation of Columnar Trading and Profit and & Loss Account and Consolidated Balance Sheet in the Books of Head office (Excluding Foreign Branches).

UNIT V: Departmental Accounts 12 Hrs

UNIT V : Profit Prior to incorporation: 12 Hrs

Meaning and nature of Profit Prior to incorporation

Calculation of profit Prior to Incorporation

References:

- | | |
|-----------------------|----------------------------------|
| 1 Advanced Accounting | Shukla M.C., Grewal T. S. |
| 2 - do - | Gupta R.L |
| 3 - do - | Jain & Narang |
| 4 - do - | Maheshwari S.W. & Maheshwari S.K |
| 5 - do - | B.S. Raman |
| 6 - do - | Basu & Das |

II B.COM. – IV SEMESTER

BCMCMC 283:INTERNATIONAL TRADE

4 Hours per week

48 Hours : 2 credits

Objectives of the Course:

- To understand the basics of International Trade
- To give global economic touch to the students
- To understand about exchange rate and balance of payments
- To know the latest developments in WTO and BRICS

Unit 1: Introduction to International Trade (08 hours)

Features of International trade. Significance of Foreign Trade. Theories of International trade: Theory of Comparative Cost Advantage and Factor Endowment Theory (H-O Theory) - Competitive Advantage Theory.

Unit II: Trade Policy and Balance of Payments. (10 hours)

Free Trade—meaning and importance- Arguments for Protection - Balance of Payments: meaning and Components - Disequilibrium in balance of payments: causes and methods of correcting disequilibrium – current account deficit.

Unit III: International Capital Movements (10 hours)

Types of international capital movements - FDI: types, advantages and disadvantages – MNCs: meaning, advantages and disadvantages - Role of capital flows in developing countries- Foreign investment policy.

Unit IV: Foreign Exchange Market (10 hours)

Meaning, features, participants, functions and instruments traded in foreign exchange market- Meaning and types of foreign exchange rates -determination of Exchange Rate- Theories of Exchange Rates: Purchasing Power Parity Theory (PPP), Balance of Payments Theory - Methods of quoting exchange rate -FEDAI.

Unit IV: WTO and BRICS (10 hours)

WTO: Objectives, organization functions, TRIPs, TRIMs and GATS- latest Ministerial Conference, WTO and developing economies. BRICS - Objectives, organization and functions.

Books for References :

1. Sodersten B., Reed G: International Economics.
2. Jeevanandam. C : Foreign Exchange.
3. Ellesworth E.T. :International Economy.
4. Kindlberger Charles: International Economics.
5. M.L. Jhingan :International Economics.
6. Francies Cherunilam: International Trade and Export Management.
7. Haberler,G :Theory of International Trade.

II B.COM. – IV SEMESTER

BCMCMC 284 : COST & MANAGEMENT ACCOUNTING – II

6 Hours per week

72 hours :No of Credits: 3

Learning Objectives:

1. To throw light on the relevance of indirect cost.
2. To make the students to understand how cost accounts reconcile itself with financial accounts.

Unit I: OVERHEADS

(12 Hrs)

Meaning- Collection of overheads - Classification of overheads on the basis of Functions, Elements and Behaviour. Allocation and Apportionment of overheads to cost centers (Departmentation of overheads). Problems on primary distribution of factory overheads.

Unit II: SECONDARY DISTRIBUTION OF OVERHEADS

(12 Hrs)

Meaning-Basis of reapportionment, Methods of reapportionment: Direct distribution, Step-Ladder Method-Reciprocal service methods: Simultaneous equation method and Repeated distribution- Problems on all methods of secondary distribution.

Unit III: ABSORPTION OF OVERHEADS

(12 Hrs)

Meaning - Methods of absorption: Percentage on direct material cost, direct labour cost, prime cost, direct labour hour rate & machine hour rate. Problems on direct labour hour rate and machine hour rate.

Unit IV: ACCOUNTING FOR COSTS (Non-Integrated Accounting System)

(12 Hrs)

Meaning, features, books maintained, Journal Entries and Ledger Accounts-Trial Balance excluded.

Unit V: INTEGRATED ACCOUNTING SYSTEM

(12 Hrs)

Meaning, features, merits and limitations. Journal entries and Ledger accounts- Trial Balance excluded.

Unit VI: RECONCILIATION OF COST& FINANACIAL ACCOUNTS

(12 Hrs)

Need for reconciliation, Procedure for reconciliation, Reasons for disagreement in profits.

BOOKS FOR STUDY AND REFERENCE:

- Cost Accounting : S.P.Jain & K.L.Narang (Kalyani Publishers)
- Cost Accounting : M.N.Arora (Vikas Publishing House)
- Cost Accounting and Management Accounting : K.S.Adiga (Shubha Prakashana)
- Cost Accounting : S.P.Iyengar (Sulthan Chand & Sons)
- Cost Accounting : Ravi M. Kishore (Taxmann Publications (P) Ltd.)
- Cost Accounting : Thukaram Rao (New Age International Publishers)
- Cost Accounting : Pattan Setty and Dr. Palekar (R Chand & Co)
- Cost Accounting : M.L.Agarwal (Sahitya Bhawan Publications)
- Cost Accounting and Management Accounting : B.S.Raman (United Publishers)
- Cost and Management Accounting : G. Balakrishna Shetty (Universal King Publishers).

III B.COM. - V SEMESTER

BCMCMC 331:DIRECT TAX - III

5 Hours per week

72 hours : No. of Credits 3

OBJECTIVES

The objective of this paper is to familiarize the students with the Legal provisions and practical aspects of Income Tax. Hence, this subject is to be taught with reference to the relevant amendments made to Income Tax Laws of India by Finance Acts passed in the Parliament from time to time.

Unit I: Computation of Total Income Considering Deductions U/s 80: **12 Hours**
80C, 80CCC, 80CCD, 80CCE, 80CCG, 80D, 80 DD, 80DDB, 80E, 80G, 80GG, 80GGA, 80GGB, 80GGC, 80TTA and 80U; Rates of Income Tax; Rebate under sec. 87A and provisions relating to Marginal Relief. Clubbing of Income; Set off of losses and Carry Forward and Set Off of Losses; Problems on Computation of Total Income.

Unit II: Assessment of Individual **12 Hours**
Taxability of Agricultural Income through Partial Integration - Taxability of share of income from HUF and from Firm; Computation of Total Income and Tax Liability of individual assessee. Exposure to Self Assessment and Online filing of ITR-1.

Unit III: Assessment of Cooperative Societies **12 Hours**
Meaning and characteristics –deduction under sec. 80P - Computation of Total Income and Tax Liability.

Unit IV: Assessment of Partnership Firm u/s 184 (other than problems on change of constitution of firm) **12 Hours**
Computation of Firm's Total Income and tax liability - computation of individual income of partners from Firm taxable u/s 28.

Unit V: Assessment of Companies **12 Hours**
Computation of Total Income; Computation of Book Profits and Tax liability (applicability of Minimum Alternate Tax: MAT) - Taxation of Non-Resident Companies.

Unit VI: International Taxation: (Theory only) **12 Hours**
Taxation of International Transactions and Non-resident Taxation, Provisions under Income-tax Act 1961 including Specific Provisions relating to Non-residents, Double Taxation Relief, Transfer Pricing & other Anti-Avoidance Measures, Advance Rulings; Equalization levy, GAAR.

Books for Reference:

1. Direct Taxes, Dr. Vinod K Singhania, Taxmann's Publications.
2. Income Tax Law and Practice, Dr. H.C.Mehrotra and Dr. S.P.Goyal, Sahithya Bhavan Publication.
3. Direct Tax Laws and International Taxation, T.N. Manoharan et al., Snow White

Publications.

4. Business Taxation, K. Sadashiva Rao, Sushrutha Publications.
5. Business Taxation, Dr. Ravi M.N., Bhanu Prakash B.E. and Dr. Suman Shetty N., Professional Books Publishers.
6. Practical Approach to Income Tax, Dr. Girish Ahuja and Dr. Ravi Gupta, Wolters Kluwer Publications.
7. Students Guide to Income Tax, Manjusha Goel, Bharath Publications.
8. Students Guide to Income Tax including GST, Dr. Vinod K Singhania and Dr. Monica Singhania, Taxmann's Publications.

III B.COM. - V SEMESTER
BCMCMC 332 : CORPORATE ACCOUNTING – I

5 hours per week

72 hrs : No of Credits: 3

Unit I : International Financial Reporting Standards: 12 Hrs

Meaning and Objectives of IFRS.-Applicability of IFRS., Need for Convergence.

Unit II: Underwriting of Shares: 12 Hrs

Procedure for issue of shares, Procedure for underwriting.

Unit III : Company Accounts: 12 Hrs

Redemption of Preference shares

Unit IV : Company Accounts: 12 Hrs

Redemption of Debentures – Sinking Fund Method only

Unit V : Holding Company Accounts: 12 Hrs

Problems with single subsidiary only

Unit VI : Final Accounts of Banking Companies with relevant schedules 12 Hrs

References:

1. Advanced Accounting Shukla M.C., Grewal T. S.
2. Advanced Accounting Gupta R.L
3. Advanced Accounting Jain & Narang
4. Advanced Accounting Maheshwari S.W. & Maheshwari S.
5. Advanced Accounting B.S. Raman
5. Advanced Accounting Basu & Das

III B.COM. - V SEMESTER
BCMCMC 333 :FINANCIAL MANAGEMENT – I

5 hours per Week

72 hrs : No of Credits: 3

Learning Objective:

To enable the students to understand the basic concepts and tools of finance applied in the corporate financial affairs and to develop the knowledge and skills expected of a Finance Manager, in relation to financial decisions.

Unit I: Nature of Financial Management:

12 Hrs

- 1.1 Meaning and Definition
- 1.2 Scope of Financial Management:
 - 1.2.1 Under Traditional Approach
 - 1.2.2 Under Modern Approach
- 1.3 Objectives of Financial Management
- 1.4 Time Value of Money:
 - 1.4.1 Meaning
 - 1.4.2 Compounding and Discounting (Computation)
 - 1.4.3 Future Value of Annuity and Present Value of Annuity (Computation)

Unit II: Capital Structure:

12 Hrs

- 2.1 Meaning and Definition of Capital Structure
- 2.2 Determinants of capital Structure
- 2.3 Components of Capital Structure:
 - 2.3.1 Debt - Meaning and Features
 - 2.3.2 Equity- Meaning and Features
- 2.4 Debt Equity Ratio:
 - 2.4.1 Meaning and Significance
 - 2.4.2 Computation of Debt-Equity Ratio
- 2.5 Zero Debt Capital Structure
- 2.6 Trading on Equity
- 2.7 Preparation of Statement of Income
- 2.8 Earning Per Share (EPS)
- 2.9 Operating Leverage
- 2.10 Financial Leverage
- 2.11 Combined Leverage

Unit III: Basic Financial Concepts:

12 Hrs

- 3.1 Return on Investment (ROI)
- 3.2 Expected Rate of Return (Probability)
- 3.3 Standard Deviation and Co-efficient of Variation
- 3.4 Sensitivity Analysis and Range
- 3.5 Risk-Return Trade-off
- 3.6 Beta Factor
- 3.7 Alpha Factor

Unit IV: Capital Budgeting:

12 Hrs

- 4.1 Meaning and Features
- 4.2 Capital Budgeting Process
- 4.3 Techniques of Capital Budgeting:
 - 4.3.1 Traditional Method:
 - 4.3.1.1 Payback Period
 - 4.3.1.2 Accounting Rate of Return
 - 4.3.2 Modern Method:
 - 4.3.2.1 Net Present Value
 - 4.3.2.2 Profitability Index
 - 4.3.2.3 Internal Rate of Return

Unit V: Issue of Equity Shares:

12 Hrs

- 5.1 Rationale for Issue
- 5.2 Public Issue: External Procedure
- 5.3 Rights Issue: Meaning
- 5.4 Book-building
 - 5.4.1 Meaning
 - 5.4.2 Rationale
 - 5.4.3 Financial intermediaries
 - 5.4.4 Issue Procedure
 - 5.4.5 Merits and Demerits

Unit VI: Stock Exchange:

12 Hrs

- 6.1 Meaning and Functions
- 6.2 Types of Dealings:
 - 6.2.1 Cash Market (Rolling Settlement)
 - 6.2.2 Options and Futures: Meaning and Settlement of Contracts.
- 6.3 Listing of Shares: Meaning, Listing Procedure
- 6.4 Speculators: Bulls, Bears and Arbitrager
- 6.5 Speculative activities: Rigging, Cornering, Wash sales.
- 6.6 Securities and Exchange Board of India (SEBI)
 - 6.6.1 Functions
 - 6.6.2 Powers

Books for Reference:

1. Financial Management - Ravi M. Kishore (Taxman Publications)
2. Financial Management - M. Y. Khan and P. K. Jain (Tata MC Graw Hill)
3. Financial Management & Policy - R. M. Srivastava (Himalaya Publishing House)
4. Financial Management - Dr. S. N. Maheshwari (Sultan Chand & Sons)
5. Financial Management - I.M. Pandey (Vikas Publishing House)
6. Investment & Securities Markets in India - V.A. Avadhani (Himalaya Publishing House)
7. Security Analysis & Portfolio Management –Punithavathy Pandian (Vikas Publishing House)

8. Financial Management – B S Raman – United Publishers
9. Financial Management - B. V. Raghunandan (Sushruta Publications)

III B.COM. - V SEMESTER

BCMCMC 334 : COST & MANAGEMENT ACCOUNTING - III

5 Hours per week

72 hrs : No of Credits: 3

Learning Objective:

To collect and analyse cost for different spheres of manufacturing and service units.

UNIT I: JOB AND BATCH COSTING

12 Hrs

Nature, Purpose and Procedure of Job Costing- Advantages and Limitations- Activity Based Costing.

UNIT II: CONTRACT COSTING:

12 Hrs

Features of Contract Costing -Types of Contracts- Cost plus Contract, Escalation & De-escalation clause, Recording of Value & Profit on Contract.

UNIT III: PROCESS COSTING

12 Hrs

Meaning - Difference between Job costing and Process costing- Problems on process costing with process losses and without process losses and Normal loss, Abnormal loss and Abnormal gain- Inter Process transfer at profit: meaning and problems.

UNIT IV: JOINT PRODUCTS AND BY PRODUCTS

12 Hrs

Meaning of Joint Products and By Products- Accounting of Joint Products- Apportionment by Physical measurement- Apportionment on Market value at Separation point- Apportionment on market value after further processing.

UNIT V: ACCOUNTING FOR BY PRODUCTS

12 Hrs

Non-cost and Sales value methods: Other income method, Total sales method and Net cost method-Theory and Problems

Cost Methods: Opportunity cost method, standard cost method and Joint cost method - Theory only.

UNIT VI: OPERATING COSTING

12 Hrs

Meaning, features, cost unit, operating cost statement-problems on Transport costing only.

BOOKS FOR STUDY AND REFERENCE:

- Cost Accounting: S.P.Jain & K.L.Narang (Kalyani Publishers)
- Cost Accounting: M.N.Arora (Vikas Publishing House)
- Cost Accounting and Management Accounting: K.S.Adiga (Shubha Prakashana)
- Cost Accounting: S.P.Iyengar (Sulthan Chand & Sons)
- Cost Accounting: Ravi M. Kishore (Taxmann Publications (P) Ltd.)
- Cost Accounting: Thukaram Rao (New Age International Publishers)
- Cost Accounting: Pattan Setty and Dr. Palekar (R Chand & Co)
- Cost Accounting: M.L.Agarwal (Sahitya Bhawan Publications)
- Cost Accounting and Management Accounting: B.S.Raman (United Publishers)
- Cost and Management Accounting: G. Balakrishna Shetty (Universal King Publishers)
- Cost Accounting: R.K.Sharma and Shashi Gupta (Kalyani Publishers)
- Principles of Management Accounting: Manmohan and Goyal (Sahirva Bhawan, Agra)
- Cost and Management Accounting: Dr.S.N.Maheshwari (Sulthan Chand)

III B.COM. - V SEMESTER

BCMCMC 335 : BUSINESS LAW

Hours per week: 05

72 hrs : No of Credits: 03

Instruction:

It is a theoretical subject to be taught with suitable examples and special reference to case laws.

Learning Outcomes:

Upon studying the subject, the student will be able to -

1. Demonstrate a basic understanding of the laws relating to Contract, Information Technology and Intellectual Property Rights.
2. Develop acceptable attitudes and view points with respect of legal environment of business.
3. Apply basic knowledge acquired to business transactions in their career ahead.

Unit I: Introduction

12 Hours

Meaning of Law, meaning of Mercantile Law, sources of Mercantile Law

Indian Contract Act, 1872 - Meaning of contract, essentials of a valid contract

Classification of contract based on validity, creation and performance

Unit II: Offer, Acceptance, Consideration, Contractual Capacity

12 Hours

Offer - Meaning, legal rules and termination Acceptance - Meaning, and legal rules. Lawful

Consideration - Meaning, legal rules, privity of contract (stranger to contract) with exceptions. Exceptions to the rule 'no consideration no contract'. Capacity to Contract -

Persons disqualified from contracting, effects of minor's agreements

Unit III: Free Consent, Lawful Object and Contingent Contract

12 Hours

Free Consent - Meaning and essentials of coercion, undue influence, fraud and misrepresentation. Mistake - Mistake of law, mistake of fact, bilateral and unilateral mistake (meaning only). Lawful Object - Meaning, agreements opposed to public policy, wagering

agreements .Contingent contract - Meaning and rules, distinction between wager and contingent contract

Unit IV: Quasi Contract, Discharge of Contract and Remedies for the Breach of Contract

12 Hours

Quasi Contract - Meaning and circumstances.Discharge of Contract - Meaning and various modes of discharge.Remedies for the breach of contract - Various remedies available for the aggrieved party

Unit V: Special Contracts

12 Hours

Contract of Indemnity - Meaning and essentials only . Contract of guarantee - Meaning, essentials, rights of surety and discharge of surety, distinction between Indemnity and Guarantee. Contract of Bailment - Meaning and essentials, duties of bailor and bailee.

Contract of Pledge - Meaning and essentials, distinction between Bailment and Pledge.

Contract of Agency - Meaning and creation of agency, rights, duties and liabilities of agent

Unit VI: Contemporary Issues in Business Law

12 Hours

Right to Information Act, 2005 - Meaning of 'Information', 'Right to Information'

-Need for Right to Information. Public Information - Request for obtaining information. Grounds for rejection of information. Central Information Commission - Constitution and powers. Information Technology Act - Purpose and significance. Cyber Crimes - Types of crimes, nature and punishment

Intellectual Property Law - Patent, trademark, copyright and industrial design

Case Laws:

The relevant legal point, facts and the judicial decision relating to the following 10 case laws are to be dealt with:

- i. Balfour Vs. Balfour
- ii. Carlill Vs. Carbolic Smoke Ball Company
- iii. Harvey Vs. Facey
- iv. Felthouse Vs. Bindley
- v. Durgaprasad Vs. Baldeo
- vi. Mohori Bibee Vs. Dharmodas Gose
- vii. Ranganayakamma Vs. Alver setty
- viii. Derry Vs. Peak
- ix. Hadley Vs. Baxendale
- x. Planche Vs. Colburn

Books for study and reference:

1. N.D. Kapoor., 'Elements of Mercantile Laws', (New Delhi: S. Chand & Sons, 2014).
2. P.P.S. Gogna, 'A Textbook of Mercantile Laws (Commercial Law)', (New Delhi: Chand & Company Pvt. Ltd., 2014).
3. Avatar Singh, 'Business Laws', (Lucknow: Eastern Book Company, 2014).
4. B.S.Raman, 'Business Law', (Mangaluru: New United Publishers, 2016).
5. B. Vamana Baliga, 'Business Law', (Mangaluru: New United Publishers, 2018).
6. Herald Monis, 'Business Law', (Mangaluru: United Agencies, 2018).
7. Umesh Maiya, 'A Textbook of Business Law', (Udupi: Prajna Prakashana, 2016).
8. K.S. Adiga, 'Business Law', (Udupi: Shubha Prakashana, 2018).

III B.COM - V SEMESTER

BCMCMC 336 : MODERN MARKETING

5 hrs per week

72 hrs: No of Credits: 3

Learning Outcomes:

This Course will enable the students to:

1. Understand the conceptual underpinnings in terms of core concepts.
2. Understand the current role of marketing in the business and society.
3. Comprehend the marketing issues in a growing business context through real marketing case studies and anecdotes.
4. Develop the cognitive and analytical ability with application of marketing knowledge required for marketing career prospects.

Unit-1 : Marketing:

12 hrs

Meaning and Importance, process,- understanding the market place and customer needs. Designing the customer driven marketing strategy, Market orientation- product concept, selling concept, Marketing concept, societal marketing concept, Holistic marketing concept.

Relationship marketing , Integrated marketing, Internal marketing,- performance marketing (Meaning and significance only)

Unit-2: Market segmentation and Consumer Behaviour:

12 hrs

Meaning and importance of market segmentation- bases for segmentation- target marketing strategies. – Meaning and importance of consumer behaviour analysis- Buying motives –classification of buying motives- Rational, Inherent Learned, Emotional and patronage- Factors influencing consumer behaviour. - Buying decision process.

Unit– 3: Product Management:

12 hrs

Product concept – meaning and definition. Product mix decision strategies. Product- Life cycle- meaning and definition- stages of PLC. Factors affecting PLC. New product development - meaning - stages in New product development . Reasons for failure of new products. BIS and AGMARK–meaning and features. FSSAI mark- meaning (Explain this chapter with case study).

Unit – 4: Advertising and personal selling:

12 hrs

Role of Advertising in Brand building. Media selection - considerations in media selection. New media of Advertising (Online Advertising and Mobile advertising). Advertising copy- Types AIDA and DAGMAR.-Ethics in advertising.

Personal selling – an outlet for communicating and delivering value. Nature, significance and scope of personal selling. Role of sales person - Diagnostic, analyst, information provider, strategist, tactician and catalyst. (Explain this chapter with case study).

Unit -5 : Marketing of services and Rural Marketing:

12 hrs

Meaning and characteristics of services- Goods Vs services- Marketing mix of services Rural marketing - features- causes for changes in volume and pattern of rural consumption. Problems of rural marketing. Marketing mix for rural marketing.(Explain this chapter with case study)

Unit-6: New Horizons in Marketing:

12 hrs

Direct marketing: Nature scope and advantages-requisites for the success of direct marketing. Forms of direct marketing - database marketing- Tele marketing- Tele shopping - Multi level marketing.(Relevance and significance)

Online and Digital marketing: Introduction and meaning . Benefits of online marketing to sellers and consumers. Limitations of online marketing. Problems of online marketing in India (Legal , Infrastructural , Commercial and other problems)Digital marketing-concept -role of digital marketing in India

Green-marketing: Meaning – importance –Fundamental requirements – problems of green marketing.(Explain this chapter with case study)

Books for reference:

- | | |
|----------------------------------|------------------------------|
| 1. Marketing Management : | Philip Kotler |
| 2. Fundamentals of Marketing : | W.J. Stanton |
| 3. Marketing Management : | T.N. Chabra and S.K. Grover |
| 4. Marketing Management : | Rajan Saxena |
| 5. Marketing Management : | Ramaswamy and Namakumari |
| 6. Modern Marketing Management : | K.C. Nair and others |
| 7. Marketing Management : | N. Sontaki |
| 8. Industrial Management : | Banga and Sharma |
| 9. Marketing Management : | R.S.N. Pillai and Bhagavathi |
| 10. Marketing Management: | R.S. Davar |
| 11. Marketing Management: | Debraj Datta and Mahua Datta |
| 12. Modern Marketing Management: | J.N. Jain and P.P Singh |
| 13. Marketing Management : | Arun Kumar and Meenakshi |
| 14. Modern Marketing : | B.S. Raman. |

III B.COM. - VI SEMESTER

BCMCMC 381:GST and CUSTOMS DUTY

5 Hours per week

72 hrs : No. of Credits 3

OBJECTIVES

The objective of this paper is to familiarize the students with the provisions of Indirect Taxation Laws in India. With the introduction of Good and Services Act, India is moving towards formalization of business transactions, mopping up higher revenue to the Exchequer. This subject is to be taught with reference to the relevant amendments made to GST by GSTC and by Finance Acts passed in the Parliament from time to time.

Unit I: Introduction

12 Hours

Evolution, Meaning and salient Features of GST; Objectives and basic schemes of GST; Benefits and Apprehensions of GST – Constitutional Amendments; GST Council – Structure, Powers, Functions and Provisions; Structure of GST (Dual Model), Types of GST - (CGST,SGST/UTGST and IGST) its meaning.

Unit II: GST Act 2017

12 Hours

Definitions and Salient features: CGST, SGST/UTGST and IGST. Definition of Goods, Place of Supply, Principal place of business, agent, principal, Associated Enterprises, Related Persons, Aggregate Turnover, Services, Taxable Turnover under CGST, SGST and IGST, Capital Goods, Casual Taxable Person, E-Commerce, Input, Input Tax credit, Job work, Works Contract, Location of the Supplier, Reverse Charge, Nature of supply – Composite, Mixed, Exempt, Outward, Inward. Recipient of Goods and Services, Supplier of Goods and Services, E-way Bill – Rates of GST.

Unit III: Procedure and Incidence of Tax

12 Hours

Procedure relating to levy – CGST and SGST, Scope of Supply, Tax liability on mixed and composite supply, Tax Invoice, HSN/SAC codes – meaning, source and identification, Time and Place of Supply of Goods and Services, Valuation and Valuation rules, Transaction Value – Inclusions and Exclusions, Reverse Charge Mechanism, Time of supply under Reverse Charge; Procedure relating to levy – IGST, Interstate supply, Intra-state supply, Zero rated supply, value of taxable supply; - Supply of Goods and Services to Foreign Diplomatic Missions. Computation of taxable value and tax liability including Reverse Charge.

Unit IV: GST Registration

12 Hours

Procedure, Persons liable for Registration, Persons not liable for Registration, Compulsory Registration, Deemed Registration, Advantages of Registration, Amendment of Registration, Cancellation of Registration, Revocation of Cancellation of Registration; Special provisions for casual taxable persons and non-resident taxable persons; Exempted Goods and Services. Composition Levy, Conditions and restrictions for Composition Levy; Problems on computation of Turnover for the purpose of Registration and applicability of Composition Levy;

Role of Information Technology in GST – GST Network – powers and functions of GST Network, Goods and Service Tax Suvidha Providers (GSP), Types of Returns and due dates for filing returns.

Unit V: Input Tax Credit

12 Hours

Meaning, eligibility and conditions for claiming Input Tax Credit, Apportionment of credit and blocked credits, Availability of credits under special circumstances under section 18, Inputs and Capital Goods, Distribution of credit by Input Service Distributor (ISD), Transfer of Input Tax Credit; Problems on utilisation of Input Tax Credit (including Blocked credits).

Unit VI: Customs Duty (Customs Act, Customs Tariff Act)

12 Hours

Definitions, types of customs duties – Prohibition of importation and exportation of goods, Treatment of imports and exports under GST, Methods of valuation for customs – Problems on computation of Assessable Value and Customs Duty.

Books for References

1. Principles of GST and Customs Law, V.S. Datey, Taxmann's Publications.
2. Illustrated Guide to Goods and Service Tax, C.A. Rajat Mohan, Bharath Publications.
3. Goods and Service Tax: An Analytical Approach, Dr. Manuel Tauro, Dr. Therese Pereira, Manoj Louis and CA Colin Rodrigues, Boscoss Publications.
4. Business Taxation (GST and Customs Duty), Dr. Ravi M.N., Bhanu Prakash B.E. and Dr. Suman Shetty N., Professional Books Publishers.
5. Business Taxation, K. Sadashiva Rao, Sushrutha Publications.
6. Systematic Approach to GST, Dr. Girish Ahuja and Dr. Ravi Gupta, Wolters Kluwer Publications.
7. Students Guide to Income Tax including GST, Dr. Vinod K Singhania and Dr. Monica Singhania, Taxmann's Publications.

III B.COM. - VI SEMESTER

BCMCMC 382 :CORPORATE ACCOUNTING –II

5 hours per week

72 hrs :No of Credits: 3

UNIT I : Company Accounts: 12 hrs

Accounting for Amalgamation as per Accounting Standards.

External Reconstruction, Absorption and Amalgamation. (Purchase method only)

UNIT II : Company Accounts: 12 hrs

Liquidators Final Statement of Accounts.

UNIT III: Valuation of Shares: 12 Hrs

UNIT IV : Valuation of Goodwill: 12 Hrs

UNIT V : Final Accounts of companies: 12 hrs

Latest Vertical form with relevant notes as stated in Companies Act -2013

UNIT VI : Analysis and Interpretation of Financial Statements 12 Hrs

Problems relating to following ratios:

- | | |
|-----------------------------|---------------------------|
| 1. Current Ratio | 2. Liquid Ratio |
| 3. Stock Turnover Ratio | 4. Gross Profit ratio |
| 5. Net Profit Ratio | 6. Debt Equity Ratio |
| 7. Capital Gearing Ratio | 8. Debtors Turnover Ratio |
| 9. Creditors Turnover Ratio | 10. Proprietary Ratio |
| 11. Operating Ratio | 12. Working Capital Ratio |

References:

- | | |
|-----------------------|---------------------------|
| 1 Advanced Accounting | Shukla M.C., Grewal T. S. |
| 2 Advanced Accounting | Gupta R.L |
| 3 Advanced Accounting | Jain & Narang |
| 4 Advanced Accounting | Maheshwari S.W. & Maheshw |
| 5 Advanced Accounting | B.S. Raman |
| 6 Advanced Accounting | Basu & Das |

III B.COM. - VI SEMESTER

BCMCMC 383 :FINANCIAL MANAGEMENT – II

5 hours per week

72 hrs : No of Credits: 3

Learning Objective:

To enable the students to acquire working capital management skills and to understand the advanced concepts and techniques in corporate financial affairs in relation to investment and dividend policy decisions.

Unit I: Working Capital Management:

12 Hrs

- 1.1 Meaning of Working Capital: Gross, Net, Permanent and Temporary
- 1.2 Factors Determining the Size of Working Capital
- 1.3 Concept of Operating Cycle: Gross Operating Cycle and Net Operating Cycle.
- 1.4 Estimation of Working Capital Requirement:
 - 1.4.1 Estimation of Components Method
 - 1.4.2 Percentage of Sales Method
 - 1.4.3 Operating Cycle Method

Unit II: Treasury Management:

12 hrs

- 2.1 Meaning and Functions
- 2.2 Centralised Vs- Decentralised
- 2.3 Reasons for Cash Flow Problems
- 2.4 Effects of Cash Deficits
- 2.5 Methods of improving Liquidity
- 2.6 Cash Budget: Preparation of Cash Budget

Unit III: Cost of Capital:

12 hrs

- 3.1 Meaning
- 3.2 Cost of Equity Shares
 - 3.2.1 Dividend Yield Method: Formula and Computation
 - 3.2.2 Dividend Growth Model: Formula and Computation
- 3.3 Cost of Irredeemable and Redeemable Preference Shares: Formula and Computation.
- 3.4 Cost of Irredeemable and Redeemable Debentures and Bonds: Formula and Computation.
- 3.5 Weighted Average Cost of Capital

Unit IV: Dividend Decisions:

12Hrs

- 4.1 Factors Determining Dividend Policy

4.2 Stock Dividend (Bonus Shares)

4.2.1 Meaning

4.2.2 Merits and Demerits

4.2.3 SEBI Guidelines

4.3 Valuation of Shares and Dividend Models

4.3.1 Relevance Approach of Walter & Gordon: Computation of Market Value of Shares

4.3.2 Irrelevance Approach of Modigliani and Miller: Computation of Market Value

Unit V: Mutual Funds:

12 Hrs

5.1 Meaning and Formation

5.2 Management and Parties to the Fund:

Sponsor, Trustee, Asset Management Company and Custodian

5.3 Types of Mutual Fund Schemes

5.3.1 Classification by Structure: Close Ended, Open-Ended and Interval Scheme

5.3.2 Calculation of Net Asset Value (NAV)

Unit VI: Financial Statements Analysis:

12Hrs

6.1 Meaning and Types of Financial Statements

6.2 Techniques of Financial Analysis:

6.2.1 Comparative Financial Statement analysis

6.2.2 Common-size Balance Sheet and Income Statement

6.2.2 Trend Analysis

Books for Reference:

(1) Financial Management - Ravi M. Kishore (Taxman Publications)

(2) Financial Management - Subir Kumar Banerjee (S. Chand & Co.)

(3) Financial Management & Policy - V. K. Bhalla (Anmol Publications (P) Ltd., New Delhi)

(4) Financial Management - I.M. Pandey (Vikas Publications)

(5) Financial Management - M. Y. Khan & P.K. Jain (Tata MC Graw Hill)

(6) Financial Management: Principles and Practice - Dr. S N Maheshwari

(Sultan Chand & Sons)

(7) Financial Management - B.V. Raghunandan (Sushrutha Publications)

III B.COM. - VI SEMESTER

BCMCMC 384 :COST & MANAGEMENT ACCOUNTING - IV

5 Hours per week

72 hrs : No of Credits: 3

Learning Objectives:

1. To acquaint students with basics of Management Accounting.
2. To impart knowledge on the short term and long-term decision-making techniques and methods.

Unit I: CASH FLOW ANALYSIS-as per AS(R3) (12 Hrs)

Concept of Cash Flow- Sources and Application of funds- Uses of Cash flow and limitations of Cash Flow.

Unit II: MARGINAL COSTING (12 Hrs)

Nature, merits and limitations- Cost-Volume-Profit relationship- Marginal cost equations and Break-even Analysis- computation of Break-even point, P/V ratio, Margin of safety.

CHAPTER III: APPLICATION OF MARGINAL COSTING FOR PLANNING & DECISION MAKING (12 Hrs)

Problems on: Limiting Factor, Make or Buy decision, Product Mix and Pricing Decisions.

CHAPTER IV: BUDGETARY CONTROL (12 Hrs)

Nature and scope- Procedure in Budget Preparation- Types of Budget: Sales Budget, Production Budget, Production Cost Budget, Purchase Budget and Flexible Budget with problems.

CHAPTER V: STANDARD COSTING (12 Hrs)

Meaning- Standard costing Vs Budgetary control- Merits and Demerits of Standard Costing.

CHAPTER VI: VARIANCE ANALYSIS (12 Hrs)

Material and Labour cost variances and their computation.

BOOKS FOR REFERENCE AND STUDY:

- Management Accounting : M.Y.Khan (Tata Mcgraw Hill Publishing Co Ltd)
- Management Accounting : Robert N. Anthony (Richard D Irwin)
- Management Accounting : I.M.Pandey (Vikas Publishing House)
- Cost and Management Accounting : Dr.S.N.Maheshwari & P.K.Jain (Sulthan Chand)
- Cost Accounting : R.K.Sharma and Shashi Gupta (Kalyani Publishers)
- Cost Accounting : S.P.Jain & K.L.Narang (Kalyani Publishers)
- Cost Accounting : M.N.Arora(Vikas Publishing House)
- Cost Accounting and Management Accounting: K.S.Adiga (Shubha Prakashana)
- Cost Accounting: Ravi M. Kishore (Taxmann Publications (P) Ltd.)
- Cost Accounting: S.P.Iyengar (Sulthan Chand & Sons)
- Cost Accounting: Thukaram Rao (New Age International Publishers)
- Cost and Management Accounting: B.S.Raman(United Publishers)
- Cost Accounting: M.L.Agarwal (Sahitya Bhawan Publications)

- Cost Accounting: Pattan Setty and Dr. Palekar (R Chand & Co)
- Cost and Management Accounting: G. Balakrishna Shetty (Universal King Publishers).

III B.COM. - VI SEMESTER

BCMCMC 385 : INDIAN CORPORATE LAW

Hours per week: 5

72 hrs : No of Credits: 03

Instruction:

A theoretical subject to be taught with special reference to case laws mentioned towards the end of the syllabus.

Learning Outcomes: Upon learning the subject, the student will be able

1. To demonstrate a comprehensive and accurate knowledge of laws relating to the formation, administration and operations of a company.
2. To develop an understanding of current policy trends and developments in Corporate Law in Indian scenario.
3. To demonstrate an in-depth understanding of the Companies Act, 2013 along with all its amendments.

Unit I: Introduction

12 Hours

Introduction to Indian Companies Act, 2013

Definition and characteristics of a Joint Stock Company

Corporate Personality and Lifting of Corporate Veil

Kinds of Companies

Distinction between private company and public company

Procedure for the conversion of a private company into a public company

Unit II: Formation of Company

12 Hours

Promoter - Meaning, functions, fiduciary position and remuneration

Incorporation - Meaning, documents to be filed with the Registrar and effects

Memorandum of Association: Meaning, significance and contents

Articles of Association: Meaning, significance and contents

Distinction between Memorandum of Association and Articles of Association

Doctrine of *Ultra-vires* Memorandum and Articles

Doctrine of Constructive Notice

Doctrine of Indoor Management - Relevance and Exceptions

Prospectus: Meaning and importance, main contents, liability for mis-statement in prospectus

Unit III: Shares and Debentures

12 Hours

Shares - Meaning and Definition

Kinds of shares - Equity (including sweat equity)

Preference (sub-classification excluded)

Issue and Allotment - Legal rules for allotment of shares

Share Certificate - electronic form only

Buy back of shares - Legal provisions relating to buy back of shares

Transfer and transmission of shares - meaning and distinction, electronic transfer.

Debentures - meaning, definition, features, and types, and differences between shares and debentures

Unit IV: Membership of a Company

12 Hours

Member and share holder - Meaning and distinction

Who can become a member?
Modes of acquiring membership
Rights and liabilities of members
Termination of membership

Unit V: Company Management

12 Hours

Company Secretary - Meaning qualification, duties and liabilities
Directors - Meaning, kinds, qualification and disqualification, appointment and removal, powers, duties and liabilities

Unit VI: Company Meetings

12 Hours

Requisites of a valid General Body Meeting
Kinds of Company Meetings - Legal provisions regarding Annual General Body Meeting, Extra-ordinary General Meeting and Board meeting
Motions and Resolutions - Meaning of motions, meaning and kinds of resolutions

Case Laws:

The following case laws are to be specifically dealt with:

- i. Solomon Vs. Solomon and Company
- ii. Royal British Bank Vs. Turquand
- iii. Daimler Company Ltd. Vs. Continental Tyre and Rubber Company
- iv. Ashbury Railway Carriage Vs. Riche
- v. Anand Bihari Lal Vs. Dinshaw and Company

Books for study and reference:

1. N.D. Kapoor., 'Elements of Company Law', (New Delhi: S. Chand & Sons, 2015).
2. P.P.S. Gogna, 'A Textbook of Company Law', (New Delhi: S. Chand & Company Pvt. Ltd., 2016).
3. Avatar Singh, 'Company Law', (Lucknow: Eastern Book Company, 2018).
4. M.C. Kuchal, 'Modern Indian Company Law', (Delhi: Shee Mahaveera Book Depot, 2012).
5. B.S.Raman, 'Indian Corporate Law', (Mangaluru: New United Publishers, 2015).
6. B. Vamana Baliga, 'Indian Corporate Law', (Mangaluru: New United Publishers, 2017).
7. Herald Monis, 'Indian Corporate Law', (Mangaluru: United Agencies, 2017).
8. Umesh Maiya, 'A Textbook of Indian Corporate Law', (Udupi: Prajna Prakashana, 2016).

III B.COM. - VI SEMESTER

BCMCMC 386 :AUDITING

Hours per week: 5

72 hrs : No of Credits: 03

Learning Objectives:

To familiarise the students with the basics of Auditing.

To create awareness of principles and procedure of Auditing.

To create interest among the students to take up professional courses.

Learning Outcomes:

1. This subject will enable the students to understand the conceptual background, need, functions, types and process of Auditing required for ensuring regulatory and normative environment in which auditor operates.
2. It will help the students to identify and understand the auditor's duties, responsibilities, liabilities and apply appropriate audit procedures to test the audit assertions and objectives.
3. It will help the students to imbibe the audit culture, critical thinking and instill analytical skills leading to the enhancement of employability in the auditing domain.

Unit I: Introduction to Audit:

12 hrs

Meaning and definition of auditing, objects of Auditing, Differences between Accounting and auditing, Advantages and limitations of Auditing. Classification of audit- Statutory audit, Govt. Audit, Internal audit, Continuous audit and Annual Audit.

Unit II: Audit Programme:

Audit Programme, advantages and disadvantages. Audit Notebook and Audit Working Papers. Audit of Computerized Accounts - Auditing in an EDP environment. General EDP controls, EDP Application Controls, Computer Assisted Audit Techniques(CAAT) **12 Hrs**

Unit III: Internal check:

Meaning, definition, objects and merits of Internal Check. Internal Check regarding cash sales, cash purchases, payment of wages and stores. **12 Hrs**

Unit IV: Vouching:

Meaning, definition and objects, vouching of cash transactions - cash receipts and cash payments, credit purchases and credit sales. Verification - meaning and definition. Verification of Land and Buildings, Plant and Machinery, Stock –in- trade, Debtors, Goodwill and Creditors **12 Hrs**

Unit V: Company Audit:

Qualifications and Disqualifications, Appointment and removal of auditor. Rights, Duties and liabilities of Company Auditor. Audit Report - Meaning and types, CARO report. **12 Hrs**

Unit VI: Corporate Governance and Social Audit:

Meaning, definition, nature, factors influencing corporate governance, mechanisms, 4p's of corporate governance, Benefits. Social audit- Meaning, features, organization for social audit, audit programme, benefits. **12 Hrs**

Books for Reference:

1. Auditing : Tandon - (Sulthan Chand and Company)
2. Principles and Practice of Auditing : Dinakar Pagare – (Sulthan Chand and Sons)
3. Auditing : T. R. Sharma- (Sahithya Bhavan Publications)
4. Principles and Practice of Auditing : R. G. Saxena – (Himalaya Publishing House)
5. Contemporary Auditing : Kamal Guptha (Tata Mcgraw Hill Publishing Company Ltd)
6. Auditing : Shekhar K.C. – (Sulthan Chand and Company)
7. Auditing : B.S. Raman – (United Publishers).
8. Essentials of business environment: K Ashwathappa – (Himalaya Publishing House)
9. Principles and practice of Auditing: D.N Thripathy (Pearson)
10. Auditing: Maxim Carl (Universal King Publishers)

I B.COM. - I SEMESTER

Group II:

ELECTIVE: SUPPORTIVE TO THE DISCIPLINE OF STUDY:

BCMCCE 135 :CORPORATE SECRETARYSHIP

Hours per week : 2

24 hrs :No of Credit: 1

Learning outcomes:

1. To enable the students to acquire in-depth knowledge about secretarial practices in companies.
2. To train the students in various types of correspondence with stakeholders.
3. To familiarise the students to learn the various provisions of company law relating to meetings and resolutions.

Unit I: Introduction:

(5 Hrs.)

Meaning of Corporate Secretary – Qualifications - Legal position– Appointment – Role and Dismissal.

Unit II: Corporate Correspondence:

(5 Hrs)

Correspondence with Shareholders, Debenture holders, Fixed Deposit Holders, Government Departments, Statutory Bodies, Office Staff, Customers & Public and Directors – Secretarial Work relating to correspondence.

Unit III: Secretarial Role in Corporate Affairs:

(7 Hrs)

Role of secretary in Appointment, Removal, Termination of Directors and Auditor.

Accounts: Statutory books – Books of accounts – annual accounts and balance sheet – secretarial duties.

Dividends: Rules relating to dividends – secretarial procedure regarding payment of dividend.

Unit IV: Corporate management and meetings:

(7 Hrs)

Meetings and procedures: Kinds of meetings – Meetings of shareholders – Statutory Meeting – Annual General Meeting – Extraordinary General Meeting – Class Meeting – Board Meeting – Secretarial work relating to meetings Motions and resolutions: Types of resolutions – agenda – Minutes – voting and poll – proxy – quorum – chairman of meeting – duties of Corporate Secretary.

Books for Reference:

1. Company law and secretarial practice (Provisions of Company's Act 2013) - N D Kapoor, Sultan Chand & Sons, New Delhi
2. Company Law & Secretarial Practice - Dr. M R Sreenivasan, Margam Publications, Chennai.
3. Outline of company Secretary Practice - P K Ghosh & Dr. V Balachandran, Sultan Chand & Sons, New Delhi
4. A text book of company law - P P S Gogna

5. Manual of Secretarial Practice – B N Tandon
6. Essentials of Business Communication – Rajendra Pal & J.S. Korlahalli, Sultan Chand & Sons, New Delhi
7. Business Law – R.S.N.Pillai & Bhagwathi, S. Chand & Co., New Delhi.
8. Company Law and Secretarial Practice - A.K. Majumdar and G.K. Kapoor, Taxman Publications, New Delhi.

I B.COM. - I SEMESTER

BCMCCE 136 :PRINCIPLES AND PRACTICE OF TOURISM

Hours per week : 2

24 hrs :No of Credits: 1

Learning Objectives:

1. To understand the basic concepts of tourism.
2. To study different types of tourism
3. To understand the various dimensions of tourism.

UNIT 1:INTRODUCTION TO TOURISM: 6 hours

Tourism concepts – definition – its significance
Components/ Elements of Tourism.
Positive and Negative effects of Tourism.

UNIT 2: TRAVEL MOTIVATIONS 6 hours

Why do people travel?
Types of Tourism
Tourism as behaviours
Travel Motivators

UNIT 3: DIMENSIONS OF TOURISM 6 hours

Impact of Tourism
Foreign exchange (International Tourism)
Income Multiplier
Regional Development (Host Region)
Employment Multiplier
Contribution to GDP
Environmental Impacts
Socio-Cultural Impacts
International understanding.

UNIT 4: TOURISM PRODUCT planning and Development: 6 hours

Tourism Product – Features
Types of Tourism Products
Why product planning?
Different processes (stages) of tourism planning – Tourists Demand and supply – setting objectives - Territorial Planning – Financial Planning, HR Planning - Environmental Planning – Regional Planning
Tourism Management in the Modern Era
Tourist/Tourism Organisations – India / World.

References:

- Tourism Development - Principles and practices of Tourism by Mr. A.K. Bhatia, Sterling Publishers Pvt. Ltd.
- Basics of Tourism – Theory, Operation and Practice by Krishna K Kamra, Mohinder Chand; Kanishka Publishers, New Delhi.(2015)
- Tourism Development, Design for ecological sustainability – Mr. Sharma J.K.; Kanishka Publication, New Delhi
- Successful Tourism Management – Mr Pran Nath Seth, -Sterling Publishers
- Dennis L. Foster – Introduction to Travel Agency Management .(2014).

I B.COM. - I SEMESTER

BCMCCE 137 :E-COMMERCE

Hours per week : 2

24 hrs : 1 credit

INSTRUCTIONS:

This Subject is a mix of theory & practical and involves few demonstration sessions in the Computer Lab.

LEARNING OUTCOMES:

1. The subject should help a student understand the basics of E-Commerce.
2. It should encourage a young mind to focus on entrepreneurship with service orientation using online platform.

Unit 1 Introduction to E-Commerce:

5 Hrs

Introduction to E-Commerce – Definition, History of E-commerce, Functions and Scope, Difference between E-Commerce & E-Business, Comparison of Traditional Commerce and E-Commerce and Advantages & Disadvantages of E-Commerce.

Unit 2 E-Commerce business models:

5 Hrs

E-Commerce models: Business to Business (B2B) model, Business to Customer (B2C) model, Consumer-to Consumer (C2C) model, Consumer-to-Business (C2B) model, Peer to-Peer (P2P) model – Emerging trends.

Unit 3 E-Commerce and ITES Tools:

7 Hrs

Web server – Internet – World Wide Web, Web hosting choices, Concept and scope of BPO, KPO, LPO, ERP and Utility Blogging (Theory only).

Unit 4 E-Commerce Techniques:

7 Hrs

Hosting a product – Direct or Online platform, Stages in Buying a product on the internet, Web auctions, Virtual Communities, Portals, E-business revenue models.

BOOKS FOR REFERENCE

1. Introduction to E-Commerce – Dhawan & Nidhi, International Book House.
2. Business on the Net – Whats and Hows of E-Commerce, Agarwala K.N and Deeksha Ararwala, Macmillan, New Delhi.
3. Business on the Net – Bridge to the online store front, Agarwala K. N. and Deeksha Ararwala, Macmillan, New Delhi.
4. Electronic Commerce – A Managers guide to E-business, Diwan, Prag and Sunil Sharma, Vanity Books International, New Delhi.
5. E Commerce, C.S.V Murthy - Himalaya Publishing House.
6. Electronic Commerce – The Strategic Perspective, Watson R T, The Dryden press

I B.COM. - I SEMESTER

BCMCCE 138 :INTELLECTUAL PROPERTY RIGHTS

Hours per week : 2

24 hrs :No of Credits: 1

Instructions:

1. It is a theoretical subject to be taught by giving an insight into the various areas of intellectual property besides enlightening them on the laws relating to intellectual property rights and to motivate them to explore the avenues to develop their own intellectual property.
2. Students are expected to have an experience in presentation, brain storming, group discussion, etc.

Learning Outcomes:

Upon studying the subject, the student will be able to –

1. Demonstrate a basic understanding of the laws relating to intellectual property rights.
2. Develop capabilities to explore career options in intellectual property rights.

Unit I: Introduction to intellectual Property Law

06 Hours

Physical property - Meaning, features and types

Intellectual property - meaning, definition and features

Intellectual property Vs. physical property

Intellectual property rights - need for protection and significance/advantages

Scope/Various forms of intellectual properties - patents, trademarks, copyrights, industrial designs, trade secrets, geographical indication, traditional knowledge and plant variety rights

Regulatory authorities of intellectual property rights

Unit II: The Law of Patents

06 Hours

Meaning and definition of patent- objects of patent law - characteristics of patents - meaning of invention

Patentable items and non-patentable inventions

Who can apply for a patent?

Procedure for registration of patent and term of protection

Patent specification - Meaning, objectives, importance and kinds

Grant of patent, rights of patentee and revocation of patent

Compulsory licence and government use of patent

Infringement of patent and remedies for infringement

Unit III: The Law of Trade Marks

06 Hours

Meaning of mark, trade mark, well-known trade mark, collective mark, certificate of trade mark and permitted use

Functions and types of trade mark

Criteria of an ideal trade mark

Doctrine of honest concurrent user

Procedure for registration and term of protection

Rights of holder and assignment/transmission of trade marks

Infringement and remedies

Unit IV: The Law of Copyrights

06 Hours

Meaning and features of copyrights

Subject matter of copyright - literary work, dramatic work, musical work, artistic work cinematograph films and sound recording

Ownership, assignment and licence of copyrights

Rights of copyright holder and assignment and licence of copyrights

Infringement and remedies for infringement of copyrights

Books for study and reference:

1. B.L. Wadehra, "Law Relating to Intellectual Property", Universal Publishing House.
2. P. Narayan, "Intellectual Property Law", Eastern Law House.
3. N.K. Acharya, "Intellectual Property Rights", Asia Law House, III, IV and Edition, 2005-06 Edition (III Edition).
4. Elizabeth Verkey, "Intellectual Property", Eastern Book Company, I Edition, 2015.
5. Neeraj Pandey, Khushdeep Dharni, "Intellectual Property Rights", PHI Learning Private Limited, I Edition, 2014.
6. B.S. Raman, "Commercial Law", New United Publishers, III Edition, 2015.
7. Dr. Umesh Maiya, "A Textbook of Business Law" Prajna Prakahana, I Edition, 2016.

I B.COM. - II SEMESTER

Group II.

ELECTIVE: PROVIDING AN EXPANDED SCOPE:

BCMCCE 185 :REAL ESTATE MANAGEMENT

Hours per week : 2

24 hours :No of Credits: 1

Learning Objectives

1. To become a well rounded Real Estate Advisors.
2. To make a career in Real Estate.
3. To give insights into Real Estate Dealings.

Unit I : INTRODUCTION TO REAL ESTATE

6 hrs

Meaning & Scope of Real Estate - Meaning of Immovable Property.

Types of immovable property Freehold/Agriculture, Leasehold.

Precautionary measures to be taken while purchasing the Immovable Property.- Sale deed, Gift deed, Partition deeds, Release deeds

Guidance value, stamp Duty, Registration of Immovable Property.

Pre and Post registration –compliances.

Loss of original documents, - Remedies.

UNIT II : SOURCES OF FINANCE:

6 hrs

Loans from Financial Institutions

Documents Required

Mortgages – Types - Equitable Mortgage & Reverse Mortgage

Simple Problems on EMI

Affordable Housing- Pradhan Mantri Awas Yojana,

Property Insurance.

UNIT III: TAX IMPLICATIONS

6 hrs

Transfer of properties

Capital gains on sale.

Holding period.

Computation of gains: STCG LTCG

Income tax applicability on gains

Exemptions under sec.54.

UNIT IV : REAL ESTATE REGULATION ACT (RERA)

6 hrs

Purpose & objectives of RERA.

Applicability of RERA (Projects / Layouts).

Authorities under RERA.

Remedies available to the buyers under RERA.

Penalties under RERA. (Sellers).

References:

- Fundamentals of Financial Management –Prof. B.V. Raghunandan
- Investment analysis and Portfolio management by Mr. Prasanna
- Chandra – Tata McGraw Hill Education
- In the wonderland of Investment by A.N. Shanbhag & Sandeep Shanbhag, Vision Books India.
- RERA Act.
- Transfer of Property by R.K. Sinha
- Income Tax laws and practice –Mr. H.C. Mehrotra.
- C.A. Girish Ahuja –“Systematic approach to Income Tax” Wolters Kluwer
- Dr.Vinod Singhania – Direct Tax – Taxman Publications

I B.COM. - II SEMESTER

BCMCCE 186 :AGRICULTURAL MARKETING

Hours per week : 2

24 hrs: No of Credits: 1

Unit 1 : Marketing of Agricultural Goods:

6 hrs

Special Problems in the Marketing of Agricultural Goods. Channels of distribution- Wholesale Market, Local market – Functions of the Local Market- Middlemen in the Local Market, Central Markets- Reasons for the growth of Central Markets-Functions of the Central Markets- Middlemen in the Central Markets, Jobbing Markets.

Unit 2: Channels of distribution for Agricultural Consumer Goods:

6 hrs

Selling Directly to Retailers- Selling Directly to Consumers, Channels for Raw Materials. Changes in the Pattern of Marketing of Agricultural Goods- Super Markets, Voluntary and Co-operative Chains, Contract Farming.

Unit3: Marketing of Agricultural Goods agricultural Marketing in India.

4 hrs

Regulated Markets-Main Features of the Regulated Markets- Advantages of the Regulated Markets.

Unit 4: Co-operative Marketing

8 hrs

Objectives-Characteristics of Agricultural Cooperative Marketing Society-Necessary Conditions for the success of a Marketing Co-operative-Organisational Structure- Types of Marketing Co-operatives- How do Marketing Co-operatives do business ?-Advantages of Co-operative Marketing- Problems or Limitations of Co-operative Marketing – Progress of Co-operative Marketing in India- Activities of Co-operative Marketing Societies in India.

Books for reference:

1. Principles of Marketing: J.C. Sinha
2. Marketing And Salesmanship: B.S. Raman

I B.COM. - II SEMESTER

BCMCCE 187 : RETAIL MANAGEMENT

Hours per week : 2

24 hrs :No of Credits: 1

Instruction:

This subject must be explained with the help of case studies

Unit 1: Retail Management:

8 hrs

Introduction- functions of Retailing-Retail management strategy-Retail management activities-Relationship management-Retail Organisation structure-Retailing scene in India.

Unit 2: Drivers of Growth in Retailing Industry:

8 hrs

Strategic Decision in Retail- Location Decision- Target Market Selection- Business Model- Merchandise Mix- Positioning the Retail Store-Wheel or Retailing-Why Wheel of Retailing?-

Unit 3: Contemporary challenges in Retail Industry:

8 hrs

Non-store Retailers- Customer Service- Promotion Decision Global Retailing : Information Technology and Retailing. Emergence of Global Retailing

Books for reference:

1. Marketing Management : Rajan Saxena
2. Marketing Management : V.S Ramaswamy and S. Namakumari
3. Marketing Management : Philip Kotler
4. Marketing Management: Dr. K . Karunakaran

I B.COM. - II SEMESTER
BCMCCE 188 : LOGISTICS MANAGEMENT

Hrs per week : 2

24 hrs :No of Credit: 1

Learning Outcomes:

1. To provide an exposure to the language of logistics
2. To understand the principles and functions of Logistics Management
3. To understand the importance of logistics management in the present market oriented society.

Unit 1: Introduction

5 Hrs

Concept of logistics, objectives, Types of logistics, concept of Logistics management- Logistics Mgt v/s supply chain management.

Unit 2: Components of logistics system:

10 hrs

Demand forecasting, Inventory management, Material storage, Warehousing, logistics packaging, transportation, Customer service

Unit 3: Logistics Information-:

5 Hrs

Meaning, objectives, concept of logistics management system(LIS), principles in designing LIS, application of information technology in Logistics

Unit 4: Logistics Outsourcing:

4 Hrs

Meaning, objectives, benefits of Logistics outsourcing, Issues in logistics outsourcing- Third-Party Logistics(3PL), Fourth-Party Logistics(4PL), Fifth-Party Logistics(5PL), Selection of Logistics Service Provider.

References:

1. Bowersox D.J. , Closs D.J. , Logistical Management, McGraw-Hill, 1996
2. Reguram G, Rangaraj N, Logistics and Supply Chain Management Cases and Concepts, Macmillan India Ltd., New Delhi, 1999.
3. Sahay B S, Supply Chain Management for Global Competitiveness, Macmillan India Ltd., New Delhi.
4. Coyle, Bradi&Longby, The Management of Business Logistics, 3rd Ed., West Publishing Co.
5. Bhattacharya S.K, Logistics Management, S. Chand, 2008
6. Sople V.V, Logistics Management, Pearson, 2012
7. Satish.C. Ailawadi., Rakesh.P. Singh, Logistics Management, PHI, 2012

II B.COM. - III SEMESTER

GROUP III

ELECTIVE: NURTURING STUDENTS PROFICIENCY/SKILLS:

BCMCCE 235 : COMPUTERISED ACCOUNTING

Hours per week : 2

24 hrs :No of Credits: 1

UNIT I: COMPANY CREATION:

5 hrs

Introduction – Tally.ERP 9, Starting Tally, Creating, Selecting, Altering, Closing and Deleting a company.

Accounts Information: Account Groups, Company Features, Ledger Accounts – Creating, displaying, altering and deleting Ledger Accounts. Multiple Ledgers.

UNIT II: INVENTORY INFORMATION:

5 hrs

Stock Groups: Single Stock Group - Creating, displaying, altering and deleting a Single Stock Group. Multiple Stock Groups - Creating, display, altering and deleting Multiple Stock Group.

Stock Categories: Single Stock Category - Creating, displaying, altering and deleting a Single Stock Category. Multiple Stock Categories - Creating, displaying, altering and deleting Multiple Stock Categories.

Units of Measure: Creating, displaying and altering Units of Measure.

Locations/Godowns: Creating a Location, Displaying and Altering Storage Locations.

Stock Items: Creating, displaying and altering a Single Stock Item: Creating, displaying and altering a Multiple Stock Item, Standard Rates for items.

Purchase Orders: Creating, alter and delete a Purchase Order, Receipt Note Voucher for Purchases, Rejections-Out Voucher for Purchase Returns

Sales Order: Creating, altering and deleting Sales Order, Delivery Note Voucher for Sales, Rejections-In Voucher for Sales Returns.

UNIT III: VOUCHER ENTRY

5 hrs

Voucher Types, Steps To Make a Voucher Entry, Receipt Voucher, Payment Voucher, Contra Voucher , Purchase Voucher, Sales Voucher, Journal Voucher, Credit Note, Debit Note, Stock Journal, Physical Stock Voucher, Memorandum Voucher, Reversing Journal. Displaying, altering, deleting and cancelling vouchers, Vat Computation.

UNIT IV: REPORTS

5 hrs

Balance Sheet, Profit And Loss Account, Trial Balance, Stock Summary and Day Book, Account Books.

UNIT V:PAYROLL

4 hrs

Introduction to Payroll Accounting, Steps to generate a Payslip, Creation of Employee Group and Employee, Salary Details, Payroll Reports.

References:

1. Tally.ERP 9 - Vishnu Priya Singh
2. Tally.ERP 9 - Tally Solutions Pvt Ltd.

II B.COM - III SEMESTER

BCMCCE 236 : TAX PROCEDURE AND PLANNING

Hours per week : 2

24 hrs : No of Credits: 1

Learning Objectives:

The objective of this paper is to familiarize the students with the Practical aspects of Income Tax to enhance skills. Hence, this subject is to be taught with reference to the relevant amendments made to Income Tax Laws of India by Finance Acts passed in the Parliament from time to time.

Unit I: Assessment procedure

4 hrs

Types of assessment, Filing of income tax return – persons exemption from filing of returns, types of returns.

Unit II: PAN

4 hrs

Persons expected to apply for PAN, persons must have a PAN, Procedure for obtaining Permanent Account No (PAN) filling and filling of application form no. 49-A.

Unit III: Information Technology and Tax administration:

8 hrs

TAN (Tax Deduction and Collection Account Number), procedure to obtain to TAN, TIN (Tax Information Network), e-TDS/e-TCS. E-filing of ITRS, benefits of e-filing.

Unit IV: Tax Planning and Tax Management

8 hrs

Tax Planning and management, Tax Evasion & Tax Avoidance, Tax Planning for Individuals.

Books for References

1. Direct Taxes, Dr. Vinod K Singhania, Taxmann's Publications.
2. Income Tax Law and Practice, Dr. H.C.Mehrotra and Dr. S.P.Goyal, Sahithya Bhavan Publication.
3. Business Taxation, K. Sadashiva Rao, Sushrutha Publications.
4. Business Taxation, Dr. Ravi M.N., Bhanu Prakash B.E. and Dr. Suman Shetty N., Professional Books Publishers.
5. Direct Tax Laws and International Taxation, T.N. Manoharan et al., Snow White Publications.
6. Practical Approach to Income Tax, Dr. Girish Ahuja and Dr. Ravi Gupta, Wolters Kluwer Publications.
7. Students Guide to Income Tax, Manjusha Goel, Bharath Publications.
8. Students Guide to Income Tax including GST, Dr. Vinod K Singhania and Dr. Monica Singhania, Taxmann's Publications.
9. In the wonderland of Investment, A.N. Shanbhag & Sandeep Shanbhag, Vision Books India.

II B.COM. - III SEMESTER

BCMCCE 237 : PERSONAL INVESTMENT MANAGEMENT

Hours per week : 2

24 hrs : No of Credits: 1

Learning Objective:

To enable the students to acquire basic knowledge and skills in managing personal investment and to understand the basics of investment in financial and capital market.

Unit I: Introduction to Investment: (Theory only)

4 hrs

- 1.1 Savings Vs Investment
- 1.2 Need for Investment
- 1.3 Principles of Investment:
 - 1.3.1 Liquidity
 - 1.3.2 Safety or Security
 - 1.3.3 Profitability or return.
 - 1.3.4 Other Considerations:
 - 1.3.4.1 Tax implications
 - 1.3.4.2 Rate of Interest
 - 1.3.4.3 Inflation.

Unit II: Investment Avenues: (Theory only)

4 hrs

- 2.1 Term deposits
- 2.2 Insurance Policies
- 2.3 Retirement Plans
- 2.4 Real Estate
- 2.5 Gold and Bullion
- 2.6 Stock market securities
- 2.7 Mutual Funds.

Unit III: Investment in Stock Market Securities: (Theory only)

6 Hrs

- 3.1 Meaning of Stock market securities
- 3.2 How to Invest in Stock market
- 3.3 Stock indices: SENSEX, NIFTY.
- 3.4 Risks involved in Stock market investments.
- 3.5 Investor protection –SEBI. (Case Studies)

Unit IV: Investment in Mutual Funds: (Theory only)

6 Hrs

- 4.1 Meaning of Mutual Funds
- 4.2 Types/classification of Mutual Funds
- 4.3 How to Invest in Mutual Funds
- 4.4 Net Asset Value
- 4.5 Benefits of Mutual Fund Investment (Case Studies)

Unit V: Personal Investment Planning (Theory only)

4 Hrs

- 5.1 Personal Financial Planning (Case Studies)
- 5.2 Personal Investment Planning (Case Studies)

Suggested Readings:

1. Rustogi, R.P., Fundamentals of Investment, Sulthan Chand & Sons, New Delhi
2. Chandra, Prasanna, Investment Analysis and Portfolio Management. Tata McGraw Hill Publishing Limited.
3. Bhalla V K, Investment Management, S Chand, New Delhi
4. Avadhani V A, Securities Analysis and Portfolio Management, Himalaya publishing House, New Delhi
5. “Stock Market Book”, Dalal Street Journal
6. The Layman’s guide to Mutual Funds, Outlook Publishing(India) Pvt Ltd.
7. In the wonderland of Investment, A.N. Shanbhag & Sandeep Shanbhag, Vision Books India.

II B.COM. - III SEMESTER

BCMCCE 238 : LIFE SKILLS

Hours per week : 2

24 hrs : No of Credit: 1

INSTRUCTIONS:

This Subject is purely practical in nature and involves activities both inside and outside the classroom. Teachers are encouraged to teach the subject on activity basis.

LEARNING OUTCOMES:

1. It will encourage young minds to think and develop as a wholesome person with a blend of creative ideas & critical thinking.
2. It will make the learner a very confident individual who is ready to face challenges put forward by the society.
3. It will help the learner decide on his/her career and become an achiever in life.

Unit 1: Developing Self and Enriching Ones Abilities

5 hours

Self-Awareness, Effective Communication (including Etiquette), Interpersonal Skills, Presentation Skills & Empathy

Unit 2: Managing Self and Stress Free Living:

4 hours

Time Management: Relevance & Techniques – Urgency and Importance Matrix and Time Logs.

Stress Management - Concept and relevance of stress and Stress Management, types of stress, Stress Management Techniques and Tips to avoid stress

Impact of emotions on problem solving and decision making

Unit 3: Thinking and Decision Making:

8 hours

Critical Thinking – Case Studies and Critical Thinking exercises

Creative and Logical Thinking activities - Brain Teasers, Sudoku, Puzzles and Logics

Decision Making techniques - Brain storming, Reverse Brainstorming, Fish Bone Analysis and Worst Case Scenario technique.

Unit 4: Working in Teams and conflict management:

7 hours

Team Building - Relevance, characteristics of an effective team (PERFORM Concept) & Team Building activities.

Conflict management – Role plays depicting real life scenarios.

Books for Reference & Activities:

1. Multiple Intelligences: New Horizons – Howard Gardner, Basic Books.com, New York.
2. The 7 Habits of Highly Effective People – Stephen R Covey, Pocket Books, New York.
3. You're Hired! How To Get That Job And Keep It Too – Nasha Fitter, Penguin books, India.
4. Corporate Grooming and Etiquette – Sarvesh Gulati, Rupa Publications, New Delhi.
5. How to Win Friends & Influence People – Dale Carnegie, India Book Distributors, Mumbai.

6. What The CEO Really Wants From You – R GopalKrishnan, HarperCollins publishing House, UK.
7. Jonathan Livingston Seagull, a story – Richard Bach, HarperCollins publishing House, UK.
8. 101 More Training Games – Gary Kroehnert, Tata McGraw Hill.
9. One Minute Manager Series – Ken Blanchard Et al, HarperCollins publishing House, UK.

Videos:

1. TEAM Games: <https://youtu.be/rq0UkuSei7Q>
2. 25 etiquette Rules you should know and Follow: <https://youtu.be/k1PVUa2TPaA>
3. Table manners 101: Basic Dinning Etiquette: <https://youtu.be/FDGGv7z5r2c>
4. Time & Stress Management games:
<https://youtu.be/zN89P0tWHIA>
https://youtu.be/fVOy7gV-s_g
<https://youtu.be/lZyGbE8UghA>
5. Empathy games: Videos of Meir Kay on Empathy and Anger Management
<https://youtu.be/2Lhl9BrRtwE>
<https://youtu.be/ujle1t4ZWl4>
<https://youtu.be/gYH0D52fXe8>
6. Communication games:
 Listening Game: https://youtu.be/c2txkdNIQ_8
<https://youtu.be/oTpXlpxFoBl>
 Non-verbal Communication: https://youtu.be/FH_7F3KI8YG
 Developing Communication Skills: <https://youtu.be/srn5jgr9Tzo>
7. Emotion management games: <https://youtu.be/SPAVcENGOWY>

II B.COM. - IV SEMESTER

GROUP IV

ELECTIVE: Enabling an exposure to some other discipline & domain:

BCMCCE 285: BASIC ACCOUNTING

Hours per week : 2

24 hours : No of Credits: 1

Unit I: Nature of Accounting.	6
Unit II: Accounting Process and Preparation of Trial Balance	6
Unit III: Preparation of three column cash book.	6
Unit IV: Preparation of Final Accounts of Sole Trader.	6

References:

1. Advanced Accounting Shukla M.C., Grewal T.S.
2. Advanced Accounting Gupta R.L.
3. Advanced Accounting Jain & Narang
4. Advanced Accounting Maheswari S.W. & Maheshwari S.K.
5. Advanced Accounting B.S.Raman
6. Advanced Accounting Basu & Das

II B.COM. - IV SEMESTER

BCMCCE 286 : PERSONAL TAXATION

Hours per week : 2

24 hrs : No of Credits: 1

Learning Objectives:

The objective of this paper is to familiarize the students with the Legal Provisions and Practical aspects of Income Tax. Hence, this subject is to be taught with reference to the relevant amendments made to Income Tax Laws of India by Finance Acts passed in the Parliament from time to time.

Unit I: Introduction

04 Hours

Meaning of Tax, Salient features of Indian Tax System. Types of Tax – Direct and Indirect taxes.

Unit II: Definitions

04 Hours

Assessee - person- assessment year and previous year, residential status, Agricultural Income, Partial integration of Agricultural Income with Non-agricultural Income- Gross Total Income- Taxable Income (also known as Total Income) –Permanent Account Number (PAN)- Income tax rate of relevant assessment year for individual assessee.

Unit III: Basic knowledge of various heads of Income

08 Hours

Various heads of Income in brief, Assessment of Individuals (Income from salary and Income from other sources). Simple problems on computation of Gross Total Income.

Unit IV: Deduction U/S 80

08 Hours

80C, 80CCC, 80CCD, 80CCG, 80D, 80E, 80G, 80TTA and 80U. Tax Slab and Tax Rates. Simple problems on Computation of Taxable Income and Tax Liability.

Books for Reference:

1. Income Tax Law and Practice, Dr. H.C.Mehrotra and Dr. S.P.Goyal, Sahithya Bhavan Publication.
2. Business Taxation, K. Sadashiva Rao, Sushrutha Publications.
3. Business Taxation, Dr. Ravi M.N., Bhanu Prakash B.E. and Dr. Suman Shetty N., Professional Books Publishers.
4. Direct Tax Laws and International Taxation, T.N. Manoharan et al., Snow White Publications.
5. Practical Approach to Income Tax, Dr. Girish Ahuja and Dr. Ravi Gupta, Wolters Kluwer Publications.

II B.COM. - IV SEMESTER

BCMCCE 287 : PERSONAL INVESTMENT MANAGEMENT

Hours per week : 2

24 hrs : No of Credits: 1

Learning Objective:

To enable the students to acquire basic knowledge and skills in managing personal investment and to understand the basics of investment in financial and capital market.

Unit I: Introduction to Investment:

4 hrs

- 1.1 Savings Vs Investment
- 1.2 Need for Investment
- 1.3 Principles of Investment:
 - 1.3.1 Liquidity
 - 1.3.2 Safety or Security
 - 1.3.3 Profitability or return.
 - 1.3. 4 Other Considerations:
 - 1.3.4.1 Tax implications
 - 1.3.4.2 Rate of Interest
 - 1.3.4.3 Inflation.

Unit II: Investment Avenues:

4 hrs

- 2.1 Term deposits
- 2.2 Insurance Policies
- 2.3 Retirement Plans
- 2.4 Real Estate
- 2.5 Gold and Bullion
- 2.6 Stock market securities
- 2.7 Mutual Funds.

Unit III: Investment in Stock Market Securities:

6 Hrs

- 3.1 Meaning of Stock market securities
- 3.2 How to Invest in Stock market
- 3.3 Stock indices: SENSEX, NIFTY.
- 3.4 Risks involved in Stock market investments.
- 3.5 Investor protection –SEBI. (Case Studies)

Unit IV: Investment in Mutual Funds:

6 Hrs

- 4.1 Meaning of Mutual Funds

- 4.2 Types/classification of Mutual Funds
- 4.3 How to Invest in Mutual Funds
- 4.4 Net Asset Value
- 4.5 Benefits of Mutual Fund Investment (Case Studies)

Unit V: Personal Investment Planning

4 Hrs

- 5.1 Personal Financial Planning (Case Studies)
- 5.2 Personal Investment Planning (Case Studies)

Suggested Readings:

1. Rustogi, R.P., Fundamentals of Investment, Sulthan Chand & Sons, New Delhi
2. Chandra, Prasanna, Investment Analysis and Portfolio Management. Tata McGraw Hill Publishing Limited.
3. Bhalla V K, Investment Management, S Chand, New Delhi
4. Avadhani V A, Securities Analysis and Portfolio Management, Himalaya publishing House, New Delhi
5. “Stock Market Book”, Dalal Street Journal
6. The Layman’s guide to Mutual Funds, Outlook Publishing(India) Pvt Ltd.
7. In the wonderland of Investment, A.N. Shanbhag & Sandeep Shanbhag, Vision Books India.

II B.COM. - IV SEMESTER

BCMCCE 288 : BANKING PRACTICES

Hours per week : 2

24 hours : No of Credits: 1

Learning objectives:

1. To highlight the practical Banking skills to the students.
2. To give an idea of recent trends in Banking.
3. To enhance the knowledge of Digital Banking Concepts.

Unit 1: Basics of Banking:

4 hrs

Banking – Meaning & Definitions

Procedure for Opening Bank Accounts (with reference to S.B a/c)

Procedure for applying loans – CIBIL

PMJDY – Features

Unit 2: Delivery Channels:

6 hrs

ATM – Phone Banking – Internet Banking – Mobile Banking- MICR- Electronic Clearings- Payment Gateways – Card Technologies.

Unit 3: Inter- Bank Payment Systems:

6 hrs

NEFT –RTGS- Negotiated Dealing systems and Securities Settlement Systems – Electronic Money – E cheques –IMPS.

Unit 4: Banking Operations:

8 hrs

Negotiable Instruments – Features – cheques- Demand Drafts – Endorsement – Crossing – Dishonour of Cheques.

Books for Reference:

1. Vasudeva : E- Banking, Common Wealth Publishers , New Delhi.
2. Bank Technology : Indian Institute of Bankers Publication.

ANNEXURE –I

B. Com Question Paper Pattern (Core Course) Total 120 marks

PART A

Answer **Any Four** of the following. Each question carries 6 marks 6X4 = 24

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....

PART B

Answer **Any Four** of the following. Each question carries 12 marks 12X4 = 48

- 7.....
- 8.....
- 9.....
- 10.....
- 11.....
- 12.....

PART B

Answer **Any Two** of the following. Each question carries 24 marks 24X2 = 48

- 13.....
- 14.....
- 15.....
- 16.....

ANNEXURE –II

B. Com Question Paper Pattern (Core Course) Total 80 marks

PART A

Answer **Any Four** of the following. Each question carries 4 marks 4X4 = 16

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....

PART B

Answer **Any Four** of the following. Each question carries 8 marks 8X4 = 32

- 7.....
- 8.....
- 9.....
- 10.....
- 11.....
- 12.....

PART B

Answer **Any Two** of the following. Each question carries 16 marks 16X2 = 32

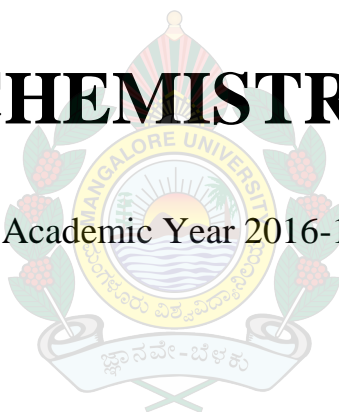
- 13.....
- 14.....
- 15.....
- 16.....

Mangalore University
Department of Studies in Chemistry
M. Sc. Degree Programmes
(CHOICE BASED CREDIT SYSTEM – SEMESTER SCHEME)

Syllabi for M.Sc., Courses in

CHEMISTRY

(From the Academic Year 2016-17 onwards)



Mangalore University
M. Sc. Degree Programme in Chemistry:
CHOICE BASED CREDIT SYSTEM (CBCS) SEMESTER SCHEME

COURSE PATTERN AND SCHEME OF EXAMINATION

(Year 2016-2017 onwards)

PREAMBLE

Revision of Syllabi for the Two years Master Degree (Choice Based Credit System-Semester Scheme) Programmes in Chemistry, Applied Chemistry, Organic Chemistry and Analytical Chemistry.

PG BOS in Chemistry has revised and prepared the Syllabi (CBCS based) for all the Four Courses -Chemistry, Applied Chemistry, Organic Chemistry and Analytical Chemistry in its meeting held on 24th July 2014 and the University implemented it from the same academic year. Now the University has asked the PG BOS in Chemistry to revise the syllabi by giving certain Guidelines (Ref:-No: MU/ACC/CR.38/ CBCS (PG)/2015-16 dt.05-05-2016 bse on UGC letter) for all the four Courses (Programmes) to offer Hard Core, Soft Core and Open Elective courses with credits to each course amounting to 92 credits for the entire programme.

Accordingly, the PG BOS in Chemistry prepared the syllabi for all the four programmes. It has prepared course pattern by proposing 12 Hard Core theory courses (3 in each semester) and 5 practical courses (in 3rd and 4th semester), one Project work (in 4th Semester with 4 credits) with a provision to have One Project Work in lieu of one of the practicals in 4th semester in each programme with 3 credits each (project work - 4 credits) with total of **55 Credits**). BOS is offering 3, 2, 2 and 3 (Total 10 courses) Soft core courses respectively in 1st, 2nd, 3rd and 4th semesters of a programme. Student shall opt any 2, 1, 1 and 2 (Total 6 courses) courses respectively in 1st, 2nd, 3rd, 4th Semesters. All the soft core courses are of 3 credits. Programme consists of 6 Soft Core practical courses (3 courses each in 1st and 2nd semesters of the Programme with 2 credits each) with a total of **30 credits** (6 theory x 3 credits + 6 practicals x 2 credits). BOS has also proposed 2 open electives (1 each in 2nd & 3rd Semesters of the programme) with 3 credits each (**6 credits**). All together **total credits** come to 91 from teaching. I have prepared a draft course pattern by considering all the points mentioned in the above said letter from the Registrar and placing it before the BOS meeting.

Detailed syllabi for 1st and 2nd Semesters are prepared and enclosed, whereas the syllabi for the 3rd and 4th Semesters will be prepared in forthcoming BOS meeting.

Course/credit pattern:

Semester Credits	Hard Core(H)(T)	Soft Core (S)(T)	Elective E)(T)	Practical	Tutorial	Total Credits
First	9	6	--	6 (S)	--	21
Second	9	3	3	6 (S)	--	21
Third	9	3	3	9 (H)	--	24
Fourth	9	6	--	10(H)	--	25
Total	36	18	6*	12(S) + 19(H)	--	91

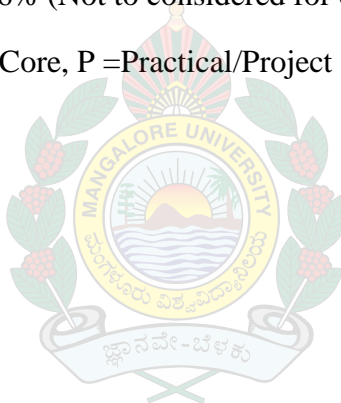
Total Credits from all the Four Semesters (1st, 2nd, 3rd and 4th) : 21+21+24+25 = 91

Total Hard Core credits = 36 (T) + 19 (P) = 55 = 60.4%

Total Soft Core credits = 18 (T) + 12(P) = 30 = 33.0%

*Open Elective Credits = 6 = 6.6% (Not to considered for calculating the

CGPA) H= Hard Core, S= Soft Core, P =Practical/Project



Consolidated Course code and title
Programme: M.Sc. in Chemistry

1st Semester

2nd Semester

Course Code	Course Title	Course Code	Course Title
CH H 401	Inorganic Chemistry	CH H 451	Advanced Inorganic Chemistry
CH H 402	Organic Chemistry	CH H 452	Advanced Organic Chemistry
CH H 403	Physical Chemistry	CH H 453	Advanced Physical Chemistry
CH S 404 Or CH S 405	Inorganic Spectroscopy and Analytical Techniques Or Environmental Chemistry	CH S 454 Or CH S 455	Organic Spectroscopic Techniques Or Chemistry of Bio-molecules
CH S 406	Molecular Spectroscopy and Diffraction Techniques	CH E 456	Environmental, Electro- and Polymer Chemistry
CH P 407	Inorganic Chemistry Practicals-1	CH P 457	Inorganic Chemistry Practicals-II
CH P 408	Organic Chemistry Practicals-1	CH P 458	Organic Chemistry Practicals-II
CH P 409	Physical Chemistry Practicals-1	CH P 459	Physical Chemistry Practicals-II

3rd Semester

4th Semester

CH H 501	Coordination Chemistry	CH H 551	Bioinorganic Chemistry
CH H 502	Organic Reaction Mechanism and Heterocyclic Chemistry	CH H 552	Organic Synthetic Methods
CH H 503	Solid State Chemistry	CH H 553	Electrochemistry and Reaction Dynamics
CH S 504 Or CH S 505	Medicinal & Natural Product Chemistry Or Bioorganic Chemistry	CH S 554	Organometallic Chemistry
CH E 506	Analytical and Green Chemistry	CH S 555 Or CH S 556	Polymer Chemistry Or Nuclear, Radiation & Photochemistry
CH P 507	Inorganic Chemistry Practicals-III	CH P 557	Inorganic Chemistry Practicals-IV
CH P 508	Organic Chemistry Practicals-III	CH P 558	Physical Chemistry Practicals-IV
CH P 509	Physical Chemistry Practicals-III	CH P 559	Project Work & Dissertation

Detailed distribution of Course &Credits:

Programme: **Chemistry:**

1st Semester

Course Code	Course Title	No of UNITs	Evaluation IA + Exam	Teaching hr week Sem	Exam Hrs	Credits
CH H 401	Inorganic Chemistry	3	30 + 70	3 45	3	3
CH H 402	Organic Chemistry	3	30 + 70	3 45	3	3
CH H 403	Physical Chemistry	3	30 + 70	3 45	3	3
CH S 404 Or CH S 405	Inorganic Spectroscopy and Analytical Techniques Or Environmental Chemistry	3 3	30 + 70 30 + 70	3 36 3 36	3	3
CH S 406	Molecular Spectroscopy and Diffraction Techniques	3	30 + 70	3 36	3	3
CH P 407	Inorganic Chemistry Practicals-1	4 Hrs	30 + 70	4	4	2
CH P 408	Organic Chemistry Practicals-1	4 Hrs	30 + 70	4	4	2
CH P 409	Physical Chemistry Practicals-1	4 Hrs	30 + 70	4	4	2

Total credits from 1st Semester: **21** (Hard Core-9, Soft Core-12)

2nd Semester

Course Code	Course Title	No of UNITs	Evaluation IA+ Exam	Teaching hr week Sem	Exam Hrs	Credits
CH H 451	Advanced Inorganic Chemistry	3	30 + 70	3 45	3	3
CH H 452	Advanced Organic Chemistry	3	30 + 70	3 45	3	3
CH H 453	Advanced Physical Chemistry	3	30 + 70	3 45	3	3
CH S 454 Or CH S 455	Organic Spectroscopic Techniques Or Chemistry of Bio-molecules	3 3	30+70 30 + 70	3 36 3 36	3	3
CH E 456	Environmental, Electro- and Surface Chemistry	3	30 + 70	3 36	3	3
CH P 457	Inorganic Chemistry Practicals-II	4 Hrs	30 + 70	4	4	2
CH P 458	Organic Chemistry Practicals-II	4 Hrs	30 + 70	4	4	2
CH P 459	Physical Chemistry Practicals-II	4 Hrs	30 + 70	4	4	2

3rd Semester

Course Code	Course Title	No of UNITS	Evaluation IA +Exam	Teaching hr week Sem	Exam Hrs	Credits
CH H 501	Coordination Chemistry	3	30 + 70	3 45	3	3
CH H 502	Organic Reaction Mechanism and Heterocyclic Chemistry	3	30 + 70	3 45	3	3
CH H 503	Solid State Chemistry	3	30 + 70	3 45	3	3
CH S 504 Or CH S 505	Medicinal & Natural Product Chemistry Or Bioorganic Chemistry	3 3	30 + 70 30 + 70	3 36 3 36	3	3
CH E 506	Analytical & Green Chemistry	3	30 + 70	3 36	3	3
CH P 507	Inorganic Chemistry Practicals-III	6 Hrs	30 + 70	6	6	3
CH P 508	Organic Chemistry Practicals-III	6 Hrs	30 + 70	6	6	3
CH P 509	Physical Chemistry Practicals-III	6 Hrs	30 + 70	6	6	3

Total Credits = **24** (Hard Core-18, Soft Core-3 and Elective-3)

4th Semester

Course Code	Course Title	No of UNITS	Evaluation IA + Exam	Teaching hr week Sem	Exam hrs	Credits
CH H 551	Bioinorganic Chemistry	3	30 + 70	3 45	3	3
CH H 552	Organic Synthetic Methods	3	30 + 70	3 45	3	3
CH H 553	Electrochemistry and Reaction Dynamics	3	30 + 70	3 45	3	3
CH S 554	Organ metallic Chemistry	3	30 + 70	3 36	3	3
CH S 555 Or CH S 556	Polymer Chemistry Or Nuclear, Radiation & Photochemistry	3 3	30 + 70 30 + 70	3 36 3 36	3	3
CH P 557	Inorganic Chemistry Practicals -IV	6 Hrs	30 + 70	6	6	3
CH P 558	Physical Chemistry Practicals -IV	6 Hrs	30 + 70	6	6	3
CH P 559	Project Work & Dissertation	8 Hrs	30 + 70	8	--	4

Total Credits = **25** (Hard Core-18, Soft Core-6 + Seminar- 1)

Total Credits: 21+21+24+25 = 91.

Question Paper Setting:

A. BASIS FOR INTERNAL ASSESSMENT: Internal assessment marks in theory papers shall be based on two tests. The tests may be conducted 8 and 14 weeks after the start of a semester. Average of two test marks will be considered as internal assessment marks. Practical internal assessment marks shall be based on test and records. 20 marks for experiment and 10 marks for record. The practical tests may be conducted 12 weeks after the start of a semester. Internal Assessment marks on Project work-Dissertation is based on two seminars of 45 minutes duration each carrying 15 marks. The Seminar is to be delivered in 3rd semester on the subject and 4th semester on their project work.

B. THEORY QUESTION PAPERS PATTERN: The Syllabus of each hard core course shall be grouped into three UNITS of 15 teaching hours and that of soft core and open Elective shall be of three UNITS of 12 teaching hours. Question Papers in all the four semesters shall consist of Two Parts- Part A and Part-B. Part A shall contain Nine (09) very short answer objective type questions carrying 2 marks each, drawn equally from all the three UNITS of the syllabus. All the nine subdivisions are to be answered. Part B shall contain Six (06) brief and/or long answer questions carrying 13 marks each drawn from all the three UNITS of the syllabus (2 questions per UNIT). There may be a maximum of three sub-divisions per question, carrying 3 or more marks per sub-division. Four (04) out of Six (06) questions are to be answered.

C. PRACTICAL EXAMINATION PATTERN: Practical Examination course papers out of 70 marks 15 marks shall be allotted for Viva voce and 55 marks for practical proper. In the 4th semester there shall project work/dissertation in lieu of one of the practicals for all the programmes (Chemistry, Applied Chemistry, Organic Chemistry and Analytical Chemistry) consisting of 70 marks. The Project work may be conducted either in the department or in an Institution or Industry. Project report shall be valued for 70 marks.

OBJECTIVES OF THE SYLLABUS

The revised syllabus is designed to provide a flexible structure within which students can choose the topic of their interest in addition to a specific knowledge. The syllabus takes into account the requirements for higher education to improve the quality of education and student competency level on par with national and international institutions. The syllabus is structured in such a way so as to ensure that students become aware of the practical applications of scientific knowledge to build careers in the scientific field.

The syllabus aims to enable students to:

- Prepare the students for employment and for further studies by acquiring the knowledge and understanding of chemical principles.
- Appreciate, understand and use the scientific method in the solving of problems. Develop the ability to disseminate chemical information effectively.
- Acquire good laboratory skills and practice safety measures when using equipment and chemicals as well as the safe disposal of chemical waste.
- Apply chemical knowledge to everyday life situations and develop inquisitiveness in order to continue the search for new ways in which the resources of our environment can be used in a sustainable way.

PROGRAMME OUTCOMES

- Master of Science in Chemistry basically aims at the training of students with a detailed knowledge base in Chemistry of potential utility in academia as well as Industry through advanced course work and laboratory work in the department and a project work in industries or premier institutions.
- To qualify NET/GATE/SET/Civil Services and other competitive examinations.
- For exploring global level research opportunities for doctoral and post-doctoral studies.
- For professional employment in different domains such as academics, industries, analytical laboratories, scientific organizations, entrepreneurship, administrative positions etc.
- For enhancing the connectivity between academic and industrial institutions.

PROGRAMME SPECIFIC OUTCOMES

- Students will equip themselves with up-to-date knowledge in the field of frontier areas of chemistry.
- Attain confidence to take up R & D positions in teaching, higher education institutions, public sector & private companies.
- Get motivated to take up higher studies.
- Will be able to use their knowledge in day to day life and work for betterment of society.
- Understand the social responsibility of chemistry in educating general public about protection of environment against pollution.
- Knowledge & Confidence to clear nation level competitive examinations.
- To make use of the chemistry knowledge to analyze real samples like food samples, biological samples, pharmaceutical products and environmental samples.
- To propose/develop most effective and novel methods of synthesis of bioactive compounds/ nanomaterials and in turn to design target oriented drugs to treat different diseases.
- To propose/develop simple and accurate analytical methods as alternatives for the existing standard/official methods for the analysis of complex matrices/clinical samples.
- To develop energy storage materials and fuel cells.

FIRST SEMESTER

CH H 401: INORGANIC CHEMISTRY

COURSE OUTCOMES:

- Students will learn the basics of ionic and covalent bonding, lattice energy, hydration energy,
- This course enables the students to understand VSEPR theory and MOT theory.
- This course will Enlighten the students to understand Noble gas chemistry, Graphitic compounds, HSAB Concept,
- Theories of redox indicators and sampling techniques.

UNIT- I:

[15 Hours]

Ionic bond: Properties of ionic substances, coordination number of an ion, structures of crystal lattices- NaCl, CsCl, ZnS and rutile. Lattice energy- Born Lande equation, Born-Haber cycle, Uses of Born-Haber type of calculations. Ionic radii, methods of determining ionic radii, factors affecting ionic radii, radius ratio rule, covalent character in ionic bonds, hydration energy and solubility of ionic solids.

Covalent bond: valence bond theory, resonance, hybridisation, Bent's rules and energetics of hybridization, Deduction of molecular shapes – VSEPR theory.

M.O.theory, application to homo- and hetero-diatomic and -triatomic molecules.

UNIT -II:

[15 Hours]

Alkali and alkaline earth metal complexes of crown ethers, cryptands and calixarenes and their biological significance.

Halogens and Noble gas chemistry –interhalogens, psuedohalogens, polyhalide ions, oxyhalogen species, xenon oxides and fluorides. Oxy- and peroxy acids of N, P and S.

Graphitic compounds, carbides, pure silicon, silica and silicates, zeolites.

HSAB concept. super acids. Reactions in non-aqueous media: Liquid ammonia, anhydrous sulphuric acid, glacial acetic acid, anhydrous HF, bromine trifluoride, liquid sulphur dioxide and dinitrogen tetroxide. Reactions in molten salts.

UNIT- III:

[15 Hours]

Precipitation phenomena: precipitation from homogeneous solutions, organic precipitants in inorganic analysis. Solvent extraction of metal ions, nature of extractant, distribution law, partition coefficients, types of extractions and applications.

Theories of redox indicators, titration curves, feasibility of redox titrations.

Chelometric titrations- titration curves with EDTA, feasibility of EDTA titrations, indicators for chelometric titrations, selective masking and demasking techniques, industrial applications of masking.

Sampling techniques, preparation of samples for analysis. Nature of errors, statistical treatment of errors, the t- and F-tests, significant figures, rejection of data.

REFERENCES:

1. J.E Huheey, Keiter, Keiter and Medhi: Inorganic Chemistry (4th ed.), Pearson Education, 2006.
2. Shriver, Atkins and Langford: Inorganic Chemistry (3rdedn.) OUP, 1999.
3. J.D. Lee: Concise Inorganic Chemistry, (5thedn.) Blackwell Science, 2000.
4. B.E. Douglas, D. McDaniel & A Alexander: Concepts & Models of Inorganic Chemistry, Wiley 2001
5. W.W. Porterfield: Inorganic chemistry – A Unified Approach, Elsevier, 2005.
6. R.A. Day and A.L. Underwood: Quantitative Analysis, 5th Ed. (Prentice Hall, India), 1998.



CH H 402: ORGANIC CHEMISTRY

COURSE OUTCOME:

- Enable the students to learn the bonding in organic systems, various aspects of aromaticity, electronic effects, acidity and basicity of organic compounds.
- To gain knowledge on methods of determination of reaction mechanism, various reaction intermediates and aliphatic nucleophilic substitution reactions.
- To understand the detailed aspects of optical and geometrical isomerism.

UNIT-I:

[15 Hours]

Bonding in organic systems: Theories of bonding-Valence and molecular orbital approaches. Resonance, hyper-conjugation and tautomerism, Huckel molecular orbital theory and its application to simple systems- ethylene, allyl, cyclopropyl, butadienyl, cyclopentadienyl, pentadienyl, hexatrienyl, heptatrienyl systems. Calculation of the total energy and M.O. coefficients of the systems. 5 hrs

Aromaticity: Concept of aromaticity, Huckel's rule, Polygon rule, Homo-aromatic, non aromatic and anti-aromatic systems. Aromaticity in benzenoid and non-benzenoid molecules. Annulenes & hetero-annulenes. Physical methods to study aromaticity-UV, IR & ^1H NMR. 4 hrs

Bonds weaker than covalent: Addition compounds, crown ether complexes, cryptands, inclusion compounds, catenanes, fluxional molecules. 3 hrs

Structure and reactivity: Effects of hydrogen bonding, resonance, inductive and hyperconjugation on strengths of acids and bases. 3 hrs

UNIT-II:

[15 Hours]

Methods of Determining Reaction Mechanism: Kinetic and non-kinetic methods, Identification of products, detection of intermediates, isotopic labelling, stereo chemical evidences, cross-over experiments, Limitation of reactions, kinetic evidences and kinetic isotopic effects. 5 hrs

Reaction Intermediates: Generation, structure, stability, reactivity, detection, trapping and reactions of classical and non-classical carbocations, carbanions, free radicals, carbenes, nitrenes and arynes. Singlet oxygen-generation and reactions with organic molecules. 5 hrs

Aliphatic Nucleophilic Substitution Reactions: Mechanism and scope of aliphatic nucleophilic substitution reactions- $\text{S}_{\text{N}}1$, $\text{S}_{\text{N}}2$ and $\text{S}_{\text{N}}i$. Stereochemistry of nucleophilic substitution reactions, allylic nucleophilic substitution reactions, Walden inversion, neighbouring group participation & anchimeric assistance. Factors influencing the rates of nucleophilic substitution reactions. 5 hrs

UNIT-III: Stereochemistry

[15 Hours]

Optical Isomerism: Conformation and configuration of molecules, projection formulae, Fischer, Saw-horse, Newman and Flying wedge representations. Interconversion of these formulae. Absolute configuration (D,L) and (R,S) systems. Elements of symmetry, Psedoasymmetric centres, chirality, molecules with more than one chiral centre, threo and

erythro isomers, methods of resolution, stereospecific and stereoselective synthesis, asymmetric synthesis, Cram's and Prelog's rules. Optical activity in the absence of chiral carbon-biphenyls, allenes and spiranes. Conformational analysis of cycloalkanes and decalins. Effect of conformation on reactivity. Acyclic & cyclic systems-Substituted cyclohexanes, cyclohexanones, cyclohexanols, Curtin-Hammet Principle. Stereochemistry of compounds containing nitrogen, sulphur and phosphorus. 12 hrs

Geometrical Isomerism: Cis-trans isomerism resulting from double bonds, monocyclic compounds & fused ring systems. E,Z-notations, determination of configuration of geometrical isomers, syn & anti isomers. 3 hrs

REFERENCES:

1. Organic Chemistry-P.Y. Bruice (Pearson Education Pvt. Ltd. New Delhi) 2002.
2. Stereochemistry, Conformation and Mechanism-P.S. Kalsi (Wiley Eastern, New Delhi) 1993.
3. Stereochemistry of Carbon Compounds-E.L. Eliel (Tata McGraw Hill, New Delhi) 1994.
4. Advanced Organic Chemistry-Reactions, mechanisms & structure-J. March (Wiley, NY) 2000.
5. Organic Chemistry-Vol. -1, 2 & 3-Mukherji, Singh and Kapoor. (Wiley Eastern) 1994.
6. A guide book of mechanisms in Organic Chemistry-P. Sykes (Orient- Longman) 1985.
7. Organic Chemistry-R.T. Morrison and R.N. Boyd (Prentice Hall, New Delhi) 1994.
8. Organic Chemistry 4th Edn.-S.H. Pine et al (McGraw-Hill, London) 1987.
9. Advanced Organic Chemistry- R.A. Carey and R.J. Sundberg (Plenum, New York) 1990.
10. Modern Concepts of Advanced Organic Chemistry-R.P. Narein (Vikas, Delhi) 1997.
11. A Text book of Organic Chemistry-Tewari, Vishnoi and Mehrotra (Vikas, New Delhi) 1998.
12. A Text book of Organic Chemistry-3rd Edn.-R.K. Bansal, (New Age, New Delhi) 1997.
13. Organic Chemistry-3rd Edn- F.A. Carey (Tata McGraw Hill, New Delhi) 1996.
14. Stereochemistry by K. Mislow.
15. Organic Chemistry-H. Pine (Hendrickson, Cram and Hammond, McGraw Hill, New York) 1987.
16. Organic Chemistry-I.L. Finar (ELBS Longmann, Vol. I) 1984.

CH H 403: PHYSICAL CHEMISTRY

COURSE OUTCOME:

- To understand the theoretical basis of catalysis, corrosion and various complex reactions which find relevance in biological processes and are of industrial importance.
- The students are introduced to the modern techniques developed for the practical applications of these concepts in different areas of science and technology.
- This course will enable the students to handle issues related to corrosion in the day to day life and in industrial reactors; enzyme mediated reactions in biochemistry, biotechnology and pharmaceutical chemistry etc.

UNIT-I: Catalysis

[15hours]

Catalysis: Homogeneous Catalysis—equilibrium and steady state treatments, activation energies of catalysed reactions. Acid - base catalysis (general and specific), protolytic and prototropic mechanisms, catalytic activity and acid strength measurements. Kinetics of enzyme catalysed mechanisms – Michaelis – Menten mechanism. Effect of pH, temperature and inhibitors. 6hrs.

Acidity functions: Hammett acidity function, Zucker–Hammett hypothesis, and Bunnett hypothesis. 2hrs

Surface Chemistry: A review of adsorption isotherms, uni- and bi- molecular reactions. Multilayer adsorption: BET equation – application in surface area determination. Harkin – Jura equation and application. Semiconductor catalysis, n- & p- type. Mechanism of surface reactions. Langmuir – Hinshelwood and Langmuir Rideal mechanisms. 7hrs

UNIT – II

[15 hours]

Chemical Kinetics:

Composite reactions: Rate equation for composite reaction mechanisms (simultaneous and consecutive reactions, steady state treatment, rate determining steps and microscopic reversibility), Chain reactions (hydrogen-halogen reactions with comparison). Auto catalytic reactions (Hydrogen-Oxygen reaction) and Oscillatory reactions. 6hrs.

Reactions in solution: Solvent effects on the reaction rates, Factors determining reaction rates in solution, reaction between ions (effect of dielectric constant and ionic strength), substitution and correlation effects (Hammett and Taft equations-linear free energy relations.) Ion-dipole and dipole-dipole reactions (Pre exp factors and influence of ionic strength) and diffusion controlled reactions. 4 hrs.

Fast reactions-Introduction, Study of fast reactions by-flow, relaxation, molecular beam, and spectroscopic and analytical methods. 3hrs.

Theory of reaction rates- Temperature dependence and the Arrhenius theory of reaction rates, collision theory of bimolecular reactions, its importance and limitations. Introduction to transition state theory. 2hrs.

UNIT-III

[15hours]

Electrochemistry of solutions: Ionic atmosphere-introduction, derivation and its effect on the theory of conductivity. Walden's rule. Debye-Huckel limiting law (DHL), its modification and verification. Bjerrum theory of ion association, triple ion formation and its significance.

4hrs.

Corrosion: Introduction, Importance and principles, Forms of corrosion (Galvanic, Atmospheric, stress, microbial and soil). Techniques of Corrosion rate measurement (instrumental and non-instrumental). EMF series & galvanic series and their limitations. Thermodynamics (Pourbaix diagram). Concept of mixed potential theory and its importance in terms of Kinetics (Tafel and Evans diagram), effect of oxidizer and passivity of corrosion. Protection against corrosion (Design improvement, Anodic and cathodic protection, inhibitors, coating).

6 hrs

Analytical Applications of Electrochemistry -Principles and Applications of Polarography, Cyclic voltammetry, Coulometry, Amperometry and chrono systems.

5hrs

REFERENCES

1. Chemical Kinetics, K. J. Laidler, Pearson Education, An and Sons (India) 3rd ed., 2008.
2. Fundamentals of Chemical Kinetics, M.R. Wright, Harwood Publishing, Chichesrer, 1999.
3. Kinetics & Mechanisms of Chemical Transformations, J Rajaram& J C Kuriacose, Macmillan, Delhi,42007.
4. Chemical &Electrochemical Energy Systems, R. Narayan & B. Viswanathan (University Press), 1998.
5. Industrial Electrochemistry, D. Peltcher & F. C. Walsh (Chapman & Hall)1990.
6. Principles and Applications of Electrochemistry–Crow (Chapman hall, New York) 2014
7. An Introduction to metallic corrosion and its prevention-Raj Narayan (Oxford-IBH, New Delhi), 1983.
8. Electrochemistry and Corrosion Science-Nebtor Ferez (Springer Pvt. Ltd.), Delhi, 2010.
9. Instrumental Methods of Chemical Analysis, Kudesia Sawhney, Pragati Prakasha (Meerut).

CH S 404: SPECTROSCOPY AND ANALYTICAL TECHNIQUES

COURSE OUTCOME:

- Students will learn the basic principles and applications of ESR Spectroscopy, NQR Spectroscopy,
- Students can be familiarising with Mossbauer Spectroscopy, Photoelectron spectroscopy, Atomic absorption Spectroscopy, Emission Spectroscopy, Molecular Luminescence Spectroscopy and Light Scattering methods.
- The students will also trained in the field of Ion Exchange Chromatography, Exclusion Chromatography and Thermal methods
- Overall students can solve the problems related to spectroscopy

UNIT- I:

[12 Hours]

Electron Spin Resonance Spectroscopy: Basic principles, hyperfine couplings, the 'g' values, factors affecting 'g' values, isotropic and anisotropic hyperfine coupling constants, Zero Field splitting and Kramer's degeneracy. Measurement techniques and Applications to simple inorganic and organic free radicals and to inorganic complexes.

NQR Spectroscopy: Quadrupolar nuclei, electric field gradient, nuclear quadrupole coupling constants, energies of quadrupolar transitions, effect of magnetic field. Applications.

Mossbauer Spectroscopy: The Mossbauer effect, chemical isomer shifts, quadrupole interactions, measurement techniques and spectrum display, application to the study of Fe^{2+} and Fe^{3+} compounds, Sn^{2+} and Sn^{4+} compounds(nature of M-L bond, coordination number and structure), detection of oxidation states and inequivalent Mössbauer atoms.

Photoelectron spectroscopy: Basic principles, valence & core binding energies, shifts in energies due to chemical forces, Photoelectron spectra of simple molecules, Auger transitions, measurement techniques. Applications.

UNIT-II

[12 Hours]

Ion Exchange Chromatography: Definitions, requirements for ion-exchange resin, synthesis and types of ion-exchange resins, Principles, basic features of ion-exchange reactions, resin properties, ion-exchange capacity, resin selectivity and factors affecting the selectivity, applications of IEC in preparative, purification and recovery process. Separation of lanthanides.

Exclusion Chromatography: Theory and principle of size exclusion chromatography, experimental techniques for gel-filtration chromatography (GFC) and gel-permeation chromatography (GPC), materials for packing-factors governing column efficiency, methodology and applications.

Thermal methods: Thermogravimetric analysis, Instrumentation, factors affecting the results and applications. Differential thermal analysis, simultaneous DTA-TGA curves. Differential scanning calorimetry, applications.

UNIT – III:

[12 Hours]

Atomic Absorption Spectrometry: Principle, Theory, working of AAS instruments, analytical applications, interferences.

Emission Spectroscopy: Flame Emission Spectroscopy, plasma emission spectrometry, basic principles of flame photometry, evaluation methods in flame photometry, interferences.

Molecular Luminescence Spectroscopy: Theory of fluorescence and phosphorescence, fluorimetry in quantitative analysis, instruments, fluorescence and structure, fluorescence quenching, phosphorescence method, applications in quantitative analysis.

Light-Scattering methods: Nephelometry and turbidimetry- theory, effects of concentration, particle size and wavelength on scattering, instrumentation and applications. Activation analysis.

REFERENCES:

1. A. Salahuddin Kunju and G. Krishnan: Group Theory and its Applications in Chemistry, PHI Learning, N. Delhi, 2010
2. Gurudeep Raj, Ajay Bhagi and Vinod Jain: Group Theory and Symmetry in Chemistry, 4th edn, Krishna Meetut, 2012.
3. U.C. Agarwala, H.L. Nigam, Sudha Agarwal and S.S. Kalra: Molecular Symmetry in Chemistry via Group Theory, Anne Books, N. Delhi, 2013.
4. G.D. Christian: Analytical Chemistry, (4th Ed.), (John Wiley), 1986.
5. R.A. Day and A.L. Underwood: Quantitative Analysis, 5th Ed. (Prentice Hall, India), 1998.
6. H.H. Wiliard, L.L. Merrit and J.J. Dean, Instrumental methods of analysis, (7th Ed.) 1988
7. B.K. Sharma, Instrumental Methods of Chemical Analysis (Goel publishing), 2000.
8. Skoog, Holler and Nieman: Principles of Instrumental Analysis, (Harcourt Afca), 2001

CH S 405: ENVIRONMENTAL CHEMISTRY

COURSE OUTCOME:

- This course enlighten the students about environmental pollutions like Air pollution, toxic chemicals in the environment,
- Hydrologic cycle, BOD, COD, radioactive waste management, sewage and industrial effluent treatment, water purification,
- Biochemical effects of Pesticides and heavy metals.
- Students learn effect of toxic chemicals in environment.

UNIT-I

[12 Hrs]

Environmental segments, evolution of earth's atmosphere. Air pollution: Air pollutants, prevention and control, Green house gases and acid rain. Carbon monoxide, industrial sources and transportation sources. SO_x - sources, ambient concentration, test methods, control techniques

- scrubbing, , limestone injection process. Ozone hole and CFC's. Photochemical smog and PAN. NO_x - Sources, ambient concentration, test methods, thermodynamics and NO_x control techniques. Particulates: Size distribution, particulate collection - settling chambers, centrifugal separators, wet scrubbers, electrostatic precipitators & fabric filters. Catalytic converters for mobile sources. Bhopal gas tragedy.

UNIT-II

[12 Hrs]

Hydrologic cycle, sources, chemistry of sea water, criteria and standards of water quality-safe drinking water, maximum contamination levels of inorganic and organic chemicals, radiological contaminants, turbidity, microbial contaminants. Public health significance and measurement of colour, turbidity, total solids, acidity, alkalinity, hardness, chloride, residual chlorine, sulphate, fluoride, phosphate and different forms of nitrogen in natural and polluted water. Chemical sources of taste and odour, treatment for their removal, sampling and monitoring techniques. Determination and significance of DO, BOD, COD and TOC. Water purification for drinking and industrial purposes, disinfection techniques, demineralization, desalination processes and reverse osmosis.

UNIT – III

[12hrs]

Toxic chemicals in the environment, impact of toxic chemicals on enzymes. Detergents-pollution aspects, eutrophication. Pesticides- pollution of surface water. Sewage and industrial effluent treatment, heavy metal pollution. Chemical speciation- biochemical effects of pesticides, insecticides, particulates, heavy metals (Hg, As, Pb, Se), carbon monoxide, nitrogen oxides, sulphur oxides, hydrocarbon, particulates, ozone, cyanide and PAN. Solid pollutants and its treatment and disposal. Radioactive waste management.

REFERENCES:

1. A.K. De: Environmental Chemistry, (Wiley Eastern).
2. S.K. Banerji: Environmental Chemistry, (Prentice Hall India), 1993.
- 3 S.D. Faust and O.M. Aly: Chemistry of Water Treatment, (Butterworths),1983.
4. Sawyer and McCarty, Chemistry for Environmental Engineering (McGraw Hill) 1978
5. I. Williams, Environmental Chemistry, John Wiley, 2001
6. S.M. Khopkar, Environmental Pollution Analysis, (Wiley Eastern).

CH S 406-Molecular Spectroscopy & Diffraction Techniques

COURSE OUTCOME:

- Deals with the understanding of the spectroscopic techniques which are based on the interaction of the electromagnetic radiation in the microwave, infrared and X-ray region with the molecules.
- The techniques introduced here are major characterization techniques employed to understand the chemical composition of compounds and the physical characteristics.
- The course has multidisciplinary relevance as these techniques are used in various fields namely, chemistry, physics biology and materials science.
- Student will be able to learn instrument like x-ray, TEM, SEM and their applications

UNIT-I

[12 hours]

Introduction to spectroscopy, intensity of spectral lines, Natural line width and broadening, Rotational, vibrational and electronic energy levels, selection rules.

Microwave Spectroscopy- The rotation and classification of molecules, rotation spectra of diatomic and polyatomic molecules. Rigid and non-rigid rotator models. Determination of bond length, isotope effect on rotation spectra. Stark effect, nuclear and electron spin interaction. Microwave Spectrometer.

Vibration Spectroscopy: Vibration spectra of diatomic molecules - linear harmonic oscillator, vibrational energies, zero point energy, force constants & bond strengths; anharmonicity of molecular vibrations- Morse PE diagram, selection rules, fundamental, overtones and hot bands. Vibrations of polyatomic molecules- normal modes of vibrations & nature of molecular vibrations (Ex-CO₂& H₂O).

UNIT-II:

[12 hours]

Vibration-rotation spectra of diatomic and polyatomic molecules, selection rules, PQR branches. IR Spectrophotometer-Instrumentation

Raman Spectroscopy: Classical and quantum theories of Raman effect, concept of polarizability and polarizability ellipsoid. Rotational and vibrational Raman spectra, selection rules, Raman activity of vibrations, vibrational- rotational Raman spectra, selection rules, mutual exclusion principle, polarization of Raman lines. An introduction to Laser Raman Spectroscopy. Raman Spectrometer – instrumentation. Applications of IR and Raman spectroscopy in elucidation of molecular structure (Ex - H₂O, N₂O & CO₂ molecules).

UNIT III

[12Hours]

Diffraction Techniques: Introduction, production of X-ray, Bragg's law, Laue equations, Ewald's diagram, X-Ray diffraction experiments – diffraction of X-rays by a crystalline powder (Debye-Scherrer and flat plate camera), powder diffract meter. Interpretation of power patterns (analytical technique). Single crystal technique - Laue and Rotation photographic methods. Moving Film method (Weissenberg method). Systematic absences. Crystalline X-ray diffractometer (4 angle), Intensities of diffracted X-rays and structural analysis, X-ray scattering atoms and molecules, Factors affecting X-ray intensities, introduction to Crystal structure analysis. 9hrs.

Electron Diffraction: Introduction, Theory of electron diffraction, Wierl equation and its significance (qualitatively), Elucidation of structure of simple gas molecules. Structure of

surfaces - (Low and high Energy Electron Diffraction, Transmission electron microscopy (TEM), SEM. Theory and applications of Neutron diffraction. Comparison between X-ray, electron and Neutron diffractions. 3hrs.

REFERENCES:

1. Fundamentals of Molecular Spectroscopy, Banwell & McCash (Tata McGraw Hill, New Delhi) 2007.
2. Spectroscopy, H. Kaur (Pragathi Prakashana, Meerut), 2012.
3. Spectroscopy, Donald L. Pavia (Cengage learning India Pvt. Ltd., Delhi), 2007.
4. Spectroscopy, B.K. Sharma (Goelprakashan, Meerut), 2013.
5. A Basic Course in Crystallography, JAK Tareen and TRN Kutty, University Press, Hyderabad (2001).
6. Essentials of Crystallography, M.A. Waheb, Narosa Publishing House, New Delhi (2009),
7. X-ray methods, Clive Whiston, (John Wiley & Sons, New York) 1987.



CH P 407: INORGANIC CHEMISTRY PRACTICALS – I

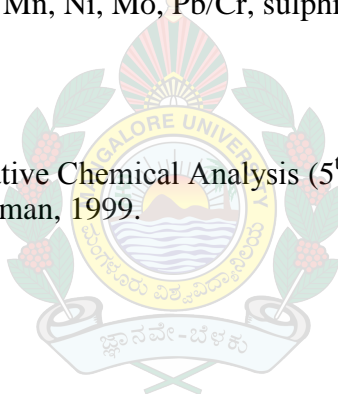
COURSE OUTCOME:

- Students will have hands on experience on the analysis of Hematite Dolomite, Pyrolusite, Solder,
- Analysis of Halide Mixture, Colorimetric Determination, Gravimetric determinations and Statistical Analysis of Data.
- To understand Complex metric determination and hardness of water
- It enables the students to learn Statistical Analysis of Data.

1. Analysis of Hematite-insoluble residue by gravimetry and Iron by volumetry using Ce^{4+} .
2. Analysis of Dolomite - insoluble residue by gravimetry and Ca, Mg by complexometry.
3. Pyrolusite - Insoluble residue by gravimetry and Manganese content by oxalate method.
4. Analysis of solder - Pb and Sn by EDTA method.
5. Complex metric determination of Mn, Cu, Ni and Fe-Cr mixture
6. Hardness of water
7. Analysis of Halide Mixture - Iodide by KIO_3 and total halide by gravimetrically.
8. Colorimetric Determination of Iron by thiocyanate and Cu by aqueous ammonia.
9. Gravimetric Determinations of Mn, Ni, Mo, Pb/Cr, sulphide, thiocyanate.
10. Statistical Analysis of Data.

Reference:

1. Vogel's Text Book of Quantitative Chemical Analysis (5th Ed), G.H. Jeffrey, J. Bassette, J. Mendham and R.C. Denny, Longman, 1999.



CH P 408: ORGANIC CHEMISTRY PRACTICALS – I

COURSE OUTCOME:

- Enlighten the students to understand the method of organic preparation by utilizing various kinds of organic reactions,
- To understand isolation and purification of products.
- To understand oxidation reactions
- To learn substitution reaction.

Single and two stage organic preparations

1. Electrophilic substitution reactions–Preparations of p-bromoaniline, p-nitroaniline, 2,4, 6-tribromophenol and picric acid.
2. Alkylations–Preparation of nerolin and N-methyl anthranilic acid.
3. Acetylations–Preparations of α -D-glucose penta-acetate and 2-naphthyl acetate.
4. Reactions with ring formation–Preparations of 1, 2, 3, 4-tetrahydrocarbazole, 1-phenyl-3-methyl-5-pyrazolone and 7-hydroxy-4-methyl-coumarin.
5. Diazotisation reactions–Preparations of iodo, chloro and azo compounds.
6. Dehydration reactions–Preparations of cyclohexene and succinic anhydride
7. Condensation reactions–Condensations involving diethylmalonate and ethyl acetoacetate. Claisen-Schmidt, Aldol and Perkin condensation reactions.
8. Halogenation reactions-Preparation of n-butylbromide & α , β -dibromocinnamic acid.
9. Reduction reactions–Reductions of nitro compounds and carbonyl compounds.
10. Oxidation reactions-Preparation of p-nitrobenzoic acid, p-benzoquinone and adipic acid.

REFERENCES:

1. Laboratory Manual in Organic Chemistry–R. K. Bansal (New Age, New Delhi)1990.
2. Experimental Organic Chemistry–Vol. I & II–P. R. Singh et al (TMH New Delhi)1981
3. Laboratory Manual in Organic Chemistry–Dey & Sitaraman (Allied, New Delhi) 1992.
4. Vogel's Text Book of Practical Organic Chemistry including Qualitative Organic Analysis - B. S. Furniss et al., (Longman - ELBS, London), 1989.
5. Manual of Organic Chemistry - Dey and Seetharaman.
6. A Text Book of Practical Organic Chemistry – A.I. Vogel, Vol.III.
8. Practical Organic Chemistry - Mann & Saunders.

CH P 409: PHYSICAL CHEMISTRY PRACTICALS - I

(Any 12 experiments are to be carried out)

COURSE OUTCOME:

- Experiments have been designed which make use of the concepts of electrochemistry, thermodynamics, solution chemistry and surface chemistry.
- Students get hands on experience in use of various instruments.
- It will be able to understand the theoretical concepts.
- To learn Specific and molar refractivity, viscosity, parachor etc.

1. (a) Determination of transport number of Cd^{2+} and SO_4^{2-} ions by EMF method.
(b) Determination of thermodynamic parameters of a cell reaction by EMF method.
 2. Determination of pK values phosphoric acid by potentiometric/pH metric method
 3. Potentiometric titration of halides in mixtures (Cl^- , Br^- and I^-) with silver nitrate
 4. Verification of Nernst equation for Ag^+ , Cu^{2+} and Zn^{2+} species.
 5. Determination of Solubility product and the Instability constant by potentiometric method.
 6. Potentiometric determination of solubility of insoluble silver halide and the standard electrode potential using quinhydrone electrode.
 7. Conductometric titrations of displacement and precipitation reactions.
 8. Determination of equivalent conductance and dissociation constants of weak acid and base.
 9. Determination of solubility of lead iodide at different T & hence molar heat of solution
 11. Determination of hydrolysis constant of aniline hydrochloride.
 11. Determination of degree of hydrolysis of $\text{CH}_3\text{CO}_2\text{Na}$ and NH_4Cl by conductivity method.
 12. Determination of Critical Micelle concentration by conductometric method.
 13. Determination of pH of buffer solutions with a pH meter & evaluation of pK_a of acids
 14. Verification of Walden's rule (relation between viscosity of a solution and the electrical Conductivity).
 15. Study of variation of viscosity of a liquid with temperature
 16. Determination of parachor value for CH_2 group and some elements by Surface Tension method,
 17. Determination of the composition of a solution by S.T measurement
 18. Determination of the Critical Micelle Concentration by surface tension/ spectrophotometric measurements.
 19. Determination of the composition of Zinc Ferrocyanide complex by Potentiometric titrations.
 20. Determination of Specific and molar refractivity of liquids and paracor value of a species by refractometric method.
- Any other relevant experiments of interest.

REFERENCES:

1. Findlay's Practical Physical Chemistry- B. P. Levitt (Longman, London).
2. Experiments in Physical Chemistry– James and Prichard.
3. Experimental Physical Chemistry - Daniels et al.
4. Experimental Physical Chemistry-Das & Behera (Tata McGraw Hill, New Delhi)1983.
5. Advanced Practical Physical Chemistry–Yadav (1989).
6. Experiments in Physical Chemistry–J. C. Ghosh (Bharathi Bhavan)1974.
7. Practical Physical Chemistry-B Viswanathan & P.S Raghavan, (ViVa Books, New Delhi) 2005.

2nd Semester

CH H 451: ADVANCED INORGANIC CHEMISTRY

COURSE OUTCOME:

- Students will study Symmetry and Group Theory,
- Chemistry of higher Boranes, Phosphazene polymers,
- Advances aspects of MOT theory, Trends of transition metals in periodic tables, Methods of reduction of oxide ores in this course

UNIT - I:

[15 Hours]

Symmetry and Group Theory

Definitions of group, subgroup, relation between orders of a finite group and its subgroup. Conjugacy relation and classes, symmetry elements and symmetry operations, Schonflies symbols, Matrix representations of symmetry operations, products of symmetry operations, some properties of matrices and vectors, classification of molecules into point groups.

Reducible and irreducible representations. The Great Orthogonality theorem (without proof), character tables. The direct product. Applications of group theory - Molecular vibrations, group theoretical selection rules for electronic transitions, for infra red and Raman spectra. Hybrid orbitals and Molecular orbitals, transformation properties of atomic orbitals.

UNIT – II:

[15 Hours]

Chemistry of higher boranes, classification, structure and M.O. description of bonding, framework electron counting, Wade's rules, chemistry of B_5H_9 , $B_{10}H_{14}$ and $B_nH_n^{2-}$ carboranes and metallocarboranes. Cyclophosphazenes, phosphazene polymers, S-N compounds. Coordination numbers 2-10 and their geometry, crystal field theory of coordination compounds, d-orbital splittings in octahedral, square planar and tetrahedral fields, spectrochemical series, and

Jahn-Teller effect. Structural evidences for ligand field splittings – hydration, ligation and lattice energies, site preference energies. MO theory of coordination compounds- MO energy level diagrams for octahedral and tetrahedral complexes.

UNIT - III:

[15 Hours]

Trends in oxidations states, stereochemistry and ionic sizes of metals, comparison of 3d, 4d and 5d series by taking Ti and Ni subgroups as examples. Lanthanides and actinides: electronic structure, oxidation states, extraction and separation of lanthanides, stereochemistry, spectral and magnetic properties of lanthanide and actinide complexes, lanthanide complexes as NMR shift reagents. Comparison with d-block ions.

Methods of reduction of oxide ores, Ellingham diagram, chemical and electrolytic reductions, reduction potentials, Latimer and Frost diagrams, effect of complexation on potential.

REFERENCES:

1. J. E Huheey, E.A..Keiter, R.L. Keiter & O K Medhi: Inorganic Chemistry (4thedn.), Pearson, 2006.
2. Shriver, Atkins and Langford: Inorganic Chemistry (3rdedn.) OUP, 1999.
3. J.D. Lee: Concise Inorganic Chemistry, (5thedn.) Blackwell Science, 2000.
4. B.E. Douglas, D. McDaniel & A Alexander: Concepts & Models of Inorganic Chemistry, Wiley 2001
5. W.W. Porterfield: Inorganic chemistry – A Unified Approach, Elsevier, 2005.
- 6.N.N. Greenwood and A. Earnshaw, Chemistry of the Elements, First Edn (Pergamon Press)
7. Basallo & Johnson, Coordination Chemistry



CH H 452: ADVANCED ORGANIC CHEMISTRY

COURSE OUTCOME:

- Students will gain an understanding of all details of aliphatic/ aromatic electrophilic substitution reactions and aromatic nucleophilic substitution reactions.
- Students will learn about various free radical reactions and elimination reactions including pyrolytic eliminations.
- Students will gain an understanding of formation and hydrolysis of esters, Addition of carbon-carbon multiple bonds and addition to carbon-heteroatom multiple bonds.

UNIT - I:

[15 Hours]

Aliphatic Electrophilic Substitution Reactions: Bimolecular mechanisms- S_E1 , S_E2 and S_{Ei} mechanism. Electrophilic substitution reactions accompanied by double bond shifts. 3 hrs

Aromatic Electrophilic and Nucleophilic Substitution Reactions: Mechanism of aromatic electrophilic substitution reactions-nitration, halogenation, sulphonation, Friedel-Crafts alkylation and acylation, orientation and reactivity, energy profile diagram. The ortho/para ratio, ipso attack, orientation in other ring systems. Mechanism of Vilsmeier-Haack reaction, Mannich reaction, Diazonium coupling, Pechmann reaction and Fries rearrangement. Mechanisms of aromatic nucleophilic substitution reactions- S_NAr , S_N1 & aryl mechanism. Von-Richter rearrangement, Sommelet-Hauser rearrangement, Smiles rearrangement. 12 hrs

UNIT- II:

[15 Hours]

Free Radical Reactions: Types, mechanisms of free radical substitution reactions & neighbouring group assistance. Reactivity for the aliphatic and aromatic substances at a bridgehead. Reactivity of attacking radical. Effect of solvent on reactivity. Auto-oxidation, coupling of alkynes. Arylation of aromatic compounds by diazonium salts. Sandmeyer, Ullmann & Hunsdiecker reactions. 5 hrs

Elimination Reactions: Discussions of $E1$, $E2$ and $E1cB$ mechanisms. Orientation during elimination reactions. Saytzeff and Hofmann rules. Reactivity-effects of substrate structures, attacking base, leaving group and solvent medium. 5 hrs

Pyrolytic Eliminations: Mechanisms of pyrolysis of esters of carboxylic acids. Chugaev reactions, Hofmann degradation, Cope elimination and xanthate pyrolysis. 5 hrs

UNIT- III:

[15 Hours]

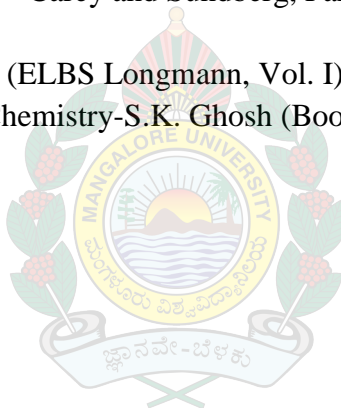
Formation and Hydrolysis of Esters: Plurality of mechanism. Mechanism of esterification reactions. Ester hydrolysis- $A_{AC}2$, $B_{AC}2$, $A_{AC}1$ & $A_{AL}1$ mechanism. Transesterification. 4 hrs

Addition to Carbon-Carbon Multiple Bonds: Addition reactions involving electrophiles, nucleophiles and free radicals. Cyclic mechanisms. Orientation and stereochemistry. Addition of halogens, hydrogen halides, carboxylic acids and amines. Addition to cyclopropanes, hydroboration, Michael addition. Addition of oxygen across double bonds. 5hrs

Addition to Carbon-Hetero Multiple Bonds: Electrophilic, nucleophilic and free radical additions to C=O and C=N systems. Addition of Grignard reagents. Reformasky reaction, aldol condensation, Knoevenagel condensation, Perkin reaction and Wittig reactions. 6 hrs

REFERENCES:

1. Organic Reactions and Their Mechanisms- P.S. Kalsi (New Age, New Delhi),1996.
2. Advanced Organic Chemistry 4th Edn- J. March (Wiley, NY) 2000.
3. Organic Reaction Mechanisms- Bansal (Tata McGraw Hill, New Delhi) 1978.
4. Organic Chemistry-Vol.-I & II-Mukherji, Singh and Kapoor (Wiley Eastern, New Delhi) 1985.
5. Mechanism and Theory in Organic Chemistry-Lowry and Richardson Harper and Row, 1987.
6. Reaction Mechanisms in Organic Chemistry-Mukherji, Singh and Kapoor (McMillan) 1978.
7. Organic Chemistry-P.Y. Bruice (Pearson Education, New Delhi) 2002.
8. Organic Reaction Mechanism-R.K. Bansal (Wiley Eastern Limited, New Delhi) 1993.
9. A Guide Book to Mechanism in Organic Chemistry-Petersykes.
10. Advanced Organic Chemistry –Carey and Sundberg, Part A& B, 3rd edition (Plenum Press, New York) 1990.
11. Organic Chemistry-I.L. Finar (ELBS Longmann, Vol. I) 1984.
12. Advanced General Organic Chemistry-S.K. Ghosh (Book and Alleied (P) Ltd) 1998.



CH H 453: ADVANCED PHYSICAL CHEMISTRY

COURSE OUTCOME:

- It is an advanced level course which helps to understand the concepts of physics and their subsequent applications in the field of chemistry.
- The concepts of chemical thermodynamics helps in the design of processes in chemical industries.
- The concepts of statistical thermodynamics find relevance in understanding the nature of solids and metals in specific.
- It enables to understand chemical bonding, photochemistry and spectroscopy

UNIT I:

[15hours]

Chemical Thermodynamics:

Entropy: Physical significance, entropy change in an ideal gas. Variation of entropy with Temperature, Pressure and Volume. Entropy change in reversible and irreversible processes. Thermodynamic equations of state.

Free energy, Maxwell's relations and significance. Helmholtz's and Gibbs free energies, Gibbs– Helmholtz equation and its applications.

Nernst heat theorem: Its consequences and applications. Third law of thermodynamics – statements, applications and Comparison with Nernst Heat theorem.

Chemical affinity and thermodynamic functions. Effect of temperature and pressure on chemical equilibrium- van't Hoff reaction isochore and isotherms.

Partial molar properties: Physical significance, determination of partial molar volume and enthalpy. Chemical potential: variation of chemical potential with temperature. Gibbs – Duhem equation.

Thermodynamic functions of mixing, Gibbs – Duhem – Margules equation.

Fugacity: Relationship between fugacity and pressure. Determination of fugacity- graphical method and Lewis Randall rule.

Activity and activity coefficient: Variation of activity and fugacity with temperature and pressure. Determination of activity by vapour pressure method.

UNIT - II: Statistical and Irreversible thermodynamics

[15 hours]

Statistical Thermodynamics: Thermodynamic Probability, phase space, micro and macrostates, statistical weight factor, assembly, ensemble-significance, classification and comparison. Distribution laws – Boltzmann law, Maxwell-Boltzmann distribution law. Bose-Einstein and Fermi-Dirac statistics, Limit of applicability of various laws. Relationship between partition function and thermodynamic functions -Average energy, heat capacity, free energy, chemical potential. Introduction to Statistical mechanism of independent, independent and indistinguishable (non-localized) molecules or particles.

Partition function for molecular particles.

Thermodynamic quantities in terms of partition function of particles- Evaluation of Translational, vibrational, rotational, electronic and nuclear derivations of translational, rotational, vibrational and electronic partition functions. Law of equipartition principle. Partition function and equilibrium constant.

Statistical thermodynamic properties of solids (Heat capacity)-Introduction, thermal characteristics of crystalline solid, Einstein model, Debye modification. Nuclear statistics -

Introduction, symmetric and nuclear spin, ortho and para nuclear states. Applications of partition function to mono atomic gases, diatomic molecules, equilibrium constant. 9hrs.

Irreversible Thermodynamics – Introduction, Thermodynamics of irreversible processes, Entropy production-rate of entropy production. Phenomenological relations. The principle of microscopic reversibility, Onsager reciprocal relations – validity and applications (Electro kinetic, Thermoelectric phenomena). Irreversible thermodynamics of Non linear regime and biological systems. 6hrs

UNIT III

Postulates of quantum Mechanics. Particle waves, its character and significance. Normalization and orthogonality of wave functions. Operators and their algebra, types and applications, operators for the dynamic variables of a system (position, linear momentum, angular momentum, Kinetic energy, potential energy and total energy) Eigen values and Eigen functions. Quantum numbers and their characteristics. Schrodinger wave equation – significance and derivation. Statistical interpretation of ψ 7 hrs

Solution of SWE for simple systems-particle in a box (1D & 3D), particle in a ring, simple harmonic oscillator, rigid rotor, the H atom (solution of r, θ, Φ equations). Chemical Bonding in diatomics: Covalent bond-Valence bond and molecular orbital approaches with comparison.

Molecular orbital theory applied to homonuclear and heteronuclear diatomic molecules. Introduction to Huckel molecular orbital theory of conjugated systems and its applications. 8hrs

REFERENCES:

1. Thermodynamics for Chemists- S Glasstone (East West press)
2. Physical Chemistry-P W Atkins.
3. Chemical Thermodynamics, Rajaram and Kuriokose (East-West) Pearson, Chennai, 2013.
4. Thermodynamics, 3rd Ed., R.C. Srivastava and Subit K Saha (Prentice-Hall of India, Delhi), 2007.
5. Statistical Thermodynamics, M. C. Gupta (New Age International, Delhi)2007.
6. Principles of Physical chemistry; B.R. Puri, L.R. Sharma and M.S. Pathania, Vishal Publishers (2014)
7. Atomic Structure and Chemical Bond, Manasa Chanda, Tata McGraw Hill Publishers (1991).
8. Quantum Chemistry, R.K. Prasad, New Age International (1991)
9. Advanced Physical Chemistry- Gurdeep R Chatwal (Goel Publishes, Meerut), 1992.
10. Introductory Quantum Chemistry – A.K. Chandra (Tata McGraw Hill) 1994.
11. Quantum Chemistry, A.B. Sannigrahi (Book and Allied Pvt. Ltd., Kolkatta), 2013.
12. Quantum Chemistry, Donald A.P (Viva Books, Delhi), 2013.

CH S 454: ORGANIC SPECTROSCOPIC TECHNIQUES

COURSE OUTCOME:

- Enable the students to understand the principle, theory, instrumentation and applications of UV-Visible, Electronic, NMR (^1H , ^{13}C , ^{19}F , ^{31}P) and Mass spectroscopy.
- To solve the composite problems involving the applications of UV-Visible, IR, NMR (^1H & ^{13}C) and Mass spectroscopic techniques.
- To develop the ability to analyse the spectrum and arrive at the correct structure of compound.
- Overall students can get confidence in solving spectroscopic problems.

UNIT-I:

[12 hours]

UV/Electronic Spectroscopy: Basic principles, Chromophores, auxochromes, Instrumentation and application. Factors affecting the positions of UV bands. Electronic transitions and empirical correlations of predicting λ_{max} of organic compounds. Woodward-Fieser rules. UV absorption of aromatic compounds - effect of substituents and solvent effects. Empirical rules to calculate λ_{max} . Application of UV spectroscopy in the structural study of organic molecules. 5 hrs

IR Spectroscopy: Basic principles, Application of infrared spectroscopy in the structural study-identity by finger printing and identification of functional groups. Characteristic vibrational frequencies of common functional groups (alkanes, alkenes, alkynes, aromatic compounds, alcohols, ethers, phenols and amines). Study of vibrational frequencies of carbonyl compounds (ketones, aldehydes, esters, amides, anhydrides and acids). Factors affecting band positions and intensities such as effect of hydrogen bonding, phase and solvent on vibrational frequencies, overtones, combination bands and Fermi resonance. 7 hr

UNIT-II: Nuclear Magnetic Resonance Spectroscopy

[12 hours]

Theory and principle, NMR spectrometer, FT NMR and its advantages. Solvents used, chemical shift and its measurements, factors affecting chemical shift. Integration of NMR signals, spin-spin coupling, coupling constant. Shielding and deshielding. Chemical shift assignment of major functional groups, Classification (ABX, AMX, ABC, A_2B_2), spin decoupling, effects of chemical exchange, fluxional molecules, Hindered rotation through NMR spectrum, Karplus relationships (Karplus curve-variation of coupling constant with dihedral angle), double resonance techniques, NMR shift reagents, solvent effects and Nuclear Overhauser Effect. High resolution ^1H NMR. Applications of NMR spectroscopy in structure elucidation of simple organic and inorganic molecules. Pulse techniques in NMR, two dimensional and solid state NMR. Use of NMR in Medical diagnostics. 10 hrs

NMR of nuclei other than proton: ^{13}C chemical shift & factors affecting it. Decoupling-Noise decoupling & broad band decoupling. Off-resonance proton decoupling-some representative examples. Introduction to ^{19}F & ^{31}P NMR. 2 hrs

UNIT-III: Mass Spectrometry

[12 hours]

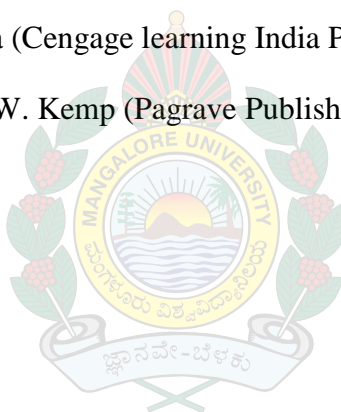
Basic principles, Instrumentation, interpretation of mass spectra, resolution, exact masses of nucleides, molecular ions, meta-stable ions and isotope ions. Fragmentation processes-representation of fragmentation, basic fragmentation types and rules. Factors influencing fragmentations and reaction pathways. McLafferty rearrangement. Fragmentations associated

with functional groups- alkanes, alkenes, cycloalkanes, aromatic hydrocarbons, halides, alcohols, phenols, ethers, acetals, ketals, aldehydes, ketones, quinines, carboxylic acids, esters, amides, acid chlorides, nitro compounds and amines. Ion analysis, ion abundance, retro Diels-Alder fragmentation. Nitrogen rule. High resolution mass spectroscopy. 9 hrs

Composite problems involving the applications of UV, IR, ^1H and ^{13}C NMR and mass spectroscopic techniques. Structural elucidation of organic molecules. 3 hrs

REFERENCES:

1. Spectrometric Identification of Organic Compounds - Silverstein, Bassler & Monnill (Wiley) 1981.
2. Applications of Absorption Spectroscopy of Organic Compounds-Dyer (Prentice Hall, NY) 1965.
3. Spectroscopy of Organic Compounds-3rd Ed.-P.S. Kalsi (New Age, New Delhi) 2000.
4. Analytical Chemistry-Open Learning: Mass spectrometry.
5. Spectroscopic Methods in Organic Chemistry - Williams and Fleming, TMH.
6. Spectroscopy, Donald L. Pavia (Cengage learning India Pvt. Ltd., Delhi), 2007.
7. Organic Spectroscopy-3rd ed.-W. Kemp (Pargrave Publishers, New York), 1991.



CH S 455: ANALYTICAL AND GREEN CHEMISTRY

COURSE OUTCOME:

- Enable the students to learn about cell structure and functions, lipids, lipoproteins.
- To understand the importance and functions of enzymes and coenzymes in biological systems.
- It helps in understanding metabolic pathways of cholesterol, bile acids, prostaglandins.
- Mechanism of reactions catalyzed by the above coenzymes.

UNIT I:

12 Hours

Cell Structure and Functions: Structure of prokaryotic and eukaryotic cells, intracellular organelles and their functions, comparison of animal and plant cells. Overview of metabolic processes – catabolism and anabolism. ATP- the biological energy currency. Origin of life – unique properties of carbon, chemical evolution and rise of living systems.

Lipids: Fatty acids, essential fatty acids, structure and function of triacylglycerides, glycerophospholipids, sphingolipids, cholesterol, bile acids, prostaglandins.

Lipoproteins: composition and function, role in atherosclerosis, properties of lipid aggregates, micelles, bilayers, liposomes and their biological functions. Biological membranes- Fluid mosaic model of membrane structure. Lipid metabolism (-oxidation of fatty acids).

UNIT II:

12 Hours

Enzymes: Introduction, Classification, Enzyme substrate complex formation models: Lock and Key model, Host-Guest and Induced- Fit model. Factors affecting enzyme activity (pH, temperature), enzyme inhibition (reversible and irreversible) and immobilised enzymes. Examples of some typical enzyme mechanisms for Triose phosphate isomerase, α - Carboxy peptidase-A and Ribonuclease. Enzymatic synthesis of α -amino acids and peptides. Transformations of lipases and esterases. Kinetic resolutions of carboxylic acids, esters and alcohols-Transesterification. Enzymatic synthesis of α -amino acids and peptides. Transformations of lipases and esterases.

Coenzymes

12 Hours

Introduction Co factors - co substrates - prosthetic groups. Classification-Vitamin derived coenzymes and metabolite coenzymes. Structure and biological functions of coenzyme A, thiamine pyrophosphate (TPP), pyridoxal phosphate (PLP), oxidized and reduced forms of nicotinamide adenosine dinucleotide / their phosphates (NAD, NADH, NADP⁺, NADPH), Flavin adenine nucleotide (FAD, FADH₂), Flavin mononucleotide (FMN, FMNH₂) and tetrahydrofolate. Adenosine triphosphate (ATP) and adenosine diphosphate (ADP). Mechanism of reactions catalyzed by the above coenzymes.

REFERENCES:

1. Principles of Biochemistry – A L Lehninger, Worth Publishers.
2. Biochemistry – L Stryer, W H Freeman.
3. Biochemistry – J David Rawn and Neil Patters.
4. Biochemistry – Voet and Voet, John Wiley.
5. Outlines of Biochemistry – E E Conn and P K Stumpf. John Wiley.
6. Enzyme structure and mechanism - Fersht and Freeman
7. Outlines of Biochemistry - Conn and Stumpf
8. Principles of Biochemistry - Horton & others.
9. Bioorganic chemistry - A chemical approach to enzyme action - Herman Dugas and Christopher Penney.



CH E 456: ENVIRONMENTAL, ELECTRO AND POLYMER CHEMISTRY

COURSE OUTCOME:

- It is an elective course offered to students from disciplines other than chemistry.
- It aims at enhancing their general understanding of chemistry. Few important topics such as sources and detection of air pollution, batteries as power sources, devices of solar energy conversion,
- Polymers used in day to day life and for medical and technical applications will be taught.
- Awareness of plastic pollution and technique of plastic waste management

UNIT-I:

[12 Hours]

Environmental segments, evolution of earth's atmosphere. Air pollution: Air pollutants, prevention and control, Green house gases and acid rain. Carbon monoxide, industrial sources and transportation sources. SO_x - sources, ambient concentration, test methods, control techniques - scrubbing, limestone injection process. Ozone hole and CFC's. Photochemical smog and PAN. NO_x - Sources, ambient concentration, test methods, thermodynamics and NO_x control techniques. Particulates: Size distribution, particulate collection - settling chambers, centrifugal separators, wet scrubbers, electrostatic precipitators & fabric filters. Catalytic converters for mobile sources. Bhopal gas tragedy.

UNIT-II

[12 hrs]

Corrosion: Introduction, consequence, type, prevention, & measurement. Conventional sources of energy, limitations, Importance of storage, Battery-Electrodes, Cell, battery Brief account of primary, secondary, lithium battery and fuel cells. Semiconductor electrodes and Solar energy system. 7 hrs

Introduction to bioelectrochemistry, electrochemical communication in biological organisms.

Theory and applications of Electroplating and electroless plating. 7hrs

Reaction Kinetics-Theory and applications of different types of reactions- Oscillatory, chain reaction, branched chain reaction. . Energy of activation and thermodynamic parameters, Collision theory of reaction rates limitations and basics of transition state theory. 5 hrs

UNIT- III

[12 hrs]

Polymers: Introduction-Basic concepts and classification of polymers, Molecular weight and its distribution, Chemistry of polymerization- Step, chain, Coordination, Copolymerization. Polymerization techniques- bulk, solution, suspension, emulsion, poly-condensation, solid and gas phase polymerization. Chemical and geometrical structure of polymer molecules, Structure property relationship-Physical, Thermal and mechanical properties 6hrs

Synthesis, properties, structural features and applications of some important commercial polymers (PE, PP,PS, PVC, PMMA, PET, Nylon-6,Nylon-6,6) , Engineering polymers (Kevlar, Nomex, ABS, PC, Teflon). Applications of polymers in separations: reverse osmosis, ultra and nano-filtration. Applications in electronics- conducting polymers and electronic shielding, Applications of polymers in medicine.

Management of plastics in environment- recycling, incineration and biodegradation. 6hrs

REFERENCES:

1. A.K. De: Environmental Chemistry, (Wiley Eastern).
2. S.K. Banerji : Environmental Chemistry, (Prentice Hall India), 1993.
3. Sawyer and McCarty, Chemistry for Environmental Engineering (McGraw Hill) 1978.
4. An Introduction to metallic corrosion and its prevention-Raj Narayan (Oxford-IBH, New Delhi), 1983.
5. Chemical& Electrochemical Energy Systems, R. Narayan & B. Viswanathan (University Press), 1998.
6. Industrial Electrochemistry, D. Peltcher & F. C. Walsh (Chapman & Hall)1990.
7. F.W. Billmeyer, Text book of Polymer science, 3rd Edn, A Wiley- Interscience Publication, New York, 2005
- 8.. V.R. Gowariker, Polymer Science, New Age International (P) Ltd., New Delhi, 2012
9. R.W. Dyson, Specialty Polymers, Chapman and Hall, New York, 1987
10. J.R. Fried, Polymer Science and Technology, Prentice Hall of India Pvt. Ltd., New Delhi, 1999
11. P. Ghosh, Polymer Science and Technology, Tata - McGraw Hill, New Delhi, 1995



CH P 457: INORGANIC CHEMISTRY PRACTICALS-II

COURSE OUTCOME:

- The students will have hands on experience in the qualitative analysis of mixtures of Inorganic Salts containing 3 cations in which 1 less common metal ion and 2 anions.
- Students will learn the systematic methods of separation techniques.
- Apart from inorganic radicals they also learn the separation organic radicals.

Qualitative Analysis of mixtures of Inorganic Salts containing 3 cations and 2 anions (1 less common metal ions like Tl, W, Mo, V, Zr, Th, U, Ce, Ti and Li to be included among anions organic acid radicals, phosphate, borate and fluoride separation included).

REFERENCES:

1. Vogel's Text Book of Quantitative Chemical Analysis (5th Ed), G. H. Jeffrey, J. Bassette, J. Mendham and R. C. Denny, Longman, 1999
2. Vogel's Qualitative Inorganic Analysis (7th Ed), G. Svehla, Longman (2001).

CH P 458: ORGANIC CHEMISTRY PRACTICALS-II

COURSE OUTCOME:

- Student will gain the in-depth knowledge and skill in organic separations, purifications, qualitative analyses.
- Separation of binary mixtures of organic compounds containing both mono and bifunctional groups
- Students will learn preparation of suitable derivatives.

Separation and systematic qualitative analysis of binary mixtures of organic compounds containing both mono and bifunctional groups and preparation of suitable derivatives.

REFERENCES:

1. Practical Organic Chemistry-F.G. Mann and B. C. Saunders (ELBS, England), 2001.
2. Practical Organic Chemistry - A. I. Vogel (Longman-ELBS, England), 1971.
3. Experimental Organic Chemistry–Vol.I & II Singh et al(TMH, New Delhi)1981.
4. Semimicro Qualitative Organic Analysis–Cheronis et al Wiley-Eastern, New Delhi) 1964.
5. Vogel's Text Book of Practical Organic Chemistry Including Qualitative Organic Analysis- B. S. Furniss *et al* (Longman-ELBS, England), 1978.
6. Manual of Organic Chemistry - Dey and Seetharaman.
7. Modern Experimental Organic Chemistry-John H. Miller and E.F. Neugil.

CH P 459: PHYSICAL CHEMISTRY PRACTICALS- II

(At least 12 experiments are to be carried out)

COURSE OUTCOME:

- In continuation with the practical course introduced in the first semester, this course provides opportunity to students to test the concepts learnt in the basic physical chemistry course CH H 403.
- Experiments have been designed on thermodynamics, kinetics, surface and interface chemistry. With the training gained.
- Students will be able to handle issues related to metallurgical processes, waste water treatment, energy efficient processes, action of soaps and detergents etc.

1. Determination of cryoscopic constants of solvents and molecular weight of non volatile substances by thermal method.
 2. Determination of degree of dissociation, Vant Hoff factor and molecular weight of an electrolyte by cryoscopy method using copper calorimeter/Dewar flask..
 3. Heat of solution of a sparingly soluble compound in water by solubility method.
 4. Phase diagram of two component systems by thermal analysis.
 5. Phase diagram of three component system (a) 3 liquids with single binodal curve, and b) two liquids and one solid
 6. Kinetics of acid catalyzed hydrolysis of methyl acetate and determination of (a) order and rate constant and (b) Energy of activation.
 7. Determination of a) Energy of activation & b) rate constant for the First and second order kinetics of reaction between potassium per sulphate and potassium iodide.
 8. Kinetics of sodium formate – iodine reaction.
 9. Determination of the latent heat of evaporation of carbon tetrachloride.
 10. Preparation of colloidal solutions.
 11. Verification of F & L adsorption isotherms for acetic acid on activated charcoal.
 12. To study the adsorption of iodine on charcoal from alcoholic solution.
 13. To study the effects of gelatin solution on the precipitation values.
 14. Comparison of detergent action of detergents and determination of interfacial tension.
 15. Thermodynamic prediction and measurement of the solubility of naphthalene in benzene.
- Study of association of benzoic acid in benzene/toluene. Any other relevant experiments of interest.

REFERENCES:-

1. Practical Physical Chemistry- B Viswanathan & P.S Raghavan, (ViVa Books, Delhi) 2005.
2. Findlay's Practical Physical Chemistry- B. P. Levitt (Longman, London).
3. Experiments in Physical Chemistry– James and Prichard.
4. Experimental Physical Chemistry - Daniels et al.
4. Experimental Physical Chemistry-Das &Behera (Tata McGraw Hill, New Delhi)1983.
5. Advanced Practical Physical Chemistry–Yadav (1989).
6. Experiments in Physical Chemistry–J. C. Ghosh (Bharathi Bhavan)1974.



3rd SEMESTER

CH H 501: COORDINATION CHEMISTRY

COURSE OUTCOME:

- The students will learn spectral properties of complexes, interpretation of spectra
- Photochemistry of metal complexes, Magnetic behavior of metal complexes,
- Spectral applications of coordination compounds,
- Reactions mechanisms in Transition metal complexes, Electron transfer reactions.

UNIT- I: [15 Hours]

Spectral properties of complexes: Term symbols for d^n ions, spectroscopic ground states, selection rules, nature of spectral bands- band shapes, band intensities, band widths, spin-orbit coupling, vibrational structures.

Orgel diagrams, Tanabe-Sugano diagrams, interpretation of spectra of octahedral, distorted octahedral, tetrahedral and square planar complexes, Determination of Δ_o from spectra. Charge transfer bands – origin, types, and characteristics. Photochemistry of metal complexes- photosubstitution and photoredox reactions, ligand photoredox reactions, photoreactions and solar energy conversion.

UNIT- II: [15 Hours]

Type of magnetic behaviour, orbital contribution, spin orbit coupling, spin cross-over systems. Measurement of magnetic susceptibility – Gouy and Faraday methods, diamagnetic corrections, ferro- and antiferromagnetic coupling, super paramagnetism. High and low spin equilibria. Magnetic properties of lanthanides and actinides. Infrared spectra of metal complexes, Group frequency concept. Changes in ligand vibrations on coordination- metal ligand vibrations. Spectral applications of coordination compounds - IR spectra of metal carbonyls - ESR spectra-application to copper complexes, Mossbauer spectra- application to iron complexes. NMR spectra - Application to diamagnetic complexes.

UNIT- III: [15 Hours]

Reaction Mechanisms in Transition Metal Complexes: Energy profile of a reaction, inert and labile complexes, kinetics of octahedral substitution and mechanistic aspects. Acid hydrolysis, factors affecting acid hydrolysis, base hydrolysis, conjugate base mechanism and evidences in its favor. Anation reactions, reactions without M-L bond cleavage. Substitution reactions in square planar complexes, trans effect, mechanisms of substitution. Substitution reactions in tetrahedral complexes. Isomerization and racemization reactions of coordination compounds. Electron transfer reactions- inner sphere and outer sphere reactions, complimentary and non-complimentary reactions.

REFERENCES:

1. D.N. Satyanarayana: Electronic absorption Spectroscopy and Related Techniques, OUP, 2001.
2. F. Basolo and R.G. Pearson: Inorganic Reaction Mechanisms, Wiley Eastern, 1979.
3. W.W. Porterfield: Inorganic chemistry – A Unified Approach, Elsevier, 2005.
4. R.L. Dutta and A Syamal : Elements of Magnetochemistry, Affiliated east-West, 1993.
5. J.E Huheey, R.L. Keiter and A.L. Keiter: Inorganic Chemistry(4thedn), Addison Wesley, 2000.

CH H 502: ORGANIC REACTION MECHANISM AND HETEROCYCLIC CHEMISTRY

COURSE OUTCOME:

- Students will gain the in-depth knowledge about ten organic name reactions, their mechanisms and synthetic uses with multiple examples.
- Students will learn about the mechanism and synthetic utility of various kinds of thirteen molecular rearrangement reactions with diverse examples.
- Students will gain knowledge on principles of photochemistry and diverse types of photochemical reactions of organic molecules with multiple examples, concepts of pericyclic reactions, diverse types of electrocyclic, cycloaddition and sigmatropic reactions with multiple examples.
- Students will understand the systematic nomenclature of various types of heterocyclic compounds with multiple examples.
- Students will get the sound knowledge on the structure, synthesis and reactions of various three, four, five, six and seven membered simple and fused heterocyclic compounds.

UNIT I:

[15 Hours]

Organic Name reactions: Reactions, Mechanisms and synthetic uses of Darzen's glycidic ester condensation, Cannizzaro reaction, Benzoin condensation, Claisen-Schmidt condensation, Stork Enamine reactions, Sharpless asymmetric epoxidation, Suzuki coupling, Heck reaction, Woodward and Prevost Hydroxylation and Mitsunobu reaction.

Molecular rearrangements: Mechanism and synthetic utility of Wagner-Meerwein, Dienone-Phenol, Pinacol-Pinacolone, Demjanov, Benzil-Benzilic acid, Fries, Wolff, Favorskii, Benzidine, Baker-Venkatraman, Beckmann, Bayer-Villiger and Amadori rearrangement.

UNIT II:

[15 Hours]

Organic Photochemistry: Bonding and antibonding orbital, Chemistry of excited states of organic molecules, Jablonski diagram and quantum yield, Photo dissociation, Photo reduction, Photochemical isomerisation, Norrish Type-I and Type-II reactions, Barton reaction and Photo Fries rearrangement, Paterno-Buchi reaction, Yang cyclization, photo oxidation and photo catalysis.

Pericyclic Reactions: Molecular orbital symmetry, Frontier orbitals of ethylene, 1,3-butadiene, 1,3,5-hexatriene and allyl systems. Woodward-Hoffmann correlation diagram and FMO approach.

Electrocyclic Reactions: Introduction, Con-rotatory & dis-rotatory Process, $4n$ & $4n+2$ systems. **Cycloaddition reaction:** Suprafacial and Antarafacial addition, $2+2$ and $4+2$ systems. 1,3-Dipolarcycloaddition reactions.

Sigmatropic reactions: Suprafacial and Antarafacial shift of H, [1,3] & [1,5] -sigmatropic shifts.

UNIT- III:

[15 Hours]

Heterocyclic Chemistry: Nomenclature of Heterocycles, Hantzsch-Widman system formonocyclic, fused and bridged heterocycles. Structure, synthesis and reactions of three membered heterocycles (aziridines, episulfides, diaziridines, oxazirines), four membered heterocycles (azetidines and thietanes), five membered heterocycles (furan, pyrrole, thiophene, oxazoles, imidazoles, thiazoles), six membered heterocycles (pyridine, Pyrimidine, α - and γ -Pyrones), seven membered heterocycles (Azepines, Oxepines, Thiepinines) and fused heterocycles (Indoles, benzofurans, Quinolines, Isoquinolines, Coumarins, Purines).

REFERENCES

1. O.L. Chapman, Organic Photochemistry. Vol I & II. Marcel Decker.
2. Francis A Carey and R. J. Sundberg, Advanced Organic Chemistry-Part A & (Plenum).
3. Mukherji Singh and Kapoor, Organic Chemistry, Vol 1-3, (Wiley Eastern, New Delhi)
4. Synthetic Organic Chemistry- G.R. Chatwal (Himalaya, Bombay), 1994.
5. Organic Reaction Mechanisms, V.K. Ahluwalia & R.K. Parashar (Narosa) 2006
6. Organic Chemistry, Vol I-II, I.L. Finar, (Longmann ELBS, London), 1973.
7. Advanced Organic Chemistry- Reaction Mechanisms, Reinhard Bruckner (Academic) 2005.
8. Pericyclic reactions, S.M Mukherji (The McMillan Bangalore), 1979.
9. Organic Reactions and their mechanisms- P.S. Kalsi (New Age, New Delhi), 1996.
10. An Introduction to the Chemistry of Heterocyclic Compounds-Acheson (Wiley-Eastern) 1987.
11. Heterocyclic Chemistry-J. Joule & G. Smith (Van-Nostrand) 1978.
12. Heterocyclic Chemistry, 3rd Edition-Raj K. Bansal (New Age International) 2005.
13. Organic Chemistry-P.Y. Bruice (Pearson Education, New Delhi) 2002.
14. Comprehensive Heterocyclic Chemistry Vol-I-VI Ed. Katritzky & Rees (Pergamon), 1984.

CH H 503: SOLID STATE CHEMISTRY

COURSE OUTCOME:

- It is an interdisciplinary course falling at the boundary of physics and chemistry.
- It is aimed at understanding the properties of solids and their possible applications in materials science as superconductors, semiconductors, liquid crystal materials and as magnetic materials.
- Importance has been given to the methods of preparation of solids, understanding the structure-property relationships and their possible applications.
- Importance has also been given to the advanced topics of nanomaterials.

UNIT-I:[15hours]

Surface morphology: Structure of solid surfaces and adsorbed layers. Mechanism of surface reactions. 3hrs.

Crystal Defects and Non-Stoichiometry: Imperfections and defects in crystals. Vacancy, Schottky and Frenkel defects. Thermodynamics of Schottky and Frenkel defect formation, colour centres, non-stoichiometry and defects—Structures of UO_2 , FeO and TiO_2 . 4hrs.

Solid State Reactions: General Principles, Wagner's theory. Order- disorder transitions in solids- Bragg- William's theory Mechanism of diffusion, Kirkendall effect. 3 hrs

Preparative Methods: Ceramic, sol-gel, precursor and chemical vapour deposition (CVD) methods. Nucleation & crystal growth techniques-pulling, zoning, flame fusion & skull melting. Basic methods of preparation of thin films. 5 hrs

UNIT-II:[15hours]

Electronic Properties and Band Theory: Free electron theory to band theory of solids, electrical conductivity, Hall effect. Metals, Insulators and Semiconductors. Intrinsic and extrinsic semiconductors, hopping semiconductors. Metal – semiconductor and p-n junctions. 6 hrs

Magnetic properties: Classification of magnetic materials—dia, para, ferro, ferri, antiferro & antiferri magnetic types Langevin diamagnetism. Selected magnetic materials such as spinels & garnets. 4hrs **Ionic Conductors:** Types of ionic conductors, mechanism of ionic conduction, diffusion superionic conductors; phase transitions and mechanism of conduction in superionic conductors, examples— α -alumina, AgI , halide and oxide ion conductors 5 hrs

UNIT - III:

[15 Hours]

Superconductivity: Meissner effects; Types I and II superconductors, Features of superconductors, isotope effect, high T_c materials. Basics of low temperature superconductivity. 5hrs.

Liquid Crystals: Mesomorphic behaviour, thermotropic liquid crystals, positional order, bond orientational order, nematic and smecticmeso phases; smectic – nematic transition and clearing temperature- homeotropic, planar and schlieren textures, twisted nematics chiral nematics, molecular arrangements in smectic A & C phases. Optical properties of liquid crystals 5hrs

Nanomaterials: Introduction—importance and characterization of nanomaterials—stability of nanoparticles In solutions – synthesis of metal nanomaterials: Physical methods (Laser Ablation, Evaporation, sputtering and solvated metal dispersion) chemical methods (Thermolysis, Sonochemical approach, reduction of metal ions by hydrogen and methanol) 5hrs.

REFERENCES:

1. D. K. Chakrabarty, Solid state chemistry (New Age) 1996.
2. H.V. Keer, Principles of the solid state (Wiley Eastern) 1993.
3. A.R. West, Solid state chemistry and its applications (Wiley) 1984.
4. L. Smart and E. Moore, Solid State Chemistry –An Introduction (Chapman &Hall) 1992.
5. L. Azaroff, An Introduction to Solids (Mc Graw Hill).
6. V. Raghavan, Material science and Engineering (3rd Ed), (Prentice Hall India) 1993.
7. Thermotropic Liquid Crystals, Ed. G.W. Gray, Wiley.
8. S. Chandrasekhar, Liquid Crystals, Cambridge University Press (2nded), 1994.
9. Chemical Kinetics, K. J. Laidler, Pearson Education, Anand Sons (India) 3rd edition (2008)
10. Physical Chemistry at surfaces, 6th ed., A.W Adamson and A P Gast, John Wiley, Canada, 1997.
11. C.P. Poole and F.K. Owens Introduction to Nanotechnology, (2004).
12. T. Pradeep, Nano: The Essential, Tata McGraw Hill Publishing Company Ltd., New Delhi, (2008).



CH S 504: Medicinal and Natural Products Chemistry

COURSE OUTCOME:

- Students will gain an understanding on the classification and nomenclature of drugs, modern theories of drug action and drug design.
- Students will be able to know classification, synthesis and mode of action of antipyretic analgesic drugs, general anaesthetics, local anaesthetics, cardiovascular drugs, antineoplastic agents and antiviral drugs with suitable examples.
- Students will get a good understanding of isolation, classification,
- Methods of structure elucidation and synthesis of various types of alkaloids, terpenoids and steroids with suitable examples.

UNIT- I:

[12 Hours]

Drugs: Introduction, Classification and nomenclature of drugs. Theories of drug action- Occupancy theory, Induced fit theory and Perturbation theory. Analogues and Prodrugs, Factors governing drug design. Rational approach to drug design, Variation method of drug designing, Physico-Chemical factors, stereochemistry and biological activities. Factors governing the ability of drugs.

Antipyretic Analgesics: Classification, synthesis & mode of action of Phenacetin, Aspirin, Cinchophen, Phenazone and Mefenamic acid.

General Anesthetics: Introduction and classification, synthesis & mode of action of methoxyfluorane, Thiopental sodium and Fentanyl citrate.

Local anesthetics: Introduction and classification, synthesis & mode of action of benzocaine, α -Eucaine, Lignocaine hydrochloride and Dibucaine hydrochloride.

UNIT- II:

[12 hours]

Cardiovascular drugs: Introduction & classification, Synthesis & mode of action of Hydralazine, Methyldopa, Diazoxide, Procainamide, Propranolol, Prenylamine.

Antimalarials: Introduction and classification, Synthesis & mode of action of Chloroquinephosphate, Pamaquine and pyrimethanin.

Antineoplastic agents: Introduction and classification, Synthesis & mode of action of Mechlorethamine hydrochloride, Busulfantriethylenemelamine, Methotrexate and Flurouracil.

Antiviral drugs: Introduction, classification, Synthesis & mechanism of action of Methisazone, Idoxuridine and Amantidine hydrochloride.

UNIT- III:

[12 Hours]

Alkaloids: Isolation, classification and general methods of structure elucidation. Structure and synthesis of Papaverine, Adrenaline and Reserpine.

Terpenoids: Introduction, classification, isoprene rule and methods of structure determination.

Structure and synthesis of Geraniol, Menthol, α -Pinene, Camphor and Zingiberene.

Steroids: Introduction, Blanc's rule, Chemistry of Cholesterol, Oestrone, Progesterone and Androsterone.

REFERENCES:

1. Medicinal Chemistry- Ashutosh Kar (New Age.), 2005,
2. Medicinal Chemistry- G. R. Chatwal (Himalaya) 2002.
3. Principles of Drug Action- II Ed. A. Goldstein Lewis Arnold & Suner M. Kalman (Wiley Int. Ed.)
4. Natural Products Chemistry, Vol-I & II- G.R. Chatwal (Himalaya), 1990.
5. Organic Chemistry, Vol I & II, I.L. Finar (Longmann ELBS, London), 1973.
6. Chemistry of Natural Products – Vol-I & II – O. P. Agarwal (Goel Gorakhpur), 1985.
7. Chemistry of Natural Products: A Unified Approach-N R Krishnaswamy (University Press) 1999



CH S 505: BIOORGANIC CHEMISTRY

COURSE OUTCOME:

Students will be able to:

- Understand the configuration and conformation of monosaccharide's, chemistry of important derivatives of monosaccharide's, structure, synthesis, industrial and biological applications of disaccharides, general methods of determination of polysaccharide structures, photosynthesis, fermentation, structure and industrial applications of polysaccharides.
- Explain the peptide bond formation, synthetic protocol for peptides, solution and solid phase peptide synthesis, Methods of peptide structure determination, different types protein structures, non-steroidal hormones, nucleosides, nucleotides,
- Synthesis of nucleosides, nucleotides and polynucleotides, structure and functions of nucleic acids.
- Learn the classification, nomenclature, sources, deficiency diseases, biological functions and chemistry of Vitamin A1, B3, B5, C and K1.
- Know the classification and chemistry of antibiotics like Penicillin V, Streptomycin, chloramphenicol and tetracyclins

UNIT I

[12 Hours]

Carbohydrates Configuration and conformation of (D & L) monosaccharide's, Hudson's rule, Mutarotation, Anomeric effect, Epimerization. Chemistry of important derivatives of monosaccharides: Glycosides (ethers, esters, acetals, ketals), deoxysugars, aminosugars, Structure of disaccharides-maltose, cellobiose and sucrose, Industrial & biological applications. General methods of structural degradation of polysaccharides- methylation & partial hydrolysis, Smith degradation and alkaline degradation techniques. Structures of cellulose, chitin, starch and glycogen. Industrial applications of cellulose & starch. Photosynthesis and Fermentation.

UNIT II

[12 Hours]

Peptides & Proteins: Peptide bond formation and synthesis of polypeptides, Amino and carboxy protecting groups in peptide synthesis, Solid phase peptide synthesis-Merrifield method, Peptide structure determination-Sequence and End group analysis (N-Terminal and C-Terminal), Secondary, Tertiary and Quaternary structure of proteins.

Nucleic acids: Nucleosides and Nucleotides, Chemical synthesis of nucleosides and nucleotides. Poly nucleotides- Structure and functions of DNA and RNA.

Non steroidal hormones: Study of the Oxytocin, Vasopressin and synthetic analogs, General study of ACTH, Growth hormones, Somatotropin and Insulin.

UNIT III

[12 Hours]

Vitamins: Classification and Nomenclature. Source, deficiency diseases and biological functions of Vitamins. Study of Vitamin A1, Vitamin B3, Vitamin B5, Vitamin C and Vitamin K1.

Antibiotics: Introduction, Classification, Chemistry of Penicillin V, Streptomycin, Chloramphenicol and Tetracyclin.

REFERENCES:

1. Organic Chemistry-P.Y. Bruice (Pearson Education Pvt.Ltd., New Delhi),2002.
2. Organic Chemistry 4thEdn.–S.H. Pine et al (McGraw-Hill, London) 1987.
3. Advanced Organic Chemistry- R.A. Carey and R.J. Sundberg (Plenum, New York)1990.
4. Organic Chemistry, Vol I & II, I.L. Finar (Longmann ELBS, London), 1973.
5. Natural Products Chemistry, Vol-I & II- G.R. Chatwal (Himalaya), 1990.
6. Chemistry of Natural Products: A Unified Approach-N R Krishnaswamy (University Press) 1999.
7. Chemistry of Natural Products-Sujata V. Bhat, B.A. Nagasampagi, Meenakshi Sivakumar (Springer-Narosa) 2005.



CHE 506: ANALYTICAL & GREEN CHEMISTRY

COURSE OUTCOME:

Enable the students:

- To understand the basic principles and theory of UV-Visible, Electronic, Infra Red, Nuclear Magnetic Resonance and Mass Spectroscopy.
- To study the utility of these techniques in structure elucidation of simple organic molecules.
- To know about water cycle, water sources, water quality, significant measurements of water parameters and treatment of water for drinking and industrial purposes.
- To learn about principles and use of green chemistry in laboratory synthesis.
- To understand the basic principles and utility of sonochemistry and Microwave induced organic synthesis.

UNIT- I:

[12 Hours]

UV/Electronic Spectroscopy: Basic principles, Beer-Lambert law, types of absorption bands, Factors affecting the positions of UV bands. Theoretical prediction of λ_{max} for polyenes, -unsaturated aldehydes, ketones (Woodward-Fieser rules) and substituted benzenes.

IR Spectroscopy: Basic principles, Application of infrared spectroscopy in the structural study-identity by finger printing and identification of functional groups. Characteristic vibrational frequencies of alkanes, alkenes, alkynes, aromatic compounds, alcohols, ethers, phenols and amines). Study of vibrational frequencies of carbonyl compounds (ketones, aldehydes, esters, amides and acids). Factors affecting band positions and intensities

Nuclear Magnetic Resonance Spectroscopy: Basic principles, Solvents used, chemical shift and its measurements, factors affecting chemical shift. Integration of NMR signals, spin-spin coupling, coupling constant. Shielding and deshielding. High resolution ^1H NMR. Applications of NMR spectroscopy in structure elucidation of simple organic molecules.

Mass Spectrometry: Basic principles, molecular ions, meta-stable ions and isotope ions. Fragmentation processes, McLafferty rearrangement. retro Diels-Alder fragmentations. Nitrogen rule.

UNIT- II:

[12 Hours]

Hydrologic cycle, sources, chemistry of sea water, criteria and standards of water quality-safe drinking water, maximum contamination levels of inorganic and organic chemicals, radiological contaminants, turbidity, microbial contaminants. Public health significance and measurement of colour, turbidity, total solids, acidity, alkalinity, hardness, chloride, residual chlorine, sulphate, fluoride, phosphate and different forms of nitrogen in natural and polluted water. Chemical sources of taste and odour, treatment for their removal, sampling and monitoring techniques. Determination and significance of DO, BOD, COD and TOC. Water purification for drinking and industrial purposes, disinfection techniques, demineralization, desalination processes and reverse osmosis. Treatment of liquid radioactive wastes

UNIT- III:

[12 Hours]

Green Chemistry: Definition and principles, planning a green synthesis in a chemical laboratory, Green preparation-Aqueous phase reactions, solid state (solventless) reactions, photochemical reactions, Phase transfer catalyst catalysed reactions (Quaternary ammonium salts & Crown ethers), enzymatic transformations & reactions in ionic liquids.

Sonochemistry: Introduction, instrumentation, the phenomenon of cavitation, Sonochemical esterification, substitution, addition, oxidation, reduction and coupling reactions.

Microwave induced organic synthesis: Introduction, reaction vessel and reaction medium, concept, specific effect, atom efficiency, % atom utilisation, advantages and limitations, alkylation of active methylene compounds, N-alkylation, condensation of active methylene compounds with aldehydes, Diels-Alder reaction, Leuckardt reductive amination of ketones, ortho ester Claisen rearrangement.

REFERENCES:

1. Organic Spectroscopy-3rd Ed.-W. Kemp (Pargrave Publishers, New York), 1991.
2. Spectrometric Identification of Organic Compounds - Silverstein, Bassler & Monnill (Wiley)1981.
3. Applications of Absorption Spectroscopy of Organic Compounds-Dyer (Prentice Hall, NY) 1965.
4. Spectroscopy of Organic Compounds-3rd Ed.-P.S. Kalsi (New Age, New Delhi) 2000.
5. Spectroscopic Methods in Organic Chemistry - Williams and Fleming, TMH.
6. A.K. De: Environmental Chemistry, (Wiley Eastern).
7. S.K.Banerji : Environmental Chemistry, (Prentice Hall India), 1993.
8. 8 S.D. Faust and O.M. Aly: Chemistry of Water Treatment, (Butterworths),1983.
9. Sawyer and McCarty, Chemistry for Environmental Engineering (McGraw Hill) 1978
- 10 I. Williams, Environmental Chemistry, John Wiley, 2001
- 11 S.M. Khopkar, Environmental Pollution Analysis, (Wiley Eastern).
- 12 Organic Synthesis-Special Techniques, V.K. Ahluwalia& R. Aggarwal, Narosa, 2001.
- 13 Green Chemistry-Environment friendly alternatives- R. Sanghi & M.M. Srivatsava, Narosa, 2003.
- 14 Green Chemistry-Environment benign reactions- V.K. Ahluwalia, Ane Books India, 2006.

CH P 507: INORGANIC CHEMISTRY PRACTICALS – III

COURSE OUTCOME:

- The students will have hands on experience in the Analysis of Brass, Cu-Ni alloy, Stainless Steel,
- Type Metal and quantitative analysis of the constituents & mixtures containing the following radicals Fe^{+} Ni, Fe^{+} Ca, Cr^{+} Fe.
- This course also train the students in Separation and determination of $\text{Mg}^{2+}/\text{Zn}^{2+}$, $\text{Zn}^{2+}/\text{Cd}^{2+}$ by Ion-Exchange Chromatography in Part A and in Part B
- Determination of COD, Phosphorus, DO, Nitrate, Alkalinity of Water.

A. Any five of the following experiments are to be carried out:

1. Analysis of brass-Cugravimetrically using α -Benzoinoxime & Zinc complexometrically.
2. Analysis Cu-Ni alloy.
3. Analysis of Stainless Steel – Insoluble residue by gravimetry, Ni gravimetrically using DMG, Fe volumetrically using Ce(IV) & Cr(III) volumetrically by persulphate oxidation.
4. Analysis of Type metal–Sn gravimetrically, Pb electrogravimetrically and Sb titrimetrically using KBrO_3
5. Quantitative analysis of the constituents & mixtures containing the following radicals
 - i. $\text{Fe}(\text{II}) + \text{Ni}(\text{II})$ - Fe gravimetrically as Fe_2O_3 and Ni using EDTA.
 - b. $\text{Fe}(\text{III}) + \text{Ca}(\text{II})$ - Fe gravimetrically as Fe_2O_3 and Ca using EDTA.
 - c. $\text{Cr}(\text{III}) + \text{Fe}(\text{III})$ – Using EDTA by Kinetic masking method.
6. Analysis of chalcopyrites, magnetite and ilmenite.
7. Ion-exchange chromatography: Separation and determination of $\text{Mg}^{2+}/\text{Zn}^{2+}$, $\text{Zn}^{2+}/\text{Cd}^{2+}$ & Cl^-/Br^- .

B. Any five of the following experiments are to be carried out:

8. Determination of COD of a water sample
9. Determination of Phosphorus.
10. Determination of dissolved oxygen (DO) by Winkler's method
11. Determination of nitrate & nitrite in water samples and sea water.
12. Analysis of heavy metals in waste water, sea water (Pb, Hg etc. By spectrophotometry)
13. Determination of available K in soil,
14. Nephelometric determination of sulphate/phosphate.
15. Determination of alkalinity of water samples
16. Determination of fluoride in drinking water by spectrophotometry and ion selective electrode
17. Determination of phosphates in detergents
18. Spectrophotometric determination of sulphur and phosphorus present in soil.

REFERENCES:

1. A.I. Vogel: A Text book of Quantitative Inorganic Analysis, (ELBS), 1978.
2. APHA, AWWA and WPCF: Standard Method for the Examination of water and Waste Water (Washington DC), 1989,
3. I. M. Kolthof and E.P. Sandell: Quantitative Chemical Analysis. McMillan, 1980
4. I. Williams, Environmental Chemistry, Wiley, 2001
5. Lobinski and Marczenko, Comprehensive Analytical Chemistry, Vol.30, Elsevier, 1996.

CH P 508: ORGANIC CHEMISTRY PRACTICALS – III

COURSE OUTCOME:

- Enable the students to understand and learn the principle of quantitative estimation of different types of organic molecules,
- Methods of organic preparations using multistep synthetic protocol,
- Isolation and purification of intermediate and final products,
- Use of computers in the study of conformation and geometry of some simple organic molecules.

Quantitative Determination: of sugars, amino acids, phenols, amines by various methods. Determinations of acid & ester and acid & amide in the given mixtures.

Multi Step Organic Synthesis: Synthesis of Ethyl resorcinol from Resorcinol, ϵ -Caprolactam from cyclohexanone, p-Aminobenzoic acid from p-Nitrotoluidine, s-Tribromobenzene from aniline, Benzanilide from Benzophenone, Benzylic acid from Benzoin, 2,5-Dihydroxy acetophenone from Hydroquinone, 2,4-Dinitrophenylhydrazine from Chlorobenzene, m-Nitrobenzoic acid from Benzoic acid, 2,4-Dinitrophenol from Chlorobenzene, o-Aminobenzoic acid from Phthalic anhydride.

Separation Techniques: Separation of components from mixture of organic compounds by fractional crystallization, fractional distillation, adsorption, Paper and TLC. Their purification and characterization.

Applications of computers in the study of conformation and geometry of some simple organic molecules.

REFERENCES:

1. Elementary Practical Organic Chemistry-Vol. III quantitative Organic Analysis- A.I. Vogel
2. Experimental Organic Chemistry- Vol. I &II- P.R. Singh, Tata McGraw-Hill, 1981.
3. Practical Organic Chemistry- IV Ed- Dey &.Sitaraman (Allied)
4. Laboratory Experiments in Organic Chemistry-Adam, Johnson &Wicon (McMillan, London), 1979.
5. Experimental Organic Chemistry- H.D. Durst &G.E. Goke (McGraw-Hill)1980.
6. Computers and their applications to Chemistry, Ramesh Kumari (Narosa).
7. Short Manual to the Chemical Drawing Program-Chem Draw®- Stefan Bienz (Cambridge Soft)

CH P 509: PHYSICAL CHEMISTRY PRACTICALS – III

COURSE OUTCOME:

- This practical course give training to students on important electrochemical techniques namely,
- Conductometry, potentiometry, voltametry and polarography.
- In addition, they are introduced to nuclear and radiation chemistry experiments.
- This course enhances the skill of students in quantitative analysis

A. Electrochemistry:

a. Conductometry (At least three experiments to be carried out)

1. Titration of a mixture of acetic acid, monochloro and trichloacetic acids with NaOH.
2. Determination of concentrations/amounts of sulphuric acid, acetic acid and copper sulphate by conductometric titration with sodium hydroxide.
3. Measurements of the conductance of a weak acid, (a) HOAC and of the strong electrolytes NaOAc, HCl and NaCl and (b) HCOOH and of the strong electrolytes HCOONa, HCl and NaCl) and to calculate the ionization constant of the acid.
4. Titration of mixture of strong acid and weak acid with weak base (HCl + HAC against NH₄OH).
5. Determination of pK_a of a given weak acid by pH measurements at various dilutions.
6. Conductometric titration of the mixture of (a) HCl and NH₄Cl and (b) HCl and acetic acid.
7. Determination of activity coefficient of Zinc ions in 0.002M ZnSO₄.
8. Conductometric determination of Critical Micelle Concentration.

B. Potentiometry (At least three experiments are to be carried out)

1. Composition of Zinc Ferrocyanide Complex by potentiometric Titration.
2. Potentiometric titration of (a) Non aqueous system and (b) mixture of strong (HCl) and weak (HAC) acid with NaOH / NH₄OH and find the strength of the acids in mixture.
3. Determination of decomposition potential of an aqueous electrolytic solution.
4. Determination of the potential of an electrochemical cell and mean ionic activity coefficient.
5. Determination of acidic and basic dissociation constants and isoelectric point an amino acid pH metrically..
6. pH titration of (a) HCl versus NaOH, (b) HOAC versus NaOH and (c) lead nitrate versus potassium chromate, and Titration of mixture of bases (Na₂CO₃& NaHCO₃) with standard HCl..
7. Determination of pK_a values of functional groups in amino acids using a pH meter.
8. Determination of Hammett constants of o-, m-, p- amino/nitro benzoic acid by pH measurements.
9. Verification of Tafel equation of hydrogen evolution reaction.
10. Study of rate of corrosion and inhibition efficiency of an inhibitor on mild steel/Al/Cu by weight loss method i) at different time intervals and ii) at different temperatures(to evaluate thermodynamic parameters)

C. Radiochemistry Experiments (At least Three experiments to be carried out)

1. Study of (a) Characteristic plateau, (b) Geometry effects and Statistics of G.M counter
2. Determination of (a) Dead time by single source & double source method. (b) E_{\max} of α - source (c) Back scattering of α and (d) α energy emitted by C-14.
3. Verification of the inverse square law.
4. Determination of half life of radionuclides.
4. Determination of Linear and mass attenuation coefficient.
5. Preparation of Fricke and Ceric sulphate dosimeters & calculation of G-value & dose rate.
6. Study of isotope dilution analysis; 8. Radiochemical Determination of I-131 in sea water.
7. Determination of β -particle range and, maximum energy (by half thickness method).

C. Voltammetry & Polarography (Any Three experiments are to be carried out)

1. Determination of the half-wave potential of Cd (II), Cu(II)& Zn(II) ions in 0.1M solutions.
2. Determination of metal ions individually and in mixtures,
3. Determination of the formula and the stability constant of a lead oxalate.
4. Study of the polarogram of supporting electrolyte with and without dissolved oxygen,
5. Determination of Huckel $\log K$ value of aromatic hydrocarbon reduction at dropping mercury electrode.
6. Amperometric titrations.
7. Coulometric titration
8. Percentage purity of copper sulphate by electrogravimetric method.

REFERENCES:

1. Findlay's Practical Physical Chemistry- B. P. Levitt (Longman, London).
2. Experiments in Physical Chemistry-James and Prichard.
3. Experimental Physical Chemistry - Daniels et al.
4. Experimental Physical Chemistry-Das & Behera (Tata McGraw Hill, New Delhi)1983.
5. Advanced Practical Physical Chemistry-Yadav (1989).
6. Experiments in Physical Chemistry-J. C. Ghosh (Bharathi Bhavan)1974.
7. Nucleonix systems Pvt. Ltd, Hyderabad.

4th SEMESTER

CH H 551 BIOINORGANIC CHEMISTRY

COURSE OUTCOME:

- In this course, students will learn metal and non metal ions in biological systems,
- Biological nitrogen fixation, Photocatalysis,
- Transport and storage of dioxygen, Metal storage and Transport, Metalloproteins as enzymes,
- Therapeutic uses of metals, Metal complexes as drugs, Treatment of toxicity due to inorganics.

UNIT -I:

[15 Hours]

Metal and non metal ions in biological systems-essential and trace metals, ion transport across membranes, active transport of ions across biological membranes, ionophores.

Biological nitrogen fixation, Molybdenum nitrogenase Model compounds, in vitro fixation of nitrogen through dinitrogen complex. Metal complexes in transmission of energy-chlorophylls. photosystems I and II in cleavage of water, model systems.

UNIT-II:

[15Hours]

Transport and storage of dioxygen- heme proteins, oxygen uptake, functions of haemoglobin, myoglobin, hemerythrin and hemocyanins, synthetic oxygen carriers.

Metal storage and transport – ferritin, transferrin and ceruloplasmin. Electron transfer proteins-cytochromes, iron-sulphur proteins. Metalloproteins as enzymes – carboxypeptidase, carbonic anhydrase, alcohol dehydrogenase, catalases, peroxidases, cytochrome P 450, superoxide dismutase, copper oxidases, vitamin B12 coenzyme.

UNIT – III

[15 HOURS]

Therapeutic uses of Metals - Metals in medicine: Metals and human biochemistry, general requirements. Disease due to metal deficiency and treatment: Iron, zinc, copper, sodium, potassium, magnesium, calcium and selenium.

Metal complexes as drugs and therapeutic agents: Antibacterial agents, antiviral agents, metal complexes in cancer therapy, metal complexes for the treatment of rheumatoid arthritis, vanadium in diabetes, metal complexes as radio diagnostic agents.

Treatment of toxicity due to inorganics: General aspects of mechanism of metal ion toxicity, (i) Mechanism of antidote complex with poison, rendering it inert: arsenic, lead, mercury, iron, copper (ii) Antidote accelerated metabolic conversion of poison to non-toxic product: cyanide and carbon monoxide

REFERENCES

1. M.N. Hughes: Inorganic Chemistry of Biological Processes, (2nd edn.) Wiley, 1988.
2. I. Bertini. H.B. Gray, S.J. Lippard and J.S. Valentine: Bioinorganic Chemistry, Viva Books, 1998.
3. J.E Huheey, R.L. Keiter and A.L. Keiter: Inorganic Chemistry (4th edn), Addison Wesley, 2000.
4. K. Hussain Reddy, Bioinorganic Chemistry - New Age International Ltd. (2003).
5. R.W. Hay, Bioinorganic Chemistry - Ellis Horwood Ltd., (1984)
6. Asim K Das, Bioinorganic chemistry, Books & Allied (P) Ltd.

CH H 552: ORGANIC SYNTHETIC METHODS

COURSE OUTCOME:

Enable the students:

- To acquire knowledge on the various reagents employed for oxidation and reduction of various kinds of organic molecules.
- To understand the various methods of halogenations of carbonyl compounds, benzylic and allylic halogenations.
- To understand the synthetic design with diverse chemical reactions, planning of organic synthesis and functionality.
- To learn the principles and technologies used in disconnection approach, the utility of protecting group strategy in organic synthesis and retrosynthetic analysis.

UNIT-I:

[15Hours]

Reduction Reactions: Catalytic hydrogenation-Introduction, catalysts and solvents, mechanisms and stereochemistry of catalytic hydrogenations. Hydrogenolysis and homogeneous catalytic hydrogenation.

Metal hydride reduction: Reduction with LiAlH_4 and NaBH_4 , Stereo chemistry of reduction, Reduction with diborane and related reactions.

Dissolving Metal Reductions: Mechanisms of reduction of carbonyl compounds, bimolecular reductions of esters, Birch reduction, Wolf-Kishner reduction and reduction with diimide. **Oxidation reactions:** Mechanism of oxidation reaction with chromium and manganese salts, Osmium tetroxide, peracids, periodic acid and Lead tetra acetate.

Halogenation: Halogenation of carbonyl compounds. Benzylic and Allylic halogenations.

UNIT- II:

[15 Hours]

Synthetic Design: Carbon skeleton frame work, Classification of carbon-carbon single bond and double bond forming reaction and their use in carbon skeleton ring formation. Ring forming and ring cleaving reactions, use of Thorpe condensation, Carbene insertion reaction, Friedel-Crafts reaction, 1,3-dipolar addition and Ene reaction in ring formation, Oxidative cleavage of rings and Retro Diel's-Alder reactions.

Planning of Organic Synthesis: Selection of starting materials and key intermediates during the synthesis. Synthesis of Cubane and Iswarane. Use of Robinson annulation, Dieckmann cyclisation, Arndt-Eistert synthesis, Diel's- Alder reaction in organic synthesis.

Functionality: Synthesis of 6- and 7- methoxytetralones, biotin and penicillin-V with special reference to the introduction of functional groups. Stereo chemical consideration and stereo selectivity during organic synthesis.

UNIT- III:

[15 Hours]

General introduction to disconnection approach. Basic principles and technologies used in disconnection approach. Synthons and synthetic equivalents. Interconversion of functional groups. One group C-X and two group C-X disconnections. Use of C-C one group and C-C two group disconnections in the synthesis of 1,2; 1,3; 1,4; 1,5 and 1,6-difunctionalised compounds. **Protecting groups:** Principle of protection of hydroxyl, amino, carboxylic and carbonyl groups.

Retrosynthetic analysis: Analysis of alcohols, carbonyl compounds cyclic and acyclic alkanes, benzocaine, p-methoxyacetophenone, acetonecyanohydrin, 2-methyl-6-methoxy-indole-3-acetic acid, 6-methylquinoline & 1-phenyl-4-p-methoxyphenyl-1,3-butadiene. Illustrative synthesis of Limonene, Danishefsky's pentalenolactone, Benziodarone,

Nitrofurazone, Warfarin, Juvabione, Longifolene, Prelog-Djerassi lactone and Taxol. Solid phase synthesis of oligonucleotides.

REFERENCES:

1. Modern Organic Reactions- H.O. House.
2. Organic Synthesis- R. E. Ireland (Prentice Hall India), 1969.
3. Art in Organic Synthesis- Anand, Bindra & Ranganath-(Wiley New Delhi), 1970.
4. Organic Synthesis a Disconnection Approach- Stuart Warren
5. Advanced Organic Chemistry-IV-Ed. Part A & B-F.J. Carrey & R.J. Sundberg (Kluwer) 2001.
6. Modern Methods of Organic Synthesis-N. Carruthers (Cambridge University), 1996.
7. Selected Organic Synthesis-Ian Fleming (John Wiley & Sons) 1973.



CH H 553: ELECTROCHEMISTRY AND REACTION DYNAMICS

COURSE OUTCOME:

- It is an advanced course on two different topics, electrochemical processes and theoretical aspects of chemical kinetics. The first part deals with concept and applications of electrocatalysis and processes taking place at the electrode and the solution interface.
- This course content trains students on alternate methods of synthesis using electrochemical concepts.
- Introduces the student to theoretical basis of understanding the rates of complex reactions,
- Arriving at the mechanism of various inorganic and organic reactions and knowledge of advanced techniques with the use of lasers in characterizing intermediates complex chemical reactions.

UNIT-I:

[15 hours]

Electrocatalysis -Introduction. Electrocatalysis in reactions involving adsorbed species, concept and process of electrogrowth on electrodes. deposition to crystallization, mechanism of electrogrowth. Special features of electrocatalysis. Hydrogen evolution and reactions. Electronation of oxygen and their mechanisms. 6hrs.

Photocatalysis: History of photocatalysis, principles and developments in photoelectrochemistry. Semiconductor-electrolyte solution interface. Effect of light at semiconductor interface. Capacity of space charge - Mott-Schottky plot. Photo cells-PEC cells and Phtogalvanic cells, surface effects in photoelectrochemistry. 5hrs

Ionic liquids - Introduction, characteristics of ionic liquids, models of simple ionic liquids, mixtures of simple ionic liquids. Hole model for liquid electrolytes. Transport phenomena in liquid electrolytes. Electronic conductance of alkali metals dissolved in alkali halides. 4hrs.

UNIT – II

[15 hours]

Electrode Processes: Charge transfer across the interface and its implications. Basic electrodic reactions: Butler - Volmer equation. Current potential laws at charged interface. Quantum aspects of charge transfer reactions. Concepts of over voltage, Theory of hydrogen and oxygen overvoltage. Mechanism of cathodic and anodic reactions, Dependence of current density on overvoltage: Tafel equation. Applications of electrode processes-(voltammetry, electrosynthesis, electrocatalysis, source of energy) 6 hrs.

The Electrified Interface: Electrification of an interfaces, experimental techniques used in studying interface (Low energy electron diffraction, X-ray photoelectron spectroscopy). The potential difference across Electrified interface. The accumulation and depletion of substances at an interface. Thermodynamics of electrified interface. Brief introduction to the structure of electrified interfaces(models) . 6hrs.

Kinetics of Composite Reactions: Inorganic reaction mechanism (decomposition of N_2O_5 , and phosgene). Organic reaction mechanism- decomposition of acetaldehyde. Goldfinger-Letort-Niclaue rules, combustion of hydrocarbon. 3hrs

UNIT – II

[15 hours]

Reaction Dynamics: A Review of Chemical Kinetics, and activation parameters. Statistical treatment of rates – Transition state theory and its applications to reactions in solution. Concept of tunneling. Conventional transition state theory (CTST) - equilibrium hypothesis, Applications of CTST to reaction between atoms, derivation of rate expression, thermodynamic formulation of conventional transition – state theory, limitations of CTST.

Extension of TST.

7hrs.

Potential energy surfaces – Features & construction of them. Theoretical calculation of E_a . Features of potential energy surfaces (attractive and repulsive surfaces for exothermic reaction). A brief account on concept of stripping and rebound mechanisms. State-to-state kinetics and spectroscopy of transient species.

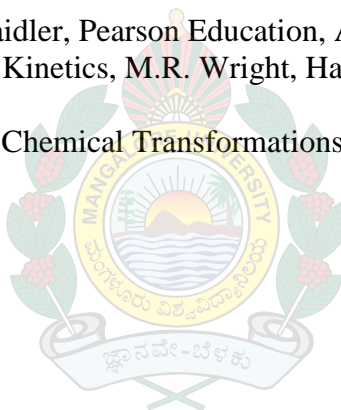
4hrs

Dynamics of unimolecular reactions - Lindemann, Hinshelwood, RRK & RRKM theories.

4 hrs.

REFERENCES:

1. Modern Electrochemistry, 2nd Ed. Vol.1, 2A & 2B, J O M Bockris and A K N Reddy, (Plenum, New York) 1998.
2. Chemical and Electrochemical Energy Systems, Narayan & Viswanathan (Univ. Press, Hyderabad) 1998.
3. Fundamentals of Electrochemistry, Fulkner and A. J. Bard, Wiley India, 2006.
4. Ions in solution-Basic principles of chemical interactions, J. Burgeess (Chichester) 1999.
5. Electrochemistry-Principles, Methods and Applications, Brett and Brett, Oxford Science 1993.
6. Chemical Kinetics, K. J. Laidler, Pearson Education, Anand Sons (India) 3rd ed., 2008.
7. Fundamentals of Chemical Kinetics, M.R. Wright, Harwood Publishing, Chichesrer, 1999.
8. Kinetics & Mechanisms of Chemical Transformations, J Rajaram & J C Kuriacose, Macmillan, Delhi, 2007.



CH S 554: ORGANOMETALLIC CHEMISTRY

COURSE OUTCOME:

- The students will learn Historical development of Organometallic compounds, Classification,
- Nomenclature, Transition metal to carbon multiple bonded compounds, Transition metal-carbon pi complexes,
- Catalysis by organometallic compounds, Homogeneous catalysis by organometallics, Hydrocarbonylation of olefins,
- Ziegler-Natta catalyst and Water Gas Shift reactions in this course.

UNIT- I:

[12 Hours]

Historical development- classification and nomenclature, bond energies and stability. 16- and 18-electron rules. Transition metal alkyls and aryls- types, routes of synthesis, stability and decomposition pathways. Nucleophilic and electrophilic cleavage of metal-carbon sigma bonded compounds. Alkane activation.

Transition metal to carbon multiple-bonded compounds- carbenes, carbynes, synthesis, nature of bond, agostic interactions, structural characteristics and reactivity. Transition metal hydrides– synthetic routes, properties, structure and reactivity, synthetic applications.

UNIT-II:

[12 hours]

Transition metal-carbon pi complexes: Preparative methods, nature of bonding, structural features of olefinic, acetylenic, allylic, butadiene, cyclobutadiene, η^5 - cyclopentadienyl, η^6 - benzene and other arenes, cycloheptatriene and cyclooctatetraene complexes. Important reactions relating to nucleophilic and electrophilic attack on ligands. Fluxional isomerism in olefin, allyl, dienyl and cyclopentadienyl complexes. Carbene complexes and metallacycles, arene complexes. Isolobal concept.

UNIT- III:

[12 hours]

Catalysis by organometallic compounds: oxidative addition, insertion, deinsertion and reductive elimination reactions.

Homogeneous catalysis by organometallics- hydrogenation, hydrosilation, hydrocyanation and isomerization of olefins, immobilisation of homogeneous hydrogenation catalysts, Hydrocarbonylation of olefins (oxo reaction–cobalt and rhodium oxo catalysts), Wacker process. Carbonylation of alcohols- Monsanto acetic acid process. Polymerization of olefins and acetylenes: Ziegler-Natta catalyst systems. Fischer – Tropsch reaction, Water Gas Shift reactions.

REFERENCES:

1. J.P. Collman, L.S. hegedus, J.R. Norton and R.G. Finke: Principles and Applications of Organotransition Metal Chemistry, University Science Books, 1987.
2. R.C. Mehrotra and A. Singh: Organometallic Chemistry, New Age International, 1999.
3. R.H. Crabtree: Organometallic Chemistry of Transition Metals, Wiley, 1999.
4. F.A. Cotton and G. Wilkinson: Advanced Inorganic Chemistry, Wiley, 1991.
5. Organometallic Chemistry, G. S. Sodhi, Ane books Pvt Ltd Edition 2009.

CH S 555: POLYMER CHEMISTRY

COURSE OUTCOME:

- This is an introductory course on highly useful materials, namely the polymers. The course content is of interdisciplinary interest.
- It deals with types, techniques of preparation and characterization of plastics, rubber and fibre materials.
- The applications of these materials in daily life, engineering and biomedical field have been emphasized.
- The students are exposed to the problems of polymer waste management and the strategies developed to minimize plastic pollution.

UNIT- I: [12 Hours]

Terminology and basic concepts: Monomers, Functionality, repeat UNITS, degree of polymerization. General structure and naming of polymers. **Classification** based on various considerations-source, preparation methods, thermal behavior, chain structure etc.

Types –Homopolymers and copolymers; Linear, branched and network polymers.

Techniques of polymerization: Techniques of preparation of addition and condensation polymers.

Kinetics of polymerization: Kinetics of addition and condensation polymerization. Kinetics of copolymerization.

UNIT- II:

[12 Hours]

Stereochemistry of polymers: Geometric and optical isomerism in polymers. Structure, properties and preparation of stereoregular polymers.

Expressions for average molecular weights. Molecular weight distribution and Polydispersity.

Determination of molecular weight: Osmometry, viscometry, ultracentrifugation and GPC methods

Thermal Characterization: Glass Transition and melting-correlation with structure- Factors affecting T_g and T_m . Techniques of thermal characterization: DSC, DTA, DTG and TGA techniques.

UNIT- III:

[12 Hours]

Structural features, properties and uses of commercial polymers: polyethylene, polypropylene, polystyrene, PVC, polyesters, polyamides, polyurethanes and polycarbonates and regenerated cellulose.

Properties and uses of Specialty polymers- Composites, Conducting polymers and Biomedical polymers.

Polymer degradation and stability-thermal, oxidative, photo, chemical and radiation affected degradation. Plastic waste management-incineration, recycling and biodegradation.

Polymer processing Techniques-Compounding- role of additives. Casting, calendaring, moulding, foaming, reinforcing and spinning techniques.

REFERENCES:-

1. Text book of Polymers- F.W. Billmeyer (Wiley)
2. Contemporary Polymer Chemistry-H.R. Allcock and F.W. Lampe (Prentice Hall).
3. Polymer Science and Technology-J.R. Frird (Prentice Hall).
4. Polymer Science: V.R. Gowariker, N.V. Viswanathan & T. Sreedhar
5. Principles of Polymer Science- P. Bahadur and N.V. Sastry (Narosa Publishers)

CH S 556: NUCLEAR, RADIATION & PHOTOCHEMISTRY

COURSE OUTCOME:

- The course content consists of two topics, radioactivity and various aspects of photochemical reactions.
- In the first part, the nuclear reactions, use of radioisotopes in analytical processes, design and functioning of nuclear reactors are taught along with the health and safety aspects of working with radiation.
- The second part deals with basic aspects of photochemical processes and their applications in synthesis, solar energy conversion,
- Understanding atmospheric reactions occurring in the presence of light.

UNIT-I:

[12 Hours]

Radioactivity and Nuclear Decay –Nuclear stability-Liquid drop, shell and collective models Decay modes of natural and artificial nuclides- Determination of half life, growth kinetics. Conditions of equilibrium. Theories of α , β and γ emissions 4hrs

Radiation Detection and Measurement: Experimental techniques in the assay of radioactive isotopes. Radiation Detectors-ionisation chambers, proportional and Geiger-Muller, scintillation and semiconductor radiation detectors (NaI-Tl and Ge(Li), HPGe solid state detectors). Liquid scintillators and multichannel analysers 4hrs

Nuclear Reactions, Energy and Nuclear Power reactors - Nuclear fission and fusion. Types of nuclear power reactors, basic features and components of a nuclear power reactor. An introduction to breeder reactors 4 hrs

UNIT-II:

[12 Hours]

Radioisotopes:- Definition of curie and related calculations. Production of radioisotopes and labelled compounds by bombardment. Radiochemical separation techniques- carriers, solvent extraction and ion-exchange methods. Szilard-Chalmer process. Physico-chemical and analytical applications-isotope dilution method, activation analysis, radiometric titration and C^{14} dating. Medical, agricultural and industrial applications of isotopes. 5 hrs

Radiation Chemistry: Difference between radiation and photochemistry. Radiation sources, UNITS (LET, Rad, Roentgen and G-value), radiation dose and radiation chemical yield. Chemical Dosimetry-Fricke and ceric sulphate dosimeters. A brief introduction to radiolysis of gases, liquids and solids. Industrial applications of radiation chemistry (radiation synthesis, polymerization & food irradiation). 5hrs.

Health and Safety Aspects: Biological effects of radiation, Radiation protection, permissible exposure doses. Radioactive waste management. 2hrs

UNIT-III:

[12 Hours]

Photochemistry

Introduction to photochemistry. Actinometry. Electronic energy states of atoms and molecules. - rules for transition between two energy states. Life time of excited electronic states. Franck-condon principle and its implications in predicting Absorption and Emission spectra. Absorption and emission spectra- effect of solute solvent interactions on electronic spectra-spectral shifts. Physicochemical properties of electronically excited molecules-excited state dipole moments, acidity constants. Photophysical pathways- Jablonski diagram.

Quenching-collisions in the gasphase, solution (Stern-Volmer equation) & by added substances 10hrs

A brief introduction to some current topics in photochemistry - Applications in synthesis, solar energy utilization and atmospheric photochemistry. 2hrs

REFERENCES:

1. Principles of Radiochemistry, Eds: Sood, Ramamoorthy & Reddy (IANCAS, BARC Mumbai)
2. Radiation Chemistry: An Overview, D.B. Naik and S. Dhanya (BARC, Mumbai)
3. Nuclear and Radiation Chemistry –Friedlander, Kennedy Macias & Miller (Wiley) 1981
4. Essentials of Nuclear Chemistry- H.J. Arnikaar (Wiley Eastern) 1987.
5. An Introduction to Radiation Chemistry, Spinks and Woods (Wiley, New York) 1990
6. Fundamentals of Photochemistry – Rohatgi and Mukherje (New Age Bangalore) 2000.



CH P 557: INORGANIC CHEMISTRY PRACTICALS – IV

COURSE OUTCOME:

- The students will have practical experience in determination of Na, K, Li and Ca by Flame photometry, Solvent extraction of Ni(II) and $\text{UO}_2(\text{II})$,
- Preparation and analysis of complexes, Measurement of Magnetic susceptibility,
- Determination of composition of complexes by Job's method, Mole ratio method, Slope ratio method,
- Determination of stability constants by Turner Anderson method, Bejrrums method and Polarographic method.

1. Colorimetric determination of Ti(IV) and Zr(IV)
2. Simultaneous colorimetric determination of two metal ions – Mn and Cr.
3. Flame photometric determination of Na, K, Li and Ca individually and in mixtures.
4. Electrogravimetric determination of (a) Cu-Ni alloy and (b) Pb in Type Metal.
5. Solvent extraction of Ni(II) and $\text{UO}_2(\text{II})$.
6. Preparation of any three of the following complexes, checking the purity of the prepared samples by chemicals analysis, structural study of the prepared complexes using conductance and magnetic susceptibility measurements, recording the electronic and infrared spectra:
 - i) Chloropentamminecobalt(III) chloride, ii) Hexamminecobalt(III)chloride.
 - iii) Potassium trisoxalatoferrate(III) and iv) Potassium hexathiocyanatochromate(III)
 - v) $\text{K}_3\text{Cr}(\text{OX})_3 \cdot 3\text{H}_2\text{O}$ vi) $\text{Cu}(\text{tu})_3\text{Cl}$ vii) $\text{Zn}(\text{tu})_3\text{OSO}_3$
7. Determination of composition of complexes:
 - a) Job's method: Fe-phenanthroline complex
 - b) Mole ratio method: Zr-Alizarin red S complex,
 - c) Slope ratio method: Cu ethylenediamine complex,
 - d) Limiting logarithmic method: Uranyl-sulphosalicyclic acid complex.
8. Determination of stability constants
 - a) Turner Anderson method: Fe-Tiron system,
 - b) Bejrrums's method: Cu – sulphosalicyclic acid system,
 - c) Polarographic method: Cu-glycinate or Pb -oxalate system.

REFERENCES:

1. J. Rose, Physicochemical Experiments
2. Vogel's Text Book of Quantitative Chemical Analysis (5th Ed), G.H. Jeffrey, J. Bassette, J. Mendham and R.C. Denny, Longman, 1999.

CH P 558: PHYSICAL CHEMISTRY PRACTICALS-IV

COURSE OUTCOME:

Includes large number of kinetic experiments from which students are made to choose five experiments which illustrate different principles of chemical kinetics. They are also expected to learn concepts of thermodynamics by carrying out 5 experiments from the respective section. The course also includes two experiments from polymer chemistry topics and two experiments from spectroscopy. In addition to the above knowledge, the students are trained to develop skill of using computers to draw chemical structures, to plot the data and to carry out calculations

SPECIFIC COURSE OUTCOMES

- To Determine order of reaction order and activation parameters
- To study various types of reactions
- To determine the mechanism of reactions
- To study the catalytic constant, surface area of catalyst & temperature etc.

A. Kinetics and Catalysis (Any Five Experiments are to be carried out)

Determination of reaction order and activation parameters, study of acidity/salt/solvent/catalytic effects on reaction rates of any FIVE of the reactions listed below.

1. Acid catalyzed hydrolysis of methyl acetate.
2. Saponification of ethyl acetate by conductivity method.
3. Decomposition of benzenediazonium chloride.
4. Reaction between potassium persulphate and potassium iodide (including the study of salt effect and catalysis by Ag^+ , Fe^{2+} and Cu^{2+} ions).
5. Decomposition of diacetone alcohol by NaOH & Hydrolysis of t-butylchloride.
6. (i) Reaction between iodine and acetone, and (ii) iodination of aniline.
7. Reaction between hydrogen peroxide and HI.
8. Decomposition of H_2O_2 (including the study of catalytic effect).
9. Reaction between Chromic acid and oxalic acid.
10. Reduction of aqueous solution of ferric chloride by stannous chloride.
11. Determination of the mechanism of the oxidation of an organic compound from kinetic data.
12. Determination of catalytic constant of an acid.
13. Determination of effect of surface area of catalyst and temperature on the kinetics of Metal-acid reaction.
14. Determination of dissociation of trichloroacetic acid-Kinetic method.
15. Determination of equilibrium constant for homogeneous equilibria and determining the concentration of a given solution.
16. Determine the molecular formula of copper-ammonia complex by the partition coefficient method.
17. Alkaline hydrolysis of ethyl acetate volumetrically.
18. Effect of reaction surface area of catalyst and temperature, concentration on the kinetics of metal-acid

B. Polymer Chemistry (Any Two experiments are to be carried out)

1. Determination of molecular weight and size parameters of polymers by viscometry.
2. Determination of sequences in polyvinylalcohol by viscometry.
3. Determination of molecular weight of a polymer by turbidimetry.

4. Preparation of Polymethylmethacrylate by suspension polymerization / polystyrene by free radical polymerization / Nylon by interfacial polymerization / Polyacrylamide by solution polymerisation method / polyvinylalcohol from polyvinylacetate / Phenol formaldehyde/ urea formaldehyde resins / thin films of polymers.

C. Thermodynamics Experiments (Any Five experiments to be carried out)

1. Determination of activities of an electrolyte and non-electrolyte by cryoscopy.
2. Determination of partial molar volumes of (a) Salts-water and (b) alcohol-water (methanol & ethanol) systems by density method.
3. Study of complex formation between mercury and potassium halides by cryoscopy.
4. Determination of specific heat of liquids and solutions by calorimetry.
5. Determination of stepwise neutralisation of acids.
6. Determination of heat of solution of KNO_3 in water, integral heat of dilution of H_2SO_4 and heat of ionization of acetic acid and ammonium hydroxide calorimetrically.
7. Cryoscopic and ebullioscopic analysis of the given mixture of urea and glucose.
8. Determination of vant Hoff's factor for benzoic and acetic acid mixtures in benzene.
9. Viscosity of sound in liquid-ultrasonic interferometry

D. Spectroscopic Experiments (Any Two experiments to be carried out)

1. Kinetics of oxidation of alcohol by potassium dichromate – spectrophotometrically.
2. Simultaneous determination of Manganese and chromium in a solution of dichromate and Permanganate mixture.
3. Determination of pK_a of an indicator..
4. Spectroscopic investigation of partition coefficient of iodine between H_2O and CHCl_3 .
5. Study of the effect of ionic strength on the pH of the given acid with the help of indicators using buffer solution by colorimetric method.

E. Computer related Practicals: Solution of some selected chemical engineering problems to

develop skill for computer applications, programme writing and numerical analysis.

Use of commercial software packages such as Mathcad, Matlab, Aspan Plus, Design II, Use of Chem draw and Chem sketch for construction of molecules. Use of Window excel for drawing graphs estimation of slope intercept.

CH P 559: PROJECT WORK AND DISSERTATION

COURSE OUTCOME:

Enable the students:

- To design the project by collecting required background material by referring the literature
- To understand the functioning and safety features in the industry.
- To improve the experimental and soft skills.
- To learn various analytical and instrumental techniques and interpretation of analytical data.



Programme Structure for Bachelor of Science (Basic/Hons.) (Physics) Programme (Subjects with Practical)

Sem.	Discipline Core(DSC) (Credits)	Discipline Elective(DSE) /Open Elective (OE) (Credits)	Ability Enhancement Compulsory Courses (AECC), Languages (Credits) (L+T+P)		Skill Enhancement Courses (SEC)			Total Credits
					Skill based (Credits) (L+T+P)	Value based (Credits) (L+T+P)		
I	DSC A1(4+2) DSC B1(4+2)	OE-1 (3)	L1-1(3), L2-1(3) (4 hrs. each)		SEC-1: (2) (1+0+2)	Yoga (1) (0+0+2)	Health &Wellness (1) (0+0+2)	25
II	DSC A2(4+2) DSC B2(4+2)	OE-2 (3)	L1-2(3), L2-2(3) (4 hrs. each)	Environmental Studies (2)		Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/ Cultural (1) (0+0+2)	25
Exit option with Certificate (48 credits)								
III	DSC A3(4+2) DSC B3(4+2)	OE-3 (3)	L1-3(3), L2-3(3) (4 hrs. each)		SEC-2: (2)(1+0+2)	Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/ Cultural (1) (0+0+2)	25
IV	DSC A4(4+2) DSC B4(4+2)	OE-4 (3)	L1-4(3), L2-4(3) (4 hrs. each)	Constitution of India (2)		Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/ Cultural (1) (0+0+2)	25
Exit option with Diploma in a particular Discipline (96 credits)								
V	DSC A5(3+2) DSC A6(3+2) DSC B5(3+2) DSC B6(3+2)				SEC-3: SEC (2) (1+0+2)	Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/ Cultural (1) (0+0+2)	24
VI	DSC A7(3+2) DSC A8(3+2) DSC B7(3+2) DSC B8(3+2)				SEC-4: Professional Communication (2)	Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/ Cultural (1) (0+0+2)	24
Exit with Bachelor of Degree in a particular Discipline (140 credits)								
VII	DSC A/B9(3+2) DSC A/B10(3+2) DSC A/B11(3)	DSC A/B E-1 (3) DSC A/B E-2 (3) Res. Methodology (3)						22
VIII	DSC A/B12(3) DSC A/B13(3) DSC A/B14(3)	DSC A/B E-3 (3) DSC A/B E-4 (3) Research Project (6)*						21
Award of Bachelor of Degree with Honours, B.Sc (Hons.) 180 credits)								

*In lieu of the research Project, two additional elective papers/ Internship may be offered.

Note: 1) Instruction hours per week: DSC-4 hrs; Practical-4 hrs; OE-3 hrs.

2) Max marks: DSC - 100 (IA 40+Exam 60); Practical – 50 (IA 25+Exam 25);
OE – 100 (IA 40+Exam 60).

3) The theory IA will be based on (i) Average of 2 tests: 20 marks, (ii) activity/ seminars/ projects :20 marks.

4) The practical IA will be based on (i) Regular performance:15 marks,
(ii) test/seminars: 10 marks.

5) Duration of Annual Examination: Theory-2hrs; Practical-4hrs.

Curriculum Structure-Physics

(Core and Electives)

Semesters- I to X

SEM	DSC	Core Papers
Sem-1	A1	Mechanics and Properties of Matter
Sem-2	A2	Electricity and Magnetism
Sem-3	A3	Wave Motion and Optics
Sem-4	A4	Thermal Physics and Electronics
Sem-5	A5 A6	1. Classical Mechanics and Quantum Mechanics- I 2. Elements of Atomic, Molecular Physics
Sem-6	A7 A8	1. Elements of Nuclear Physics and Nuclear Instruments 2. Elements of Condensed Matter Physics
Sem-7	A9 A10 A11	1. Mathematical Methods of Physics – I 2. Classical Electrodynamics. 3. Experimental methods of Physics 4. Research Methodology (Select Two DSE subjects from the Pool B-I shown below)
Sem-8	A12 A13 A14	1. Classical Mechanics and Quantum Mechanics-II 2. Statistical Mechanics 3. Astrophysics & Astronomy 4. Research Project* (Select Two DSE subjects from the Pool B-II shown below) *In lieu of the research Project, two additional elective papers/ Internship may be offered.
Sem-9	A15	1. Mathematical Methods of Physics – II (Select One DSE subjects from the Pool B-III shown below) 2. Research Project
Sem-10	A17	1. Quantum Mechanics – III (Select One DSE subjects from the Pool B-IV shown below) 2. Research Project

* The Courses of 3rd Semester and above need to be revisited.

Open Electives for 1st and 2nd Semester

Sem.	Courses
1.	Energy Sources
2.	Astronomy and Space Mission

Discipline Specific Electives for 7th to 10th Semesters

	7th Sem Electives Pool B-I (Select any two)		8th Sem Electives Pool B-II (Select any two)
A.	Condensed Matter Physics-1	A.	Atomic & Molecular Physics-1
B.	Nuclear and Particle Physics	B.	Materials Physics & Nano materials
C.	Theoretical and Computational Physics-I	C.	Lasers and non-linear optics
D.	Biophysics	D.	Plasma Physics
E.	Astronomy and Astrophysics	E.	Physics of Semiconductor devices

	9th Sem Electives (Specialization papers) Pool B-III		10th Sem Electives (Specialization papers) Pool B-IV
A.	Condensed Matter Physics-2	A.	Condensed Matter Physics-3
B.	Nuclear and Particle Physics-2	B.	Nuclear and Particle Physics-3
C.	Atomic & Molecular spectroscopy-1	C.	Atomic & Molecular spectroscopy-2
D.	Materials Physics & Nanophysics –1	D.	Materials Physics & Nanophysics -2
E.	Theoretical and Computational Physics-I	E.	Theoretical and Computational Physics-2
F.	Astronomy and Astrophysics-1	F.	Astronomy and Astrophysics-2

Detailed Syllabus for Semesters I & II

B.Sc., Physics

Detailed Syllabus for Semesters I & II

Semester – I

Mechanics and Properties of Matter

Programme Outcomes (POs)

PO-1: Discipline Knowledge: Knowledge of science and ability to apply to relevant areas.

PO-2: Problem solving: Execute a solution process using first principles of science to solve problems related to respective discipline.

PO-3: Modern tool usage: Use a modern scientific, engineering and IT tool or technique for solving problems in the areas of their discipline.

PO-4: Ethics: Apply the professional ethics and norms in respective discipline.

PO-5: Individual and teamwork: Work effectively as an individual as a team member in a multidisciplinary team.

PO-6: Communication: Communicate effectively with the stake holders, and give and receive clear instructions.

Course Articulation Matrix:

Mapping of Course Outcomes (COs) with Program Outcomes (POs)

Program Outcomes (POs)

Course Outcomes (COs) (UGC guidelines)	1	2	3	4	5	6
CO-1: Will learn fixing units, tabulation of observations, analysis of data (graphical/analytical)	x	x				x
CO-2: Will learn about accuracy of measurement and sources of errors, importance of significant figures.	x	x				
CO-3: Will know how g can be determined experimentally and derive satisfaction.	x					
CO-4: Will see the difference between simple and torsional pendulum and their use in the determination of various physical parameters.	x			x	x	x
CO-5: Will come to know how various elastic moduli can be determined.	x				x	x
CO-6: Will measure surface tension and viscosity and appreciate the methods adopted.	x	x				
CO-7: Will get hands on experience of different equipment.	x	x	x		x	x

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course are Marked 'X' in the intersection cell if a course outcome addresses a particular program outcome.

Mechanics & Properties of Matter		Hrs
Credit : 4+2	Unit – 1	Theory : 4 hours /Week
Chapter No. 1	Units and measurements: System of units (CGS and SI), dimensions of physical quantities, dimensional formulae. Minimum deviation, errors and error analysis Vectors: Instantaneous velocity and acceleration, Derivative of planar vector of constant magnitude but changing direction. Arbitrary planar motion, radial and transverse component of velocity and acceleration, deduction of the results of uniform circular motion.	(13)
Chapter No. 2	Momentum and Energy: Work and energy, Conservation of linear and angular momentum. Conservation of energy with examples. Motion of rockets. Problems	
Chapter No. 3	Special Theory of Relativity: Inertial and non-inertial frames of reference, Galilean transformation equation, Galilean principle of relativity. Search for absolute frame of reference, Ether concept, Null result of Michelson Morley experiment, Constancy of speed of light. Postulates of Special Theory of Relativity. Length contraction. Time dilation. Twin paradox, Relativistic addition of velocities, Einstein's mass energy relation-photon box experiment. Problems	
Topics for self study	Self Study Units and measurements: Measurement of length, mass and time. Laws of Motion: Newton's Laws of motion. Dynamics of single and a system of particles. Centre of mass.	
	Suggested Activities	
Activity No. 1	i). Students can measure diameters of small balls of different size and estimate their volumes. ii). Students can measure lengths of nails of different size. iii). Students can measure volume of a liquid. iv). Students can measure distances and put the result both in CGS and SI units in 2, 3 and 4 significant figures. Ask them to mention the precession of the measurement. v). students can estimate standard deviations wherever possible.	
Activity No. 2	Students can try and understand conservation of energy in every day examples. For example: i) What happens in solar conservation panels ii) Pushing an object on the table it moves iii) Moving car hits a parked car causes parked car to move. In these cases, energy is conserved. How? Understand and verify if possible. Students can try and understand conservation of momentum with help of coins and balls by referring to websites. Reference: https://www.youtube.com/	

Unit – 2		
Chapter No. 4.	Laws of Motion: Conservative and non-conservative forces. Deduction of conservation of energy in conservative force field. Centre of mass. Simple harmonic motion – vertical oscillations of the light loaded spring, expression for force constant and determination of acceleration due to gravity, Problems	(3)
Chapter No. 5.	Dynamics of Rigid bodies: Rotational motion about an axis, Relation between torque and angular momentum, Rotational energy. Moment of inertia: Theorem of perpendicular axis and Theorem of parallel axes, Moment of Inertia of a rectangular Lamina, Circular disc and ring and solid cylinders. Flywheel, theory of compound pendulum and determination of 'g'. Problems	(7)
Chapter No. 6.	Gravitation: Law of Gravitation. Motion of a particle in a central force field (motion is in a plane, angular momentum is conserved, areal velocity is constant). Kepler's laws (statements). Satellite in a circular orbit. Problems	(3)
Topics for self study (If any) Chapter 7	Escape velocity, Geosynchronous orbits. Basic idea of global positioning system (GPS).	
	Suggested Activities	
Activity No. 3	<p>Activity:</p> <p>Moment of inertia is an abstract concept. It simply gives a measure of rotational inertia of a rigid body and it is proportional to the product of the square of radius, r of the body and its mass, m. Students by Referring to websites, students can construct and perform simple experiments to verify that $MI \propto mr^2$.</p> <p>Students can try to understand law of inertial with the help of coins and balloons by referring to websites.</p> <p>Reference : www.khanacademy.org, www.pinterest.com, www.serc.cerleton.edn, https://www.youtube.com</p>	
Activity No. 4	<p>Activity:</p> <p>Prepare suitable charts and give seminar talks related to moment of inertia, gravitation and planetary motion.</p>	
Activity No. 5	<p>(i) Rolling of different disc and cylinders on inclined plane to understand the moment of inertia.</p> <p>(ii) Listing and discussing the moment of inertia of bodies come across in daily life.</p>	

Unit - 3		
Chapter No. 8	<p>Elasticity: Hooke's law - Stress-strain diagram, elastic moduli-relation between elastic constants, Poisson's Ratio-expression for Poisson's ratio in terms of elastic constants.</p> <p>Work done in stretching and work done in twisting a wire-Twisting couple on a cylinder.</p> <p>Torsional pendulum-Determination of rigidity modulus and moment of inertia - q, η and σ by Searle's method</p> <p>Bending moment of beams, Cantilever bending and uniform bending, I - section of girders. Problems.</p>	(13)
	Suggested Activities	
Activity No. 6	<p>Activity:</p> <p>Arrange a steel spring with its top fixed with a rigid support on a wall and a meter scale alongside. Add 100 g load at a time on the bottom of the hanger in steps. This means that while putting each 100g load, we are increasing the stretching force by 1N. Measure the extension for loads up to 500g. Plot a graph of extension versus load. Shape of the graph should be a straight line indicating that the ratio of load to extension is constant. Go for higher loads and find out elastic limit of the material.</p>	
Activity No.7	<p>Activity:</p> <p>Repeat the above experiment with rubber and other materials and find out what happens after exceeding elastic limit. Plot and interpret.</p>	
Activity No 8	<p>Activity: Classifying different materials in to elastic and plastic materials. Studying the bending magnitudes of different shape and material rods.</p>	

Unit - 4		
Chapter No. 9	<p>Surface tension: Definition of surface tension. Surface energy, relation between surface tension and surface energy, pressure difference across curved surface example, excess pressure inside spherical liquid drop, angle of contact., Surface tension by drop weight method, Interfacial surface tension, Problems.</p>	(13)
Chapter No. 10	<p>Viscosity: Streamline flow, turbulent flow, equation of continuity, determination of coefficient of viscosity by Poissulle's method, Stoke's method. Problems.</p>	
Topics for self study (If any)	<p>Variation of surface tension with temperature, Surface tension by Capillarity rise, Application of viscosity.</p>	

Suggested Activities		
Activity No.9	<p>1. Measure surface tension of water and other common liquids and compare and learn</p> <p>i) Why water has high ST? think of reasons.</p> <p>ii) Check whether ST is a function of temperature? You can do it by heating the water to different temperatures and measure ST.</p> <p>iii) Plot ST versus T and learn how it behaves.</p> <p>Mix some quantity of kerosene or any oil to water and measure ST. Check whether ST for the mixture is more or less than pure water. List the reasons.</p>	
Activity No. 10	<p>Activity:</p> <p>2. Collect a set of different liquids and measure their viscosity.</p> <p>i) Find out whether sticky or non-sticky liquids are most viscous. List the reasons.</p> <p>ii) Mix non sticky liquid to the sticky liquid in defined quantities and measure viscosity. Find out viscosity is increasing or decreasing with increase of non-sticky liquid concentration.</p> <p>iii) Do the above experiment by mixing sticky liquid to the non-sticky liquid. Find out change in viscosity with increase of concentration of sticky liquid.</p> <p>List the applications where concept of Viscosity plays a dominant role</p>	

Text Books:

Sl No	Title of the Book	Authors Name	Publisher	Year of Publication
1	Mechanics by, New Edition	D. S. Mathur	S.Chand & Co.	2000
2	Mechanics and Relativity by 3 rd Edition,	Vidwan Singh Soni,	PHI Learning Pvt. Ltd.	2013
3	Mechanics Berkeley Physics Course, Vol.1:	Charles Kittel, et.al.	Tata McGraw-Hill	2007
4	Properties of Matter	Brijlal & Subramanyam.	S.Chand & Co	2014
5	Physics for Degree Students	CL Aurora & PS Hemne	S.Chand & Co	2010
6	Mechanics	J C Upadhyaya	Himalaya	2016

References Books

Sl No	Title of the Book	Authors Name	Publisher	Year of Publication
1	Principles of Physics 9 th Edn,	Resnick, Halliday & Walker,	Wiley	2013
2	Conceptual Physics, 10 th Edn	Paul G Hewit	Pearson	2012
3	Introduction to Special Theory of Relativity	Robert Resnick	Wiley Student Edition	2014
4	Physics for Scientists and Engineers	Jewett & Serway	Cengage learning India Pvt Ltd, Delhi	2012
5	The Feynman Lectures on Physics – Vol 1	Richard P Feynman, Robert B Leighton, Mathew Sands	Narosa Publishing House	1986
6	Physics – (International Student Edition)	Marcelo Alonso & Edward J Finn	Addison – Wesley	1999
7	Concepts of Modern Physics	Arthur Beiser	Tata Mcggraw Hill	1998
8	Modern Physics	Kenneth Krane	Wiley	2012
9	Newtonian Mechanics	AP French	Viva Books	2017
10	Modern Physics	G Aruldas & P Rajgopal	PHI Learning Pvt. Ltd.	2009

List of Experiments to be performed in the Laboratory:

1.	Determination of g using bar pendulum (two hole method and L versus T graphs).
2.	Determination of moment of inertia of a Fly Wheel.
3.	Determination of rigidity modulus using torsional pendulum.
4.	Modulus of rigidity of a rod – Static torsion method.
5.	Determination of elastic constants of a wire by Searle's method.
6.	Young's modulus by Koenig's method.
7.	Viscosity by Stokes' method.
8.	Verification of Hooke's law by stretching and determination of Young's Modulus.
9.	Determination of surface tension of a liquid by drop weight method.
10.	Study of motion of spring and to calculate the spring constant, g and unknown mass.
11.	Determination of Young's modulus of a bar by the single cantilever method.
12.	Determination of Young's modulus of a bar by uniform bending method.
13.	Radius of capillary tube by mercury pellet method.
14.	Verification of parallel and perpendicular axis theorems.
15.	Determination of interfacial tension between two liquids using drop weight method.
16.	Determination of viscosity of liquids by Poiseuille's method.

(Minimum EIGHT experiments have to be carried out).

Reference Book for Laboratory Experiments

Sl No	Title of the Book	Authors Name	Publisher	Year of Publication
1	Advanced Practical Physics for students	B.L. Flint and H.T. Worsnop	Asia Publishing House.	1971
2	A Text Book of Practical Physics	I. Prakash & Ramakrishna	Kitab Mahal, 11 th Edition	2011
3	Advanced level Physics Practicals	Michael Nelson and Jon M. Ogborn	Heinemann Educational Publishers, 4 th Edition	1985
4	A Laboratory Manual of Physics for undergraduate classes	D.P.Khandelwal	Vani Publications.	1985
5	BSc Practical Physics Revised Ed	CL Arora	S.Chand & Co	2007
6	An advanced course in practical physics	D. Chatopadhyay, PC Rakshit, B.Saha	New Central Book Agency Pvt Ltd	2002

Semester – II

Electricity & Magnetism

Programme Outcomes

PO - 1 Discipline Knowledge: Knowledge of science and ability to apply to relevant areas.

PO - 2 Problem solving: Execute a solution process using first principles of science to solve problems related to respective discipline.

PO - 3 Modern tool usage: Use a modern scientific, engineering and IT tool or technique for solving problems in the areas of their discipline.

PO - 4 Ethics: Apply the professional ethics and norms in respective discipline.

PO - 5 Individual and teamwork: Work effectively as an individual as a team member in a multidisciplinary team.

PO - 6 Communication: Communicate effectively with the stake holders, and give and receive clear instructions.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

Program Outcomes (POs)

Course Outcomes (COs)	1	2	3	4	5	6
i. Will demonstrate Gauss law, Coulomb's law for the electric field, and apply it to systems of point charges as well as line, surface, and volume distributions of charges.	x	x				
ii. Will explain and differentiate the vector (electric fields, Coulomb's law) and scalar (electric potential, electric potential energy) formalisms of electrostatics.	x					
iii. Will be able to apply Gauss's law of electrostatics to solve a variety of problems.	x	x			x	
iv. Will describe the magnetic field produced by magnetic dipoles and electric currents.	x					
v. Will be able to explain Faraday-Lenz and Maxwell laws to articulate the relationship between electric and magnetic fields.	x					
vi. Will be in position to describe how magnetism is produced and list examples where its effects are observed.	x				x	x
vii. Will be able to apply Kirchhoff's rules to analyze AC circuits consisting of parallel and/or series combinations	x	x			x	x

of voltage sources and resistors and to describe the graphical relationship of resistance, capacitor and inductor.						
viii. Will understand and able to apply various network theorems such as Superposition, Thevenin, Norton, Reciprocity, • Maximum Power Transfer, etc. and their applications in electronics, electrical circuit analysis, and electrical machines.	x	x			x	x

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark 'X' in the intersection cell if a course outcome addresses a particular program outcome.

Electricity & Magnetism		Hrs
Unit – 1		
Chapter No. 1	Topics to be covered: Electric charge and field Coulomb's law, electric field strength, electric field lines, point charge in an electric field and electric dipole, work done by a charge (derivation of the expression for potential energy), Problems.	3
Chapter No. 2	Topics to be Covered Gauss's law and its applications (electric fields of a (i) spherical charge distribution, (ii) line charge and (iii) an infinite flat sheet of charge).	3
Chapter No. 3	Topics to be Covered Electric potential, line integral, gradient of a scalar function, relation between field and potential. Potential due to point charge and distribution of charges (Examples: potential associated with a spherical charge distribution, infinite line charge distribution, infinite plane sheet of charges). Constant potential surfaces, Potential due to a dipole and electric quadrupole. Problems	7
Topics for self study(If any)	Constant potential surfaces - for self learning Work out problems listed in the reference	
	Suggested Activities	
Activity No. 1	1. Learn the difference between and DC and AC electricity and their characteristics. Voltage and line frequency standards in different countries. 2. A small project report on production of electricity as a source of energy: Different methods	

	3. With the help of glass rod, plastic rod, silk, and fur demonstrate the generation of charge and electrostatic attraction and repulsion.	
Activity No. 2	<ol style="list-style-type: none"> 1. Learn to use a multimeter (analog and digital) to measure voltage, current and resistance. Continuity testing of a wire. 2. Learn about household electrical connection terminals: Live, neutral and ground and voltage between the terminals. Role of earthing and safety measures 	
Unit – 2		
Chapter No. 4.	Topics to be covered Conductors in electrostatic field Conductors and insulators, conductors in electric field. Capacitance and capacitors, calculating capacitance in a parallel plate capacitor, parallel plate capacitor with dielectric, dielectrics: an atomic view. Energy stored in a capacitor, Dielectric and Gauss's law, Problems.	6
Chapter No. 5.	Topics to be covered Electric currents and current density. Electrical conductivity and Ohm's law. Physics of electrical conduction, conduction in metals and semiconductors, circuits and circuit elements: Variable currents in capacitor circuits, Resistor, inductor and capacitor and their combination, charging and discharging of capacitor. Force on a moving charge. Problems.	7
Topics for self study(If any)	Currents and voltage in combination of R, L and C circuits, Kirchoff's laws of voltage & Current	
	Suggested Activities	
Activity No. 3	<ol style="list-style-type: none"> 1. Learn about electrical appliances which work with AC and DC electricity 2. Learn about types of resistors and their colour codes and types of capacitors(electrolytic and non-electrolytic) 	
Activity No. 4	<ol style="list-style-type: none"> 1. Learn about power transmission: 3-phase electricity, voltage and phase 2. Visit a nearby electrical power station. Interact with line men, Electrical engineers and managers. Discuss about power loss in transmission. How to reduce it? 3. Prepare a small project report on street lighting and types of electrical bulbs. 	

Unit – 3		
Chapter No.6	Topics to be covered Magnetism Definition of magnetic field, Ampere's law and Biot-Savart law (magnetic force and magnetic flux), Magnetic force on a current carrying conductor, Hall effect. Electromagnetic induction, conducting rod moving in a magnetic field, law of induction and mutual inductance, self inductance and energy stored in a magnetic field. Problems.	5
Chapter No. 7	Topics to be covered Alternating current circuits: Resonant circuit, alternating current, quality factor, RL, RC, LC, LCR circuits, admittance and impedance, power and energy in AC circuits. Filters – High and Low and band pass filters (qualitative), Problems.	8
Topics for self study(If any)	Force acting on a moving charge in electric and magnetic fields – Lorentz force, Magnetic dipole moment – torque on a magnetic dipole.	
Suggested Activities		
Activity No. 5	Activity: 1. Prepare a small project report on street lighting and types of electrical bulbs. 2. Learn the measurement of electric current using tangent galvanometer.	
Activity No.6	Activity: Build a small coil with insulated copper wire. Connect an ammeter micro/milli ammeter. Verify magnetic induction using a powerful bar magnet.	
Unit - 4		
Chapter No. 8	Electromagnetic waves: Scalar and vector fields, operator grad, the gradient of a scalar function, integration theorems – line integral, surface integral, volume integral, divergence and curl of a vector, Gauss and Stokes theorems (qualitative), Equation of continuity, Maxwell's equations, displacement current, electromagnetic wave, energy transported by electromagnetic waves. Electromagnetic waves in different frames of reference, the field of a current loop, magnetic moment, Electric current in atoms, electron spin and magnetic moment, magnetization and magnetic susceptibility.	10
Chapter No. 9	Topics to be covered: Types of magnetic materials: diamagnetic, paramagnetic and ferromagnetic materials. B-H hysteresis curves.	3
Topics for self study(If any)	B-H curves and its characteristics Ferrites	

Suggested Activities		
Activity No.7	1. Prepare a small project report on production of magnetic field: Permanent magnets, electromagnets and superconducting magnets. 2. Learn the principle of working of a Gauss meter to measure magnetic field	
Activity No. 8	1. Model the earth's magnetic field with a diagram. Explain the effect of tilt of the earth's axis and reasons for the change in the tilt of the earth's axis over thousands of years.	
Activity No 9	Identifying the magnetic meridian of the earth and measuring the magnetic dip at a place using the magnetic pointer. Discussion on magnetic equator	

Text Books:

Sl No	Title of the Book	Authors Name	Publisher	Year of Publication
1	Physics for Degree Students Volume 1	CL Aurora & PS Hemne	S.Chand & Co	2010
2	Fundamentals of Magnetism and Electricity	DN Vasudeva	S Chand & Co	2011
3	Electricity and Magnetism	R Murugesan	S Chand & Co	2019
4	Electricity and Magnetism	D C Tayal	Himalaya	1989

References Books:

Sl No	Title of the Book	Authors Name	Publisher	Year of Publication
1	Physics-Part-II,	David Halliday and Robert Resnick	Wiley Eastern Limited	2001
2	Berkeley Physics Course, Vol-2, Electricity and Magnetism, Special Edition	Edward M Purcell	Tata Mc Graw-Hill Publishing Company Ltd, New Delhi	2008
3	The Feynman Lectures on Physics – Vol II	Richard P Feynman, Robert B Leighton, Mathew Sands	Narosa Publishing House	1986
4	Physics for Scientists and Engineers	Jewett & Serway	Cengage learning India Pvt Ltd, Delhi	2012
6	Physics – (International Student Edition)	Marcelo Alonso & Edward J Finn	Addison – Wesley	1999

List of Experiments to be performed in the Laboratory

1.	Experiments on tracing of electric and magnetic flux lines for standard configuration.
2.	Verification of Maximum Power Transfer Theorem.
3.	Analysis of Phasor diagram.
4.	Determination of capacitance of a condenser using B.G.
5.	Determination of mutual inductance using BG.
6.	Charging and discharging of a capacitor (energy dissipated during charging and time constant measurements).
7.	Series and parallel resonance circuits (LCR circuits).
8.	Impedance of series RC circuits- determination of frequency of AC.
9.	Study the characteristics of a series RC and RL Circuit.
10.	Determination of self inductance of a coil.
11.	Verification of laws of combination of capacitances and determination of unknown capacitance using de - Sauty bridge.
12.	Determination of B_H using Helmholtz double coil galvanometer and potentiometer.
13.	Low pass and high pass filters.
14.	Charge sensitiveness of BG.
15.	Field along the axis of a coil.
16.	Low resistance by potentiometer .

(Minimum EIGHT experiments have to be carried out).

Reference Book for Laboratory Experiments

Sl No	Title of the Book	Authors Name	Publisher	Year of Publication
1	Advanced Practical Physics for students	B.L. Flint and H.T. Worsnop	Asia Publishing House.	1971
2	A Text Book of Practical Physics	I. Prakash & Ramakrishna	Kitab Mahal, 11 th Edition	2011
3	Advanced level Physics Practicals	Michael Nelson and Jon M. Ogborn	Heinemann Educational Publishers, 4 th Edition	1985
4	A Laboratory Manual of Physics for undergraduate classes	D.P.Khandelwal	Vani Publications.	1985
5	BSc Practical Physics Revised Ed	CL Arora	S.Chand & Co	2007
6	An advanced course in practical physics	D. Chatopadhyay, PC Rakshit, B.Saha	New Central Book Agency Pvt Ltd	2002

Question paper pattern for I and II Semester Examinations

Max. marks: 60

Part A

Answer any FOUR out of six questions. Each questions carry 2 marks. $4 \times 2 = 8$

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Part B

$4 \times 10 = 40$

Answer **All** questions.

7a) One question from Unit I for 4 marks.

b) One question from Unit I for 6 marks.

OR

8a) One question from Unit I for 4 marks.

b) One question from Unit I for 6 marks.

9a) One question from Unit II for 4 marks.

b) One question from Unit II for 6 marks.

OR

10a) One question from Unit II for 4 marks.

b) One question from Unit II for 6 marks.

11a) One question from Unit III for 4 marks.

b) One question from Unit III for 6 marks.

OR

12 a) One question from Unit III for 4 marks.

b) One question from Unit III for 6 marks.

13a) One question from Unit IV for 4 marks.

b) One question from Unit IV for 6 marks.

OR

14a) One question from Unit IV for 4 marks.

b) One question from Unit IV for 6 marks.

Part C

Answer any THREE out of four questions (one PROBLEM from each unit). Each questions carry 4 marks. $3 \times 4 = 12$

- 15 (a)
(b)
(c)
(d)

Total Marks

= 60

Scheme of practical final examination (I and II semester)

Instructions:

- i) Minimum 8 experiments should be done (otherwise student is not allowed to sit for semester examination)
- ii) Knowledge of the experiment:-
 - Student knowledge is judged based on the performance of the handling equipments & recognising suitable devices used in the experiment. Questions must be asked to test basic knowledge of concerned the experiment only.

Marks allotment for practical

Allotment of marks	I & II semesters
Record book	8
Formula	3
Diagram/circuit, Exptal set up	3
Observation & trails	6
Knowledge of the experiment	3
Result & accuracy	2
Total marks	25

OPEN ELECTIVES

(SEM I to II)

Open Elective 1

ENERGY SOURCES

Programme Outcomes

PO - 1 Discipline Knowledge: Knowledge of science and ability to apply to relevant areas.

PO - 2 Problem solving: Execute a solution process using first principles of science to solve problems related to respective discipline.

PO - 3 Modern tool usage: Use a modern scientific, engineering and IT tool or technique for solving problems in the areas of their discipline.

PO - 4 Ethics: Apply the professional ethics and norms in respective discipline.

PO - 5 Individual and teamwork: Work effectively as an individual as a team member in a multidisciplinary team.

PO - 6 Communication: Communicate effectively with the stake holders, and give and receive clear instructions.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

Program Outcomes (POs)

Course Outcomes (COs)	1	2	3	4	5	6
CO - 1: Will be able to comprehend the varieties of energy sources and differentiate between the renewable and non-renewable sources of energy	x	x				
CO - 2: Will know the significance of solar energy and the different techniques to harness the solar energy	x	x				
CO - 3: Will gain the idea of the formation of waves and standing wave pattern, analysis of longitudinal and transverse waves.	x	x			x	
CO - 4: Will acquire the knowledge of wind energy and the methods to tap the energy from the blowing wind to generate electrical power.	x	x		x		
CO - 5: Will come to know about the conventional energy sources and its impact on the climate	x	x			x	

CO - 6: Will acquire the skill to set up a model to show the production of energy from different energy sources	x				x	x
CO - 7: Will be able to explain the different energy sources and how they are beneficial for the development of Technology.	x	x			x	x
CO - 8: Will be able to understand the problems of global warming and other climatic impact of the reckless usage of energy resources	x			x	x	x

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark 'X' in the intersection cell if a course outcome addresses a particular program outcome.

ENERGY SOURCES

		No. of lectures
Unit-I	Non-Renewable energy sources	
	Chapter-1: Introduction	
	Energy concept-sources in general, its significance & necessity. Classification of energy sources: Primary and Secondary energy, Commercial and Non-commercial energy, Renewable and Non-renewable energy, Conventional and Non-conventional energy, Based on Origin-Examples and limitations. Importance of Non-commercial energy resources.	04
	Chapter-2: Conventional energy sources	
	Fossil fuels & Nuclear energy- production & extraction, usage rate and limitations. Impact on environment and their issues& challenges. Overview of Indian & world energy scenario with latest statistics- consumption & necessity. Need of eco-friendly & green energy & their related technology.	09
	Total	13
Unit-II	Renewable energy sources	
	Chapter-1: Introduction:	
	Need of renewable energy, non-conventional energy sources. An overview of developments in Offshore Wind Energy, Tidal Energy, Wave energy systems, Ocean Thermal Energy Conversion, solar energy, biomass, biochemical conversion, biogas generation, geothermal energy tidal energy, Hydroelectricity.	05
	Chapter 2 : Solar energy:	
	Solar Energy-Key features, its importance, Merits & demerits of solar energy, Applications of solar energy. Solar water heater, flat plate collector, solar distillation, solar cooker, solar green houses, solar cell -brief discussion of each. Need and characteristics of photovoltaic (PV) systems, PV models and equivalent circuits, and sun tracking systems.	08
	Total	13

Unit-III	Chapter-3: Wind and Tidal Energy harvesting:	
	Fundamentals of Wind energy, Wind Turbines and different electrical machines in wind turbines, Power electronic interfaces, and grid interconnection topologies. Ocean Energy Potential against Wind and Solar, Wave Characteristics and Statistics, Wave Energy Devices. Tide characteristics and Statistics, Tide Energy Technologies, Ocean Thermal Energy.	07
	Chapter-4 : Geothermal and hydro energy	
	Geothermal Resources, Geothermal Technologies.	02
	Hydropower resources, hydropower technologies, environmental impact of hydro power sources.	03
	Carbon captured technologies, cell, batteries, power consumption.	01
	Total	13
	Activity <ol style="list-style-type: none"> 1. Demonstration of on Solar energy and wind energy using training modules at Labs. 2. Conversion of vibration to voltage using piezoelectric materials. 3. Conversion of thermal energy into voltage using thermoelectric (using thermocouples or heat sensors) modules. 4. Project report on Solar energy scenario in India 5. Project report on Hydro energy scenario in India 6. Project report on wind energy scenario in India 7. Field trip to nearby Hydroelectric stations. 8. Field trip to wind energy stations like Chitradurga, Hospet and Gadag. 9. Field trip to solar energy parks like Yeramaras near Raichur. 10. Videos on solar energy, hydro energy and wind energy. 	
	Reference Books: <ol style="list-style-type: none"> 1. Non-conventional energy sources - G.D Rai - Khanna Publishers, New Delhi 2. Solar energy - M P Agarwal - S Chand and Co. Ltd. 3. Solar energy - Suhas P Sukhative Tata McGraw - Hill Publishing Company Ltd. 4. Godfrey Boyle, "Renewable Energy, Power for a sustainable future", 2004, Oxford University Press, in association with The Open University. 5. Dr. P Jayakumar, Solar Energy: Resource Assessment Handbook, 2009 6. J.Balfour, M.Shaw and S. Jarosek, Photovoltaics, Lawrence J Goodrich (USA). 7. http://en.wikipedia.org/wiki/Renewable_energy 	

Astronomy & Space Mission

Programme Outcomes

PO - 1 Discipline Knowledge: Knowledge of science and ability to apply to relevant areas.

PO - 2 Problem solving: Execute a solution process using first principles of science to solve problems related to respective discipline.

PO - 3 Modern tool usage: Use a modern scientific, engineering and IT tool or technique for solving problems in the areas of their discipline.

PO - 4 Ethics: Apply the professional ethics and norms in respective discipline.

PO - 5 Individual and teamwork: Work effectively as an individual as a team member in a multidisciplinary team.

PO - 6 Communication: Communicate effectively with the stake holders, and give and receive clear instructions.

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs)

Program Outcomes (POs)

Course Outcomes (COs)	1	2	3	4	5	6
CO – 1 : Will come to know the historical growth of Astronomy and the accumulation of knowledge.	x	x				
CO – 2 : Will be able to understand the basic principle of optical instruments such as telescope, binoculars.	x	x				
CO – 3 : Will acquire the skills to set up the telescope and recognize the star clusters and also the planets and satellites.	x	x			x	
CO- 4 : Will acquire the knowledge of wind energy and the methods to tap the energy from the blowing wind to generate electrical power.	x	x	x			
CO – 5 : Will come to know about the conventional energy sources and its impact on the climate	x	x			x	
CO-6 : Will be able to explain the stellar evolution and evolution of the universe.	x				x	x

CO- 7 : Will be able to explain the principle of Rocket launching and other space machines. .	x	x			x	x
CO-7 : Will know the Indian Space program and its contribution for the nation building.	x			x	x	x

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark 'X' in the intersection cell if a course outcome addresses a particular program outcome.

Astronomy & Space Mission

Topic	Hours
Unit 1: History & Introduction	13
Ancient Astronomy Vedic Astronomy, Ancient Astronomy – Aryabhata, Varahamihira, Bhaskara Greek, Sumerian, Mayan, Egyptian, Arabic and Chinese Observations	3
Medieval Astronomy: Geocentric Model, Heliocentric Model Observations by Tycho Brahe, Kepler, Galileo, Herschel and others.	3
Tools for Astronomy: Invention of Telescopes Pin Hole, Binoculars, Telescopes & Imaging.	3
Modern Astronomy Hubble's discovery, Stellar Evolution (Brief), Microwave, Radio Telescopes	2
Observational Terminologies Cardinal Directions, Azimuth, Altitude, Measurements using Compass and Hand. Equatorial Co-ordinates, Light years, Magnitude, Colors.	2
Unit 2: Observational Astronomy	13
The Sun Ecliptic and the Orientation of the Earth, Seasons - Solstices and Equinox, Observations of the Sun from Earth during seasons. Zero-shadow day Sunspots.	2
The Moon Earth-Moon system – Phases, Lunar Eclipses, Ecliptic and Lunar Orbital Plane – Nodes, Lunar Month, Full Moon Names.	2

<p>Inner Planets: Mercury & Venus Observational History, Observational Windows, Appearance, Apparitions, Elongations, Superior Conjunctions, Inferior Conjunctions, Transits.</p> <p>Outer Planets: Mars, Jupiter & Saturn Observational History, Observational Windows, Appearance, Frequency of Oppositions, Conjunctions, Galilean Moons, Saturn's Rings</p> <p>Distant or Minute Objects: Uranus, Neptune & Asteroids Observational History, Observational Windows, Asteroid Belt, Prominent Asteroids.</p>	5
<p>Comets & Meteors Origin, Orbital Nature, Historical Observations, Prominent Comets and Asteroids., Meteors, Origins and Showers</p>	2
<p>Occultations, Transits and Eclipses Definitions, Prominent Occultations and Transits, Eclipses – Types and prominent occurrences. Famous Eclipses in the past.</p>	2
Unit 3: Space Missions	13
<p>Introduction to Space Missions: Rockets, types and their applications, Different types of orbits, Artificial satellites – basic idea and their applications, Introduction to Space Missions, Beginning of Space Missions - World and India, Applications of Space Research, Space crafts, Launching Vehicles.</p> <p>Topics for Self-study: Major Space Centres in the World (at least 10) – brief idea about their location, establishment, capabilities and achievements. People behind space programs – at least 2 from India. Successful Missions (Any Five).</p>	6
<p>Indian Space Research Organisation (ISRO): About ISRO and its Goals, History of Creation.</p> <p>General Satellite Programmes: The IRS series, The INSAT series. Gagan Satellite Navigation System, Navigation with Indian Constellation (NavIC), Other satellites.</p> <p>Launch vehicles: Satellite Launch Vehicle (SLV), Augmented Satellite Launch Vehicle (ASLV), Polar Satellite Launch Vehicle (PSLV), Geosynchronous Satellite Launch Vehicle (GSLV).</p> <p>Experimental Satellites: Details and applications (Any Five)</p> <p>Earth Observation Satellites: Details and applications (Any Five)</p> <p>Communication satellites: Details and applications (Any Five)</p> <p>Topics for Self study: Chandrayaan 1: Details and applications. Mars Orbiter Mission: Details and applications.</p>	7

References:

SI No	Title of the Book	Authors Name	Publisher	Year of Publication
1	The Amateur Astronomer	Sir Patrick Moore	Springer	2006
2	Handbook of Practical Astronomy	Gunter D. Routh	Springer	2009
3	Fundamental Astronomy	Hannu Karttunen	Springer	2007
4	Guide to Night Sky	P. Shankar	KRVP	2007
5	The Complete Idiot's Guide to Astronomy	Christopher De Pree and Alan Axelrod	Pearson	2001
6	The story of Astronomy In India	Chander mohan	Research Gate	2015
7	Trigonometry	-	Inc. BarCharts	
8.	Stargazing for Dummies	Steve Owens	John Wiley & Sons	2013
9.	A Skywatcher's Year	Jeff Kanipe	Cambridge University Press	1999
10.	The Casual Sky Observer's Guide	Rony De Laet	Springer	2012
11.	https://www.isro.gov.in/			

Question paper pattern for Open Elective for I and II Semester

Internal Assessment: 40 marks

Semester Examination: 60 marks

UNIT I, II & III Internal choice for each unit

Questions carrying $1 \times 8 = 8$

$1 \times 7 = 7$

$1 \times 5 = 5$

Total $20 \times 3 = 60$

MANGALORE UNIVERSITY

Name of the Degree Program: BSc (Honors) Chemistry with Analytical Specialization

Discipline Core: Chemistry Total Credits for the Program: 176

Starting year of implementation: 2021-22

Program Outcomes:

By the end of the program the students will be able to:

(Refer to literature on outcome based education (OBE) for details on Program Outcomes)

1. **PO. 1:** To create enthusiasm among students for Analytical chemistry and its application in various fields of life.
2. **PO. 2:** To provide students with broad and balanced knowledge and understanding of key concepts in Analytical chemistry
3. **PO. 3:** To develop in students a range of practical skills so that they can understand and assess risks and work safely measures to be followed in the laboratory.
4. **PO. 4:** To develop in students the ability to apply standard methodology to the solution of problems in chemistry
5. **PO. 5:** To provide students with knowledge and skill towards employment or higher education in Analytical chemistry or multi-disciplinary areas involving Analytical chemistry.
6. **PO. 6:** To provide students with the ability to plan and carry out experiments independently and assess the significance of outcomes and to cater to the demands of chemical Industries of well-trained graduates
7. **PO. 7:** To develop in students the ability to adapt and apply methodology to the solution of unfamiliar types of problems.
8. **PO. 8:** To instil critical awareness of advances at the forefront of chemical sciences, to prepare students effectively for professional employment or research degrees in chemical sciences and to develop an independent and responsible work ethics

Assessment:

Weightage for assessments (in percentage)

Type of Course	Formative Assessment / IA	Summative Assessment
Theory	40	60
Practical	25	25
Projects	-	-
Experiential Learning (Internships etc.)	-	-

Curriculum Structure for the Undergraduate Degree Program BSc (Honors) Chemistry with Analytical Specialization

Total Credits for the Program: 176 Starting year of implementation: 2021-22

Name of the Degree Program: B. Sc (Honors) Discipline/Subject: Chemistry

Program Articulation Matrix:

This matrix lists only the core courses. Core courses are essential to earn the degree in that discipline/subject. They include courses such as theory, laboratory, project, internships etc. Elective courses may be listed separately

Semester	Title /Name Of the course	Program outcomes that the course addresses (not more than 3 per course)	Pre- requisite course(s)	Pedagogy##	Assessment\$
1	DSC-1: Analytical and Organic Chemistry-I	<ul style="list-style-type: none"> The concepts of chemical analysis, accuracy, precision and statistical data treatment Understand the preparation of alkanes, alkenes and alkynes, their reactions, etc. Understand the mechanism of nucleophilic, electrophilic reactions 	P.U.C with Chemistry	Assignment Desk work	Internal Exams, Continuous Evaluation, Sem Exams
	DSC lab-1: Analytical and Organic Practical's-I	<ul style="list-style-type: none"> The students will be able to learn how to handle the glassware, prepare and dilute solutions and perform the experiments with prepared reagents The students will be able to determine the analyte through volumetric and gravimetric analysis and understand the chemistry involved in each method of analysis. 	-	Assignment Desk work	Internal Exams, Continuous Evaluation, Sem Exams

		<ul style="list-style-type: none"> The students will be able to deduce the conversion factor based on stoichiometry and in turn use this value for calculation 			
2	DSC-2: Inorganic and Physical Chemistry-I	<ul style="list-style-type: none"> The Bohr's theory of atomic structure and how it was developed Quantum numbers and their necessity in explaining the atomic structure The concept of unit cell, symmetry elements, Nernst distribution law. 	-	Assignment Desk work	Internal Exams, Continuous Evaluation, Sem Exams
	DSC Lab -2: Inorganic and Physical Practical's-I	<ul style="list-style-type: none"> To prepare standard solutions Techniques like precipitation, filtration, drying and ignition Various titrimetric techniques and gravimetric methods 		Assignment Desk work	Internal Exams, Continuous Evaluation, Sem Exams
3	DSC-3: Analytical and Organic Chemistry-II DSC Lab-3: Analytical and Organic Practical's-II		DSC-1 and DSC-2	Assignment Desk work	Internal Exams, Continuous Evaluation, Sem Exams
4	DSC-4: Inorganic and Physical Chemistry-II DSC Lab-4: Inorganic and Physical Practical's-II			Assignment Desk work	Internal Exams, Continuous Evaluation, Sem Exams

5.	DSC-5: Selected topics in Inorganic Chemistry DSC Lab-5: Inorganic Chemistry Practical's DSC-6: selected topics in Organic Chemistry DSC Lab-6: Organic Chemistry Practical's		DSC-3 and DSC-4	MOOC, Problem solving	Internal tests, Assignments, Quiz
6.	DSC-7: Selected topics in Physical Chemistry DSC Lab-7: Physical Chemistry Practical's. DSC-8: Spectroscopy DSC Lab-8: Analytical and Industrial Chemistry Practical's			MOOC, Problem solving	Internal tests, Assignments, Quiz
7.	DSC-9 :Analytical Techniques-I DSC Lab-9: Analytical Chemistry. DSC-10:Applied Chemical Analysis. DSC Lab-10 :Analytical Chemistry. DSC-11: Enviornmental and Nanomaterial Chemistry.		DSC-5, DSC-6, DSC-7 and DSC-8	MOOC, Problem solving	Internal tests, Assignments, Seminar, Debate, Quiz
8.	DSC-12: Analytical Techniques-II DISIPLINE A13(4) DSC-13: Separation and Electroanalytical Techniques. DSC-14: Analysis of food and pharmaceuticals			Project work, Industrial Visit	Internal tests, Assignments, Seminar, Debate, Quiz

\$ Every course needs to include assessment for higher order thinking skills (Applying/ Analyzing/ Evaluating/ Creating). However, this column may contain alternate assessment methods that help formative assessment (i.e. assessment for learning).

Course Title: DSC-1: Analytical and Organic Chemistry-I	
Total Contact Hours: 56	Course Credits: 4
Formative Assessment Marks: 40	Duration of ESA/Exam: 3 hrs
Model Syllabus Authors: Chairman	Summative Assessment Marks: 60

PUC with Chemistry

At the end of the course the student should be able to:

1. The concepts of chemical analysis, accuracy, precision and statistical data treatment
2. Prepare the solutions after calculating the required quantity of salts in preparing the reagents/solutions and dilution of stock solution.
3. The concept of volumetric and gravimetric analysis and deducing the conversion factor for determination
4. Handling of toxic chemicals, concentrated acids and organic solvents and practice safety procedures.
5. The concepts of Organic reactions and techniques of writing the movement of electrons, bond breaking, bond forming
6. The Concept of aromaticity, resonance, hyper conjugation, etc.
7. Understand the preparation of alkanes, alkenes and alkynes, their reactions, etc.
8. Understand the mechanism of nucleophilic, electrophilic reactions

[illegible]

6	X												
7	X												
8	X												

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark 'X' in the intersection cell if a course outcome addresses a particular program outcome.

BA/BSc/BCom/BBA/BCA

BSc Semester 1 – Chemistry (Hons) with specialization in Analytical Chemistry

Title of the Course: DSC-1: Analytical and Organic Chemistry – I

Number of Theory Credits	Number of lecture hours/ semester	Number of practical Credits	Number of practical hours/ semesters
4	56	2	56
Content of Theory Course 1			56Hrs
Unit – 1			14
Language of analytical chemistry: Definitions of analysis, determination, measurement, techniques and methods. Classification of analytical techniques. Choice of an analytical method - accuracy, precision, sensitivity, selectivity, method validation. Figures of merit of analytical methods and limit of detection (LOD), Limit of quantification (LOQ), linear dynamic range (working range).			
Errors and treatment of analytical data: Limitations of analytical methods – Errors: Determinate and indeterminate errors, absolute error, relative error, minimization of errors. Statistical treatment of finite samples -mean, median, range, standard deviation and variance. External standard calibration - regression equation (least squares method), correlation coefficient (R^2).			
Numerical problems			
Basic laboratory practices, calibration of glassware (pipette, burette and volumetric flask), Sampling (solids and liquids), weighing, drying, dissolving, Acid treatment, Rules of work in analytical laboratory, General rule for performing quantitative determinations (volumetric and gravimetric), Safety in Chemical laboratory, Rules of fire prevention and accidents, First aid. Precautions to be taken while handling toxic chemicals, concentrated/fuming acids and organic solvents.			
Unit - 2			14
Titrimetric analysis: Basic principle of titrimetric analysis. Classification, Preparation and dilution of reagents/solutions. Normality, Molarity and Mole fraction. Use of $N_1V_1 = N_2V_2$ formula, Preparation of ppm level solutions from source materials (salts), conversion factors.			
Acid-base titrimetry: Titration curves for strong acid vs strong base, weak acid vs strong base and weak base vs strong acid titrations. Titration curves, Quantitative applications – selecting and standardizing a titrant, inorganic analysis - alkalinity, acidity.			
Complexometric titrimetry: Indicators for EDTA titrations - theory of metal ion indicators, titration methods employing EDTA - direct, back, displacement and indirect determinations, Application-determination of hardness of water.			
Redox titrimetry: Balancing redox equations, calculation of the equilibrium constant of redox			

<p>reactions, titration curves, Theory of redox indicators, calculation of standard potentials using Nernst equation. Applications.</p> <p>Precipitation titrimetry: Titration curves, titrants and standards, indicators for precipitation titrations involving silver nitrate- Volhard's and Mohr's methods and their differences.</p> <p>Gravimetric Analysis: Requisites of precipitation, mechanism of precipitation, Factors influencing precipitation, Co-precipitation, post-precipitation, Advantages of organic reagents over inorganic reagents, reagents used in gravimetry (8-hydroxy quinoline (oxine) and dimethyl glyoxime (DMG)).</p> <p>Numerical problems on all the above aspects.</p>	
Unit - 3	14
<p>Classification and nomenclature of organic compounds, Hybridization, Shapes of organic molecules, Influence of hybridization on bond properties.</p> <p>Nature of bonding in Organic molecules</p> <p>Formation of Covalent bond, Types of chemical bonding, localized and delocalized, conjugation and cross conjugation, concept of resonance, electronic displacements: Inductive effect, Electromeric effect, Resonance and Hyper conjugation, cross conjugation explanation with examples. Concept of resonance, aromaticity, Huckel rule, anti-aromaticity explanation with examples. Strengths of Organic acid and bases: Comparative study with emphasis on factors effecting pK values. Relative strength of aliphatic and aromatic carboxylic acids-Acetic acid and chloroacetic acid, acetic acid and propionic acid, acetic acid and Benzoic acid. Steric effect- Relative stability of trans and cis-2-butene.</p> <p>Mechanisms of Organic Reactions</p> <p>Notations used to represent electron movements and directions of reactions- curly arrows, formal charges. Types of bonds breaking- homolytic and heterolytic. Types of reagents-Electrophiles, nucleophiles, nucleophilicity and basicity. Types of organic reactions- substitution, addition, elimination, rearrangement and pericyclic reactions, explanation with examples.</p> <p>Chemistry of Aliphatic hydrocarbons, Carbon-Carbon Sigma bonds</p> <p>Chemistry of alkanes: Formation of alkanes, Wurtz reaction, Wurtz-Fittig reaction, Free radical substitution, Halogenation- relative reactivity and selectivity</p> <p>Carbon-carbon pi bonds</p> <p>Formation of alkenes and alkynes by elimination reaction. Mechanism of E1, E2, E1cb reaction. Saytzeff and Hofmann eliminations. Addition of HBr to propene, Free radical addition of HBr to propene. Addition of halogens to alkenes-carbocation and halonium ion mechanism. Stereospecificity of halogen addition. Ozonolysis mechanism - ozonolysis of propene. Addition of hydrogen halides to alkenes, mechanism, regioselectivity and relative rates of addition. Hydrogenation, hydration, hydroxylation and epoxidation of alkenes, explanation with examples, 1,2 and 1,4- addition reactions in conjugated dienes. Diels-Alder reaction, Allylic and benzylic bromination and mechanism in propene, 1-butene, 1-toluene and ethylbenzene.</p>	
Unit - 4	14
<p>Nucleophilic substitution at saturated carbon. Mechanism of S_N^1 and S_N^2 reactions with suitable examples. Energy profile diagrams, Stereochemistry and factors effecting S_N^1 and S_N^2 reactions.</p> <p>Aromatic Electrophilic substitution reactions, Mechanisms, σ and π complexes, Halogenation, Nitration, Sulphonation, Friedel Crafts alkylation and acylation with their mechanism. Activating and deactivating groups. Orientation influence, Ortho-para ratio.</p> <p>Aromatic nucleophilic substitution reaction: S_N^Ar and Benzyne mechanism with suitable examples</p>	

Text Books

1. Vogel's Textbook of Quantitative Chemical Analysis, J. Mendham, R.C. Denney, J.D.Barnes and M.J.K. Thomas, 6th edition, Third Indian Reprint, Pearson Education Pvt.Ltd.(2007).
2. Fundamentals of Analytical Chemistry, D.A. Skoog, D.M. West, Holler and Crouch, 8th edition, Saunders College Publishing, New York (2005).
3. Analytical Chemistry, G.D. Christian, 6th edition, Wiley-India (2007).
4. Practical Volumetric Analysis, Peter A C McPherson, Royal Society of Chemistry, Cambridge, UK (2015).
5. Morrison, R. N. & Boyd, R. N. *Organic Chemistry*, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education)
6. Finar, I. L. *Organic Chemistry (Volume I)*, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education)

7. McMurry, J. E. *Fundamentals of Organic Chemistry*, 7th Ed. Cengage Learning India Edition, 2013
8. Organic Reaction mechanism by V. K. Ahluwalia and K. Parashar (Narosa Publishers).
9. Organic Chemistry by S. M. Mukherji, S. P. Singh and R. K. Kapoor. (Narosa Publishers)
10. A Guide book to mechanism in Organic Chemistry by Peter sykes. Pearson.

References

Pedagogy

Formative Assessment	
Assessment Occasion/ type	Weightage in Marks
Internal Test	40
Sem End Exam	60
Total	100

Content of Practical Course 1: List of Experiments to be conducted

PART-A Analytical Chemistry

1. Calibration of glassware, pipette, burette and volumetric flask.
2. Determination of sodium carbonate and sodium bicarbonate in a mixture.
3. Determination of alkali present in soaps/detergents
4. Determination of iron(II) using potassium dichromate
5. Determination of oxalic acid using potassium permanganate solution
6. Standardization of EDTA solution and determination of hardness of water
7. Standardization of silver nitrate and determination of chloride in a water sample (demonstration)
8. Determination of alkali content in antacids

PART-B Organic Chemistry

1. Selection of suitable solvents for Purification/Crystallization of organic compounds.
2. Preparation of acetanilide from aniline using Zn/acetic acid (Green method).
3. Synthesis of p-nitro acetanilide from acetanilide using nitrating mixture.
4. Bromination of acetanilide (i) Conventional method and/or (ii) with ceric ammonium nitrate and potassium bromide (Green method).
5. Hydrolysis of methyl m-nitrobenzoate to m-nitrobenzoic acid (Conventional method)
6. Synthesis of diazoaminobenzene from aniline (conventional method).
7. Preparation of dibenzalacetone (Green method).
8. Diels Alder reaction between furan and maleic acid (Green method).

BSc Semester 1 – Chemistry (Hons) with specialization in Analytical Chemistry

Title of the Course: OE-1: CHEMISTRY IN DAILY LIFE

Number of Theory Credits	Number of lecture hours/ semester	Number of practical Credits	Number of practical hours/ semesters
3	42	-	42
Content of Theory Course 1			42 Hrs
Unit – 1			14
Dairy Products: Composition of milk and milk products. Analysis of fat content, minerals in milk and butter. Estimation of added water in milk. Beverages: Analysis of caffeine in coffee and tea, detection of chicory in coffee, chloral hydrate in toddy, determination of methyl alcohol in alcoholic beverages. Food additives, adulterants, and contaminants- Food preservatives like benzoates, propionates, sorbates, disulphites. Artificial sweeteners: Aspartame, saccharin, dulcin, sucralose, and sodium cyclamate. Flavors: Vanillin, alkyl esters (fruit flavors), and monosodium glutamate. Artificial food colorants: Coal tar dyes and non-permitted colors and metallic salts. Analysis of pesticide residues in food.			
Unit - 2			14
Vitamins: Classification and Nomenclature. Sources, deficiency diseases, and structures of Vitamin A1, Vitamin B1, Vitamin C, Vitamin D, Vitamin E & Vitamin K1. Oils and fats: Composition of edible oils, detection of purity, rancidity of fats and oil. Tests for adulterants like argemone oil and mineral oils. Halphen test. Soaps & Detergents: Definition, classification, manufacturing of soaps and detergents, composition and uses			
Unit - 3			14
Chemical and Renewable Energy Sources: principles and applications of primary & secondary batteries and fuel cells. Basics of solar energy, future energy storer. Polymers: Basic concept of polymers, classification and characteristics of polymers. Applications of polymers as plastics in electronic, automobile components, medical fields, and aerospace materials. Problems of plastic waste management. Strategies for the development of environment-friendly polymers.			

Text Books

1. B. K. Sharma: Introduction to Industrial Chemistry, Goel Publishing, Meerut (1998)
2. Medicinal Chemistry- Ashtoush Kar.
3. Analysis of Foods – H.E. Cox: 13.
4. Chemical Analysis of Foods – H.E. Cox and Pearson.
5. Foods: Facts and Principles. N. Shakuntala Many and S. Swamy, 4thed. New Age International (1998)
6. Physical Chemistry – P I Atkins and J. de Paula – 7thEd. 2002, Oxford University Press.

7. Handbook on Fertilizer Technology by Swaminathan and Goswamy, 6th ed. 2001, FAI.
8. Organic Chemistry by I. L. Finar, Vol. 1 & 2. 9. Polymer Science and Technology, J. R. Fried (Prentice Hall).

References

Pedagogy

Formative Assessment	
Assessment Occasion/ type	Weightage in Marks
Internal Test	40
Sem End Exam	60
Total	100

BSc Semester 2 – Chemistry (Hons) with specialization in Analytical Chemistry
Title of the Course: DSC – 2: INORGANIC AND PHYSICAL CHEMISTRY - I

Number of Theory Credits	Number of lecture hours/semester	Number of practical Credits	Number of practical hours/ semesters
4	56	2	56
Content of Theory Course 2			56Hrs
Unit – 1			14
Bohr's theory, its limitations and atomic spectrum of hydrogen atom. Wave mechanics: de Broglie equation, Heisenberg's Uncertainty Principle and its significance, Schrödinger's wave equation, significance of ψ and ψ^2 . Quantum numbers and their significance.			
Normalized and orthogonal wave functions. Sign of wave functions. Radial and angular wave functions for hydrogen atom. Radial and angular distribution curves. Shapes of s, p, d and f orbitals. Contour boundary and probability diagrams.			
Pauli's Exclusion Principle, Hund's rule of maximum multiplicity, Aufbau's principle and its limitations- Electronic configurations of the elements (Z=1-30), effective nuclear charge, shielding/screening effect, Slater's rules. Variation of effective nuclear charge in Periodic Table.			
Unit - 2			14
s, p, d and f-block elements, the long form of periodic table. Detailed discussion of the following properties of the elements, with reference to s and p-block elements:			
(a) Atomic radii (van der Waals)			
(b) Ionic and crystal radii.			
(c) Covalent radii			
(d) Ionization enthalpy, successive ionization enthalpies and factors affecting ionization energy. Applications of ionization enthalpy.			
(e) Electron gain enthalpy, trends of electron gain enthalpy.			
(f) Electronegativity, Pauling's/ Mulliken's/ Allred Rachow's/ and Mulliken-Jaffé's electronegativity scales. Variation of electronegativity with bond order, partial charge, hybridization, group electronegativity.			
Trends in the chemistry of the compounds of groups 13 to 17 (hydrides, carbides, oxides and halides) are to be discussed.			
Unit - 3			14
<u>Gaseous State</u>			
Elementary aspects of kinetic theory of gases, Ideal and real gases. Boyle temperature (derivation not required), Molecular velocity, collision frequency, collision diameter, Collision cross section, collision number and mean free path and coefficient of viscosity, calculation of σ and η , variation of viscosity with temperature and pressure.			
Maxwell's Boltzmann distribution law of molecular velocities (Most probable, average and root mean square velocities). Relation between RMS, average and most probable velocity and average kinetic energies. (Mathematical derivation not required), law of equipartition of			

<p>energy.</p> <p>Behaviour of real gases: Deviation from ideal gas behaviour. Compressibility factor (Z) and its variation with pressure for different gases. Causes of deviation from ideal behaviour, vander Waals equation of state (No derivation) and application in explaining real gas behaviour. Critical phenomena - Andrews isotherms of CO₂, critical constants and their calculation from van der Waals equation, Continuity of states, Law of corresponding states. Numerical problems.</p> <p>Liquid State</p> <p>Surface Tension: Definition and its determination using stalagmometer, effect of temperature and solute on surface tension</p> <p>Viscosity: Definition, Coefficient of viscosity. Determination of viscosity of a liquid using Oswald viscometer. Effect of temperature, size, weight, shape of molecules and intermolecular forces.</p> <p>Refraction: Specific and molar refraction- definition and advantages. Determination of refractive index by Abbe's Refractometer.</p> <p>Additive and constitutive properties.</p> <p>Parachor: Definition, Atomic and structure parachor, Elucidation of structure of benzene and benzoquinone. Viscosity and molecular structure. Molar refraction and chemical constitution.</p> <p>Numerical Problems.</p>	
Unit - 4	14
<p>Liquid Crystals</p> <p>Explanation, classification with examples- Smectic, nematic, cholesteric, disc shaped and polymeric. Structures of nematic and cholesteric phases-molecular arrangements in nematic and cholesteric liquid crystals. Applications of liquid crystals in LCDs and thermal sensing.</p> <p>Solids</p> <p>Forms of solids: Unit cell and space lattice, anisotropy of crystals, size and shape of crystals,</p> <p>Laws of Crystallography: Law of constancy of interfacial angles, Law of rational indices, Law of symmetry (Symmetry elements), Crystal systems, Bravais lattice types and identification of lattice planes.</p> <p>Miller indices and its calculation, X-Ray diffraction by crystals: Bragg's law and derivation of Bragg's equation, Single crystal and powder diffraction methods. Defects in crystals, glasses and liquid crystals. Numerical problems.</p> <p>Distribution Law</p> <p>Nernst Distribution Law - Statement and its derivation. Distribution constant, factors affecting distribution constant, validity of Distribution Law, Modification of distribution law when molecules undergo a) Association b) Dissociation. Application of Distribution Law in Solvent extraction. Derivation for simple and multiple extraction. Principles of distribution law in Parkes Process of desilverisation of lead. Numerical Problems.</p>	

Text Books

1. Concise Inorganic Chemistry: J D Lee, 4th Edn, Wiley, (2021)
2. Fundamentals Concepts of Inorganic Chemistry, Vol 1 and 2, 2nd Edition, Asim K Das, CBS Publishers and Distributors, (2013)
3. Basic Inorganic Chemistry, F A Cotton, G Wilkinson and P. L. Gaus, 3rd Edition. Wiley. India
4. Inorganic Chemistry, 2nd Edn. Catherine E. Housecroft and A.G. Sharpe, Pearson Prentice Hall (2005)
5. Atkins Physical Chemistry. 8th Edition. Peter Atkins & Julio De Paula Oxford University Press.
6. Physical Chemistry by Samuel Glasstone, ELBS (1982).

7. A Text book of Physical Chemistry, A S Negi & S C Anand, New Age International Publishers (2007).
8. Principles of Physical Chemistry, Puri, Sharma & Pathania, Vishal Publishing Co.
9. A Text Book of Physical Chemistry P.L.Soni , O.P. Dharmarhaand and U.N.Dash, Sultan Chand and Sons.
10. Advanced Physical Chemistry, Gurdeep Raj, Goel Publishing House (2018)

References

Pedagogy

Formative Assessment	
Assessment Occasion/ type	Weightage in Marks
Internal Test	40
Sem End Exam	60
Total	100

Date _____ Course Co-ordinator _____ Subject Committee Chairperson _____

Content of Practical Course 2: List of Experiments to be conducted

PART-A Inorganic Chemistry

TITRIMETRY

1. Determination of carbonate and hydroxide present in a mixture.
2. Determination of oxalic acid and sodium oxalate in a given mixture using standard $\text{KMnO}_4/\text{NaOH}$ solution
3. Standardization of potassium permanganate solution and determination of nitrite in a water sample
4. Determination of chlorine in bleaching powder using iodometric method.

GRAVIMETRY

1. Determination of Ba^{2+} as BaSO_4
2. Determination of Cu^{2+} as CuSCN
3. Determination of Fe^{2+} as Fe_2O_3
4. Determination of Ni^{2+} as Ni(DMG)_2 complex.

PART-B Physical Chemistry

1. Safety Practices in the Chemistry Laboratory, Knowledge about common toxic chemicals and safety measures in their handling, cleaning and drying of glassware's
2. Determination of density using specific gravity bottle and viscosity of liquids using Ostwald's viscometer (Ethyl acetate, Toluene, Chloroform, Chlorobenzene or any other non-hazardous liquids)
3. Study of the variation of viscosity of sucrose solution with the concentration of a solute
4. Determination of the density using specific gravity bottle and surface tension of liquids using Stalagmometer (Ethyl acetate, Toluene, Chlorobenzene, any other non-hazardous liquids)

5. Study of variation of surface tension of detergent solution with concentration.
6. Determination of specific and molar refraction by Abbes Refractometer. (Ethyl acetate, Methyl acetate, Ethylene Chloride)
7. Determination of the composition of liquid mixture by refractometry. (Toluene & Alcohol, Water & Sucrose)
8. Determination of partition/distribution coefficient - i) Acetic acid in water and cyclohexane. ii) Acetic acid in Water and Butanol. iii) Benzoic acid in water and toluene.

BSc Semester 2 – Chemistry (Hons) with specialization in Analytical Chemistry

Title of the Course: OE – 2: Molecules of Life

Number of Theory Credits	Number of lecture hours/semester	Number of practical Credits	Number of practical hours/ semesters
3	42	-	42
Content of Theory Course 2			42 Hrs
Unit – 1			14
Carbohydrates			
Classification of carbohydrates, reducing and non-reducing sugars, General properties of glucose and fructose, their open chain structures. Epimers, mutarotation and anomers.			
Linkage between monosaccharides, structure of disaccharides (sucrose, maltose, lactose) and polysaccharides (starch and cellulose) excluding their structure elucidation.			
Amino Acids, Peptides and Proteins			
Classification of amino acids, Zwitterion structure and Isoelectric point. Overview of Primary, Secondary, Tertiary and Quaternary structure of proteins. Determination of primary structure of peptides.			
Unit - 2			14
Enzymes and correlation with drug action			
Mechanism of enzyme action, factors affecting enzyme action, Co-enzymes and cofactors and their role in biological reactions, Specificity of enzyme action (including stereospecificity),			
Enzyme inhibitors and their importance, phenomenon of inhibition (Competitive and Non competitive inhibition including allosteric inhibition).			
Drug action -receptor theory. Structure–activity relationships of drug molecules, binding role of –OH group, -NH ₂ group, double bond and aromatic ring			
Lipids			
Introduction to lipids, classification. Biological importance of triglycerides, phospholipids, glycolipids, and steroids (cholesterol).			
Unit - 3			14
Nucleic Acids			
Components of nucleic acids: Adenine, guanine, thymine and cytosine (Structure only), other components of nucleic acids, Nucleosides and nucleotides (nomenclature),			

Structure of polynucleotides; Structure of DNA (Watson-Crick model) and RNA (**types of RNA**), Genetic Code, Biological roles of DNA and RNA: Replication, Transcription and Translation.

Concept of Energy in Biosystems

Calorific value of food. Standard caloric content of carbohydrates, proteins and fats. Oxidation of foodstuff (organic molecules) as a source of energy for cells. Introduction to Metabolism (catabolism, anabolism), ATP: the universal currency of cellular energy, ATP hydrolysis and free energy change. Conversion of food into energy. Outline of catabolic pathways of Carbohydrate- Glycolysis, Fermentation, Krebs Cycle. Overview of catabolic pathways of Fats and Proteins. Interrelationships in the metabolic pathways of Proteins, Fats and Carbohydrates.

Text Books

1. Morrison, R. T. & Boyd, R. N. *Organic Chemistry*, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education).
2. Finar, I. L. *Organic Chemistry (Volume 1)*, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education).
3. Finar, I. L. *Organic Chemistry (Volume 2)*, Dorling Kindersley (India) Pvt. Ltd. (Pearson Education).
4. Nelson, D. L. & Cox, M. M. *Lehninger's Principles of Biochemistry 7th Ed.*,
5. W. H. Freeman. Berg, J.M., Tymoczko, J.L. & Stryer, L. *Biochemistry*, , 2002.

References

Formative Assessment	
Assessment Occasion/ type	Weightage in Marks
Internal Test	40
Sem End Exam	60
Total	100

Sd/-



MANGALORE UNIVERSITY

NATIONAL EDUCATION POLICY - 2020 (NEP-2020)

Curriculum Structure

for

Bachelor of Computer Applications (BCA) Programme

(Basic and Honours Degree)

Syllabus for 1st and 2nd Semesters

and

Open Elective Courses in Computer Science

Preface

The BoS committee members are thankful to the Government of Karnataka for initiating the process of implementation of NEP-2020 and Authorities of the Mangalore University for implementing the concern syllabus for the academic year 2021- 22 onwards in Mangalore University. It is our privilege to be part of this process through a respected BoS committee for finalizing syllabus of the UG Four Year BCA (Honors) Programme.

The respected BoS committee members conducted offline meeting on 21.10.2021@11am and subsequently by online meetings on 23.10.2021 @ 6.00pm and 24.10.2021 @ 6pm for discussion and finalizing the course titles as per model given in Table B2 Model Programme Structure for Bachelor of Science (Basic/Hons.) Programme (Subjects with practical) C5 Model Programme Structure for Bachelor of Computer Applications (Basic/Hons.) with Computer Applications as Programme Core Subject with Practical.

These deliberations also helped in framing the syllabi for I and II Semesters and also the Programme and Course outcomes. The model draft curriculum structure and the syllabi for the first two semesters of the Programme was presented in the BoS committee meeting and the inputs are considered during further revision. The model draft document is ready for submission to the University for further action.

The BoS committee is committed to frame the remaining part of the syllabus for the BCA Programme and will be working further to fulfill all academic input requirements in implementing the curriculum in letter and spirit of NEP 2020.

Preamble

Computer Application (CA) has been evolving as an important branch of science and technology in last two decade and it has carved out a space for itself like computer science and engineering. Computer application spans theory and more application and it requires thinking both in abstract terms and in concrete terms.

The ever -evolving discipline of computer application has strong connections to other disciplines. Many problems in science, engineering, health care, business, and other areas can be solved effectively with computers and its applications, but finding a solution requires both computer science expertise and knowledge of the particular application domain.

Computer science has a wide range of specialties. These include Computer Architecture, Software Systems, Graphics, Artificial Intelligence, Mathematical and Statistical Analysis, Data Science, Computational Science, and Software Engineering.

Universities and other HEIs introduced programmes of computer application. Information Technology is growing rapidly. Increasing applications of computers in almost all areas of human endeavour has led to vibrant industries with concurrent rapid change in technology. Unlike other basic disciplines, developing core competency in this discipline that can be reasonably stable becomes a challenge.

In India, it was initially introduced at the Master (postgraduate) level as MCA and M.Tech. Later on, engineering programmes such as B.Tech and B.E in Computer Science & Engineering and in Information Technology were introduced in various engineering College/Institutions to cater to the growing demand for trained engineering manpower in IT industries. Parallely, BCA, BSc and MSc programmes with specialization in Computer Science were introduced to train manpower in this highly demanding area.

BCA (Basic / Hons) are aimed at undergraduate level training facilitating multiple career paths. Students so graduated, can take up postgraduate programmes in CS or MCA leading to research as well as R&D, can be employable at IT industries, or can pursue a teaching profession or can adopt a business management career.

BCA (Basic / Hons) aims at laying a strong foundation of computer application at an early stage of the career. There are several employment opportunities and after successful completion of BCA, graduating students can fetch employment directly in companies as programmer, Web Developer, Software Engineer, Network Administrator, Data Scientist, or AI/ML personnel.

The Program outcomes in BCA are aimed at allowing flexibility and innovation in design and

development of course content, in method of imparting training, in teaching learning process and in assessment procedures of the learning outcomes. The emphasis in BCA courses, in outcome-based curriculum framework, help students learn solving problems, accomplishing IT tasks, and expressing creativity, both individually and collaboratively. The proposed framework will help Students learn programming techniques and the syntax of one or more programming languages.

All students must, therefore, have access to a computer with a modern programming language installed. The computer science framework does not prescribe a specific language. The teacher and students will decide which modern programming languages students will learn. More importantly, students will learn to adapt to changes in programming languages and learn new languages as they are developed.

The present Curriculum Framework for BCA degrees is intended to facilitate the students to achieve the following.

- To develop an understanding and knowledge of the basic theory of Computer Science and Information Technology with good foundation on theory, systems and applications such as algorithms, data structures, data handling, data communication and computation
- To develop the ability to use this knowledge to analyse new situations in the application domain
- To acquire necessary and state-of-the-art skills to take up industry challenges. The objectives and outcomes are carefully designed to suit to the above-mentioned purpose.
- The ability to synthesize the acquired knowledge, understanding and experience for a better and improved comprehension of the real-life problems
- To learn skills and tools like mathematics, statistics and electronics to find the solution, interpret the results and make predictions for the future developments
- To formulate, to model, to design solutions, procedure and to use software tools to solve real world problems and evaluate

The objectives of the Programme are:

1. The primary objective of this program is to provide a foundation of computing principles and business practices for effectively using/managing information systems and enterprise software
2. It helps students analyze the requirements for system development and exposes students to business software and information systems
3. This course provides students with options to specialize in legacy application software, system software or mobile applications
4. To produce outstanding IT professionals who can apply the theoretical knowledge into practice in the real world and develop standalone live projects themselves
5. To provide opportunity for the study of modern methods of information processing and its applications.
6. To develop among students the programming techniques and the problem- solving skills through programming
7. To prepare students who wish to go on to further studies in computer science and related subjects.
8. To acquaint students to Work effectively with a range of current, standard, Office Productivity software applications

Program Outcomes: **BCA (3 Years) Degree**

1. **Discipline knowledge:** Acquiring knowledge on basics of Computer Science and ability to apply to design principles in the development of solutions for problems of varying complexity
2. **Problem Solving:** Improved reasoning with strong mathematical ability to Identify, formulate and analyze problems related to computer science and exhibiting a sound knowledge on data structures and algorithms.
3. **Design and Development of Solutions:** Ability to design and development of algorithmic solutions to real world problems and acquiring a minimum knowledge on statistics and optimization problems. Establishing excellent skills in applying various design strategies for solving complex problems.
4. **Programming a computer:** Exhibiting strong skills required to program a computer for various issues and problems of day-to-day applications with thorough knowledge on programming languages of various levels.
5. **Application Systems Knowledge:** Possessing a sound knowledge on computer application software and ability to design and develop app for applicative problems.
6. **Modern Tool Usage:** Identify, select and use a modern scientific and IT tool or technique for modeling, prediction, data analysis and solving problems in the area of Computer Science and making them mobile based application software.
7. **Communication:** Must have a reasonably good communication knowledge both in oral and writing.
8. **Project Management:** Practicing of existing projects and becoming independent to launch own project by identifying a gap in solutions.
9. **Ethics on Profession, Environment and Society:** Exhibiting professional ethics to maintain the integrality in a working environment and also have concern on societal impacts due to computer-based solutions for problems.
10. **Lifelong Learning:** Should become an independent learner. So, learn to learn ability.
11. **Motivation to take up Higher Studies:** Inspiration to continue educations towards advanced studies on Computer Science.

Additional Program Outcomes: BCA Degree (Hons)

The Bachelor of Computer Application (BCA (Hons.)) program enables students to attain following additional attributes besides the afore-mentioned attributes, by the time of graduation:

1. Apply standard Software Engineering practices and strategies in real -time software project development
2. Design and develop computer programs/computer -based systems in the areas related to AI, algorithms, networking, web design, cloud computing, IoT and data analytics.
3. Acquaint with the contemporary trends in industrial/research settings and thereby innovate novel solutions to existing problems
4. The ability to apply the knowledge and understanding noted above to the analysis of a given information handling problem.
5. The ability to work independently on a substantial software project and as an effective team member.

**C5. Model Programme Structure for Bachelor of Computer Applications (Basic/Hons.) with
Computer Applications as Programme Core Subject with Practical**

Sem.	Discipline Core (DSC) (Credits)	Discipline Elective (DSE) / Open Elective (OE) (Credits)	Ability Enhancement Compulsory Courses (AECC), Languages (Credits) (L+T+P)		Skill Enhancement Courses (SEC)			Total Credits
					Skill based (Credits) (L+T+P)	Value based (Credits) (L+T+P)		
I	CA C-1 (3+2) CA C-2 (3+2) CA C-3 (3)	OE-1 (3)	L1-1(3), L2-1(3) (4 hrs. each)		SEC-1: Digital Fluency (2) (1+0+2)	Yoga (1) (0+0+2)	Health & Wellness (1) (0+0+2)	26
II	CA C-4 (3+2) CA C-5 (3+2) CA C-6 (3)	OE-2 (3)	L1-2(3), L2-2(3) (4 hrs. each)	Environmental Studies (2)		Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/Cultural (1) (0+0+2)	26
Exit option with Certificate in Computer Applications (with the completion of courses equivalent to a minimum of 48 credits)								
III	CA C-7 (3+2) CA C-8 (3+2) CA C-9 (3)	OE-3 (3)	L1-3(3), L2-3(3) (4 hrs each)		SEC-2: Artificial Intelligence or some other SEC (2) (1+0+2)	Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/Cultural (1) (0+0+2)	26
IV	CA C-10 (3+2) CA C-11 (3+2) CA C-12 (3)	OE-4 (3)	L1-4(3), L2-4(3) (4 hrs each)	Constitution of India (2)		Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/Cultural (1) (0+0+2)	26
Exit option with Diploma in Computer Applications (with the completion of courses equivalent to a minimum of 96 credits)								
V	CA C-13 (3+2) CA C-14 (3+2) CA C-15 (3)	CA E-1 (3) Vocational-1 (3)			SEC-3: Cyber Security or some other SEC (2) (1+0+2)	Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/Cultural (1) (0+0+2)	23
VI	CA C-16 (3+2) CA C-17 (3+2) CA C-18 (3)	CA E-2 (3) Vocational-2 (3) Internship (2)			SEC-4: Professional Communication (2)	Sports (1) (0+0+2)	NCC/NSS/R&R(S&G)/Cultural (1) (0+0+2)	25
Exit Option with Bachelor of Computer Applications Degree, BCA Degree (with completion of courses equivalent to a minimum of 140 credits)								
VII	CA C-19(3+2) CA C-20(3+2) CA C-21 (3)	CA E-3 (3) Vocational-3 (3) Res.methodology (3)						22
VIII	CA C-22 (3) CA C-23 (3) CA C-24 (3)	CA E-4 (3) Vocational-4 (3) Research Project(6)*						21
Award of Bachelor of Computer Applications with Honours, BCA (Hons.) Degree (with completion of courses equal to a minimum of 180 credits)								

*In lieu of the research Project, two additional elective papers/ Internship may be offered.

Curriculum for BCA

Sem	Core Courses	Hour / Week		DS Elective Courses	Hous/ Week
		Theory	Lab		
1	i. Fundamentals of Computers ii. Programming in C iii. Mathematical Foundation iv. LAB: Information Technology v. LAB: C Programming	3 3 3	4 4		
2	i. Discrete Mathematical Structures ii. Data Structures using C iii. Object Oriented Concepts using JAVA iv. LAB: Data Structure v. LAB: JAVA Lab	3 3 3	4 4		
3	i. Data Base Management Systems ii. C# and DOT NET Framework iii. Operating Systems Concepts iv. LAB: DBMS v. LAB: C# and DOT NET Framework	3 3 3	4 4		
4	i. Python Programming ii. Computer Multimedia and Animation iii. Computer Communication and Networks iv. LAB: Multimedia and Animation v. LAB: Python programming	3 3 3	4 4		
5	i. Internet Technologies ii. Statistical Computing and R Programming iii. Software Engineering iv. LAB: R Programming v. LAB: JAVA Script, HTML and CSS vi. Vocational 1	3 3 3	4 4	(a) Cyber Law and Cyber Security (b) Cloud Computing (c) Business Intelligence	3 3 3
6	i. Artificial Intelligence and Applications ii. PHP and MySQL iii. LAB: PHP and MySQL iv. PROJECT v. Vocational 2	3 3	4 12	(a) Fundamentals of Data Science (b) Mobile Application Development (c) Embedded Systems	3 3 3
7	i. Analysis and Design of Algorithms ii. Data Mining and Knowledge Management iii. LAB: Algorithms iv. LAB: Data Mining and Knowledge Management v. Vocational 3	3 3	4 4	(a) Data Compression (b) IoT (c) Data Analytics	3 3 3
8	i. Automata Theory and Compiler Design ii. Cryptography and Network Security ii. LAB: Compiler Lab vi. PROJECT v. Vocational 4	3 3	4 12	(a) Open-Source Programming (b) Storage Area Networks (c) Pattern Recognition (a) Machine Learning	3 3 3 3

TABLE I: COURSE STRUCTURE FOR BCA

Semester	Course Code	Title of the Paper	Credit	Total Credit of OE, Languages, CAE, Voc, AECC, SEC	Total Credit
I	CAC01	Fundamentals of Computers	3	13	26
	CAC02	Programming in C	3		
	CAC03	Mathematical Foundation	3		
	CAC01P	LAB: Information Technology Lab	2		
	CAC02P	LAB: C Programming Lab	2		
II	CAC04	Data Structures using C	3	13	26
	CAC05	Object Oriented Concepts using JAVA	3		
	CAC06	Discrete Mathematical Structures	3		
	CAC04 P	LAB: Data Structure	2		
	CAC05 P	LAB: JAVA	2		
III	CAC07	Data Base Management Systems	3	13	26
	CAC08	C# and DOT NET Framework	3		
	CAC09	Operating System Concepts	3		
	CAC07P	LAB: DBMS	2		
	CAC08P	LAB: C# and DOT NET Framework	2		
IV	CAC10	Python Programming	3	13	26
	CAC11	Computer Multimedia and Animation	3		
	CAC12	Computer Communication and Networks	3		
	CAC10P	LAB: Python programming	2		
	CAC11P	LAB: Multimedia and Animation	2		
V	CAC13	Internet Technologies	3	10	23
	CAC14	Statistical Computing and R Programming	3		
	CAC15	Software Engineering	3		
	CAC13P	LAB: JAVA Script, HTML and CSS	2		
	CAC14P	LAB: R Programming	2		
VI	CAC16	PHP and MySQL	3	10	23
	CAC17	Artificial Intelligence and Applications	3		
	CAC16P	LAB: PHP and MySQL	2		
	CA-P1	Project Work	5		
VII	CAC18	Analysis and Design of Algorithms	3	11	21
	CAC19	Data Mining and Knowledge Management	3		
	CAC18P	LAB: Algorithms	2		
	CAC19P	LAB: Data Mining	2		
	CAI01	Internship	2		
VIII	CAC20	Automata Theory and Compiler Design	3	6	20
	CAC21	Cryptography and Network Security	3		
	CAC20P	LAB: Compiler Lab	2		
	CAP02	Project Work	6		

TABLE II: CS COURSE DETAILS FOR BCA

Course-Type	Course Code as referred above	Compulsory/ Elective	List of compulsory courses and list of option of elective courses. (A suggestive list)
CA	CAC01, CAC02, CAC03, CAC04, CAC05, CAC06, CAC07, CAC08, CAC09, CAC10, CAC11, CAC12, CAC13, CAC14, CAC15, CAC16, CAC17, CAC18, CAC19, CAC20, CAC21	Compulsory	As Mentioned in Table I
CA E	CAE-1A	Elective	Cyber Law and Cyber Security OR Business Intelligence OR Fundamentals of Data Science
	CAE-2A	Elective	Fundamentals of Data Science OR Mobile Application Development OR Embedded Systems
	CAE-3A	Elective	Data Compression OR Internet of Things (IoT) OR Data Analytics
	CAE-4A	Elective	Open-source Programming OR Storage Area Networks OR Pattern Recognition OR Machine Learning
Vocational	Vocational -1	Elective	DTP, CAD and Multimedia OR Hardware and Server Maintenance OR Web Content Management Systems OR Computer Networking OR Health Care Technologies OR Digital Marketing OR Office Automation
	Vocational -2	Elective	
	Vocational -3	Elective	
	Vocational -4	Elective	
SEC	SEC 1	Compulsory	Health & Wellness/ Social & Emotional Learning
	SEC 2	Compulsory	Sports/NCC/NSS etc
	SEC 3	Compulsory	Ethics & Self Awareness
	SEC 4	Compulsory	Professional Communication
AECC	AECC1	Compulsory	Environmental Studies
	AECC2	Compulsory	Constitution of India
Language 1	L1-1, L1-2, L1-3, L1-4	Compulsory	Kannada/Functional Kannada
Language 2	L2-1, L2-2, L2-3, L4-4	Elective	English/Hindi/French/ Additional English/ etc.

Course Contents for BCA: Semesters I and II

Semester: I

Course Code: CAC01	Course Title: Fundamentals of Computers
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration: 03

Course Outcomes (COs):

After completing this course satisfactorily, a student will be able to:

- Understand the fundamentals of computer system
- Identify different components within the computer system
- Understand different types of input and output devices
- Demonstrate the working concepts of different devices connected to computer
- Explain different generations of programming languages and their significance
- Understand the use of Word processing, Spreadsheet, Presentation and DBMS applications
- Understand Digital computer and digital systems functioning

Course Contents

Contents	Hours
Unit - 1	
Computer Basics: Introduction, Characteristics computers, Evolution computers, Generations of computers, Classification of computers, the computer system, Application of computers. Computer Architecture: Introduction, Central processing unit- ALU, Registers, Control unit, system bus, main memory unit, cache memory Input devices: Introduction, Types of input devices, Keyboard, Mouse, Track ball, Joystick light pen, Touch screen and track pad. Speech recognition, digital camera, webcam, flatbed scanner Output devices: Types of output, Classification of output devices, Printers – Dot matrix, Ink-jet, Laser, Hydra, Plotter, Monitor – CRT, LCD, Differences between LCD and CRT	12
Unit - 2	
Computer software: Introduction, software definition, relationship between software and hardware, software categories Computer programming languages: Introduction, Developing a program, Program development cycle, Types of programming languages, generation of programming languages, Features of a good programming language. Problem Solving techniques: Introduction, Problem solving procedure. Algorithm: Steps involved in algorithm development, Algorithms for simple problems (To find largest of three numbers, factorial of a number, check for prime number, check for palindrome, Count number of odd, even and zeros in a list of integers) Flowcharts: Definition, advantages, Symbols used in flow charts. Flowcharts for simple problems mentioned in algorithms. Psuedocode.	10

Unit-3	
Digital Computers and Digital System: Introduction to Number System, Decimal number, Binary number, Octal and Hexadecimal numbers, Number base conversion, Complements, Binary codes, Binary arithmetic, Addition, Subtraction in the 1's and 2's complements system, Subtraction in the 9's and 10's complement system. Boolean Algebra: Basic definitions, Axiomatic definition of Boolean algebra, Basic theorems and properties of Boolean algebra, Venn diagram.	10
Unit-4	
Digital logical gate: Boolean functions, Canonical and Standard forms, Minterms, Maxterms, other logic operations, Digital logic gates, Universal gates. Simplification of Boolean function: The map method, Two and three variable maps, Four-variable maps, Don't care conditions, Product of sum simplification.	10

Text Books:

1. ITL Education Solution Limited, Introduction to Information Technology, Second Edition, Pearson
2. M. Morris Mano, Digital Logic and Computer design, PHI, 2015

Reference Books:

1. Pradeep K. Sinha and Priti Sinha, Computer Fundamentals, Sixth Edition, BPB Publication.
2. David Riley and Kenny Hunt, Computational thinking for modern solver, Chapman & Hall/CRC.
3. J. Glenn Brookshear, Computer Science: An Overview, Twelfth Edition, Addison-Wesley
4. R.G. Dromey, How to solve it by Computer, PHI.

Course Code: CAC02	Course Title: Programming in C
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration: 03

Course Outcomes (COs):

After completing this course satisfactorily, a student will be able to:

- Confidently operate Desktop Computers to carry out computational tasks
- Understand working of Hardware and Software and the importance of operating systems
- Understand programming languages, number systems, peripheral devices, networking, multimedia and internet concepts
- Read, understand and trace the execution of programs written in C language
- Write the C code for a given problem
- Perform input and output operations using programs in C
- Write programs that perform operations on arrays

Course Contents

Contents	Hours
Unit - 1	
Overview of C : History of C , Importance of C Program, Basic structure of a C-program, Execution of C Program. C Programming Basic Concepts: Character set, C token, Keywords and identifiers, Constants, Variables, data types, Declaration of variables, assigning values to variables, defining symbolic constants. Input and output with C: Formatted I/O functions - <i>printf</i> and <i>scanf</i> , control stings and escape sequences, output specifications with <i>printf</i> functions; Unformatted I/O functions to read and display single character and a string - <i>getchar</i> , <i>putchar</i> , <i>gets</i> and <i>puts</i> functions.	12
Unit - 2	
Operators & Expressions: Arithmetic operators; Relational operators; Logical operators; Assignment operators; Increment & Decrement operators; Bitwise operators; Conditional operator; Special operators; Operator Precedence and Associativity; Evaluation of arithmetic expressions; Type conversion. Control Structures: Decision Making and Branching -Decision making with if statement, simple if statement, the if else statement, nesting of if ... else statements, the else if ladder, the switch statement, the ?: operator, the go to statement. Decision making and looping - The while statement, the do statement, for statement, nested loops, exit, break, jumps in loops.	10
Unit - 3	
Derived data types in C: Arrays - declaration, initialization and access of one-dimensional and two-dimensional arrays. programs using one- and two-dimensional arrays, sorting and searching arrays. Handling of Strings: Declaring and initializing string variables, reading strings from terminal, writing strings to screen, Arithmetic operations on characters, String handling functions - <i>strlen</i> , <i>strcmp</i> , <i>strcpy</i> , <i>strstr</i> and <i>strcat</i> ; Character handling functions - <i>tolower</i> , <i>toupper</i> , <i>isalpha</i> , <i>isnumeric</i> etc. Pointers: Understanding pointers, accessing the address of a variable, declaring and initializing pointers, accessing a variable through its pointer, pointer expression, pointer increments and scale factor, pointers and arrays, pointer and strings.	10

Unit - 4	
<p>User-defined functions: Need for user-defined functions, Declaring, defining and calling C functions, return values and their types, Categories of functions: With/without arguments, with/without return values. Nesting of functions.</p> <p>Recursion: Definition, example programs.</p> <p>Structures and unions: Structure definition, giving values to members, structure initialization, comparison of structure variables, arrays of structures, arrays within structures, Structure and functions, structures within structures. Unions</p>	10

Text Book:

1. E. Balagurusamy, Programming in ANSI C, 7th Edition, Tata McGraw Hill

Reference Books:

1. Herbert Schildt, C: The Complete Reference, 4th Edition
2. Brain W. Kernighan, C Programming Language, 2nd Edition, Prentice Hall Software
3. Kernighan & Ritchie: The C Programming Language, 2nd Edition, PHI
4. Kamthane, Programming with ANSI and TURBO C, Pearson Education
5. V. Rajaraman, Computer Programming in C, 2nd Edition, PHI
6. S. Byron Gottfried, Programming with C, 2nd Edition, TMH
7. Yashwant Kanitkar, Let us C, 15th Edition, BPB
8. P.B. Kottur, Computer Concepts and Programming in C, 23rd Edition, Sapna Book House

Course Code: CAC03	Course Title: Mathematical Foundation
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration: 03

Course Outcomes (COs):

- Study and solve problems related to connectives, predicates and quantifiers under different situations.
- Develop basic knowledge of matrices and to solve equations using Cramer's rule.
- Know the concept of Eigen values.
- To develop the knowledge about derivatives and know various applications of differentiation.
- Understand the basic concepts of Mathematical reasoning, set and functions

Course Contents:

Contents	Hours
Unit - 1	
Algebra: Logarithms - Introduction, Definition, Laws of operations, change of base Binomial theorems - Introduction, Binomial theorem, Position of terms. Analytical geometry : Introduction, directed line, midpoint, distance between two points, Section formula, external division, coordinates of a centroid, Area of a triangle. The straight line – slope of a straight line, different forms of equations of the straight line. Circle -The equation of a circle, different forms of circles, General equation of the circle, equation of tangent and normal to the circle.	12
Unit - 2	
Trigonometry : Introduction, Measurement of angles, trigonometric functions, relation between trigonometric functions, signs of trigonometric functions, trigonometric functions of standard angles. Calculus : Limit of function, continuity of a function. Differentiation : Derivative of a function of one variable, Power function, constant with a function, sum of functions, product of two functions, quotient of two functions. Integration - Indefinite integral, rules of integration, some standard results and examples, definite integral.	10
Unit - 3	
Matrix Algebra : Definition, types of matrices, algebra of matrices – addition of matrices, subtraction of matrices, multiplication of matrices, determinant of a matrix, Adjoint of a matrix, orthogonal and unitary matrix, rank of a matrix, echelon form of a matrix, normal form of a matrix, equivalence of matrices	10
Unit - 4	
Inverse of a matrix, Characteristic equation of a matrix , Cayley Hamilton theorem, Eigen values. System of Linear equations : solution of Linear homogeneous and non-homogeneous equations (matrix method), Cramer's rule Arithmetic progression : Definition, formula for nth term, sum to n terms, Arithmetic mean, problems Geometric progression : Definition, formula for nth term, sum to n terms, geometric mean, problems	10

Text Books:

- 1.C Sanchethi and V K Kapoor,Business Mathematics, Sulthan Chand & Sons Educational publishers, New Delhi, Eleventh Revised Edition
- 2.P. R. Vittal-Business Mathematics and Statistics, Margham Publications, Chennai
- 3.Pundir &S.K. Pundir, A Text Book of BCA Mathematicis - I, Rimple A, Pragatis Edition (IV)
- 4.B. S. Vatsa-Discrete Mathematics –New Age International Limited Publishers, New Delhi

Course Code: CAC01P	Course Title: Information Technology Lab
Course Credits: 02	Hours/Week: 04
Total Contact Hours: 52	Formative Assessment Marks: 20
Exam Marks: 30	Exam Duration: 03

Practice Lab

1. Identification of the peripherals of a computer, components in a CPU and their functions.
2. Assembling and disassembling the system hardware components of personal computer.
3. Basic Computer Hardware Trouble shooting.
4. LAN and WiFi Basics.
5. Operating System Installation – Windows OS, UNIX/LINUX, Dual Booting.
6. Activities using word processing, presentation and spreadsheet software
7. Tasks involving Internet Browsing

Information Technology Lab

Part A: Word Processing & Presentation

I. Word Processing

1. Prepare a document using different formatting tools

Highlights of the National Education Policy (NEP) 2020



Note4Students

From UPSC perspective, the following things are important :

Prelims level : National Education Policy

Mains level : Need for imbuing competitiveness in Indian education system

New Policy aims for **universalization of education** from pre-school to secondary level with 100 % Gross Enrolment Ratio (GER) in school education by 2030. NEP 2020 will bring 2 crores out of school children back into the mainstream through the open schooling system.

❖ The current 10+2 system to be replaced by a **new 5+3+3+4 curricular structure** corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively. **This will bring the hitherto uncovered age group of 3-6 years under the school curriculum, which has been recognized globally as the crucial stage for the development of mental faculties of a child.**

❖ The new system will have 12 years of schooling with three years of Anganwadi/ pre-schooling.

- o Emphasis on Foundational Literacy and Numeracy, no rigid separation between academic streams, extracurricular, vocational streams in schools; Vocational Education to start from Class 6 with Internships
- o Teaching up to at least Grade 5 to be in mother tongue/ regional language. No language will be imposed on any student.

- Assessment reforms with **360° Holistic Progress Card**, tracking Student Progress for achieving Learning Outcomes

- A new and comprehensive National Curriculum Framework for Teacher Education, NCFTE 2021, will be formulated by the NCTE in consultation with NCERT.

- By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.

- Gross Enrolment Ratio in higher education to be raised to **50% by 2035; 3.5 crore seats to be added in higher education.**

- The policy envisages broad-based, multi-disciplinary, holistic Under Graduate Program with flexible curricula, creative combinations of subjects, integration of vocational education and multiple entries and exit points with appropriate certification.

- **Academic Bank of Credits to be established to facilitate Transfer of Credits**

Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards in the country.

Affiliation of colleges is to be **phased out in 15 years** and a stage-wise mechanism is to

be established for granting graded autonomy to colleges.

Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College or a constituent college of a university.

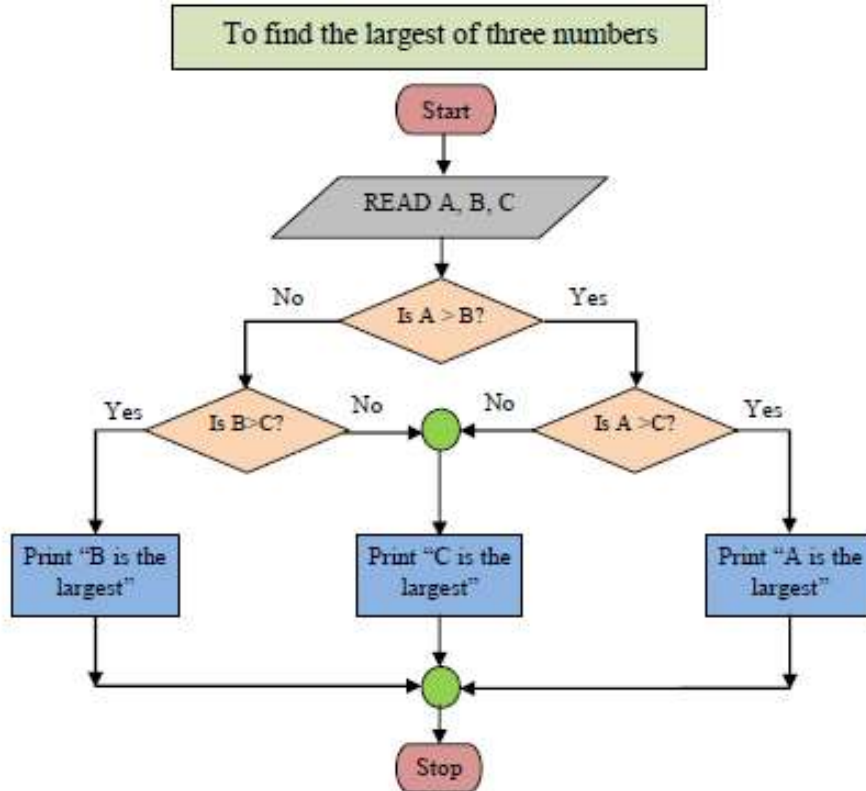
$$\frac{df}{dt} = \lim_{h \rightarrow 0} \frac{f(t+h) - f(t)}{h}$$

$$(a+b)^2 = a^2 + 2ab + b^2$$

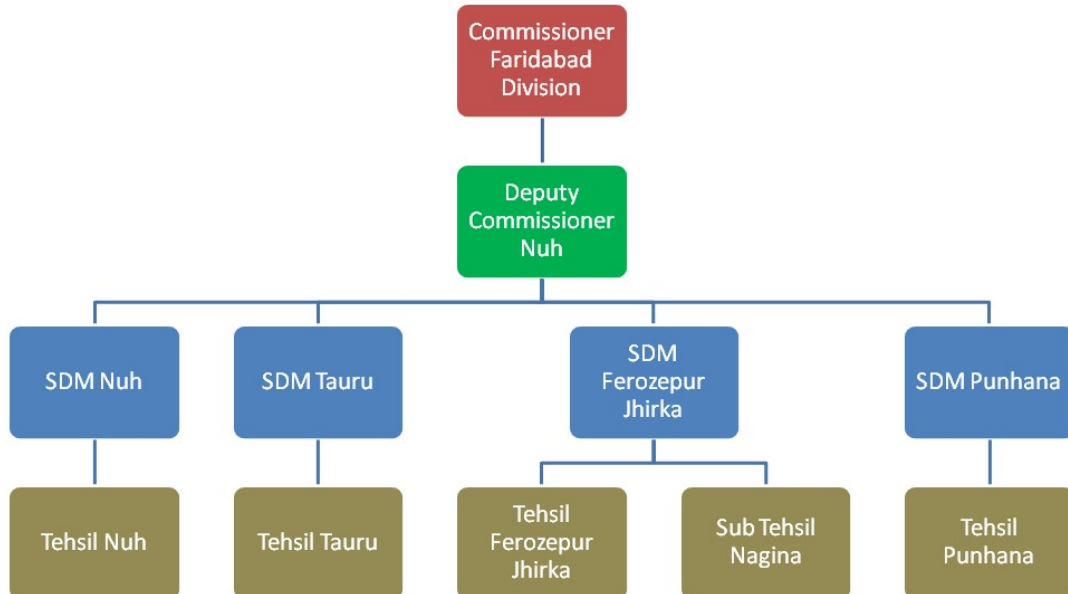
$$(a-b)^2 = (a+b)^2 - 4ab$$

$$a^2 + b^2 = (a-b)^2 + 2ab$$

2. Prepare a document using SmartArt and Shapes tools



Organization Chart – Administration Faridabad Division



3. Prepare a document with table to store sales details of a company for different quarters and calculate total, average and find maximum, minimum sales value.

Branch Code	Branch	Sales in Quarters				Total	Avg
		1	2	3	4		
A101	Mangalore	354690	244610	383290	413670		
A102	Udupi						
Total (Across Branches)							
Average (Across Branches)							
Highest Sales (Across Branches)							
Lowest Sales (Across Branches)							

TIME TABLE

Class : I BCA				Room No. 206			
Day	I	II	III	IV		V	VI
Monday					LUNCH BREAK		
Tuesday							
Wednesday							
Thursday							
Friday							
Saturday						***	

4. Prepare interview call letters for five candidates describing about the company and instructions about the interview. Use Mail merge feature

Interview call Letter Format

Date:

[Name of the candidate]

[Address]

Dear [name of the candidate]

This is to the reference of your application for the job [name of the job] indicating interest in seeking employment in our organisation. We thank you for the same.

We would like to inform you that your profile is being shortlisted for the job role and is best suited for it. Therefore, we would like to take a face to face interview with you on [date of interview] at [venue details].

We hope that the venue is suitable for you. If not please get in touch with us, so that we can arrange the date and venue according to your availability.

The company will reimburse you all the expenses incurred by you for this interview. This letter has an attachment in which you need to fill the details and carry it along on the date of interview. Please carry your CV also along with you.

Kindly confirm your availability for the date and venue. If there are any changes to be done, please contact us at phone number: [999xxxx999] and email id: abcnd@mail.com.

We look forward to seeing you.

Regards,

Name of the Manager

Designation Name

Company name

II. Presentation

1. Create a presentation (minimum 5 slides) about your college. It should contain images, chart, Bulleted text,
2. Create a presentation (minimum 5 slides) to advertise a product. The slides should be displayed automatically in a loop. Make use of Transition and Animations.
3. A simple quiz program. Use hyperlinks to move to another slide in the presentation to display the result and correct answer/wrong answer status. Use at least four questions.

Part B: Spreadsheet

(Note: Give proper titles, column headings for the worksheet. Insert 10 records for each exercise in such a way to get the result for all the conditions. Format the numbers appropriately wherever needed).

1. Create a worksheet to maintain student information such as *RollNo, Name, Class, Marks in three subjects* of 10 students. Calculate total marks, average and grade. Find grade for Distinction, First class, Second class, Pass and Fail using normally used conditions.
 - Using custom sort, sort the data according to class: - Distinction first, FirstClass next, and so on. Within each class, average marks should be in descending order.
 - Also draw the Column Chart showing the RollNo versus Average scored.

(Note: Worksheet creation and formatting 4 marks, calculations: 5 marks, sorting: 3 marks, chart: 3 marks)

2. Prepare a worksheet to store details of Electricity consumed by customers. Details are Customer No, Customer Name, Meter No, Previous meter reading, Current meter reading of 10 customers. Calculate total number of units consumed and total amount to be paid by each consumer using following conditions:
- If unit consumed is up to 30, charge is 100.
 - 31 to 100 units, 4.70 per unit
 - 101 to 200 units, 6.25 per unit
 - Above 200 units, 7.30 per unit.
 - Use Data validation to see that current reading is more than previous reading.
 - Arrange the records in the alphabetic order of names.
 - Filter the records whose bill amount is more than Rs.1500.

(Note: Worksheet creation and formatting 4 marks, Data validation: 2 marks, calculations: 5 marks, sorting: 2 marks, filtering: 2 marks)

3. Create Employee worksheet having EmpNo, EmpName, DOJ, Department, Designation and Basic Pay of 8 employees. Calculate DA, HRA, Gross Pay, Profession Tax, Net Pay, Provident Fund as per the rule :
- DA = 30% of basic pay
 - HRA = 10% of basic pay if basic pay is less than 25000, 15% of basic pay otherwise.
 - Gross = DA + HRA + Basic pay
 - Provident fund = 12% of Basic pay or Rs.2000, whichever is less.
 - Profession Tax = Rs.100 if Gross pay is less than 10000, Rs.200 otherwise.
 - NetPay = Gross - (Professional tax + Provident Fund)
 - Using Pivot table, display the number of employees in each department and represent it using Pie chart.

(Note: Worksheet creation and formatting 4 marks, calculations: 5 marks, Pivot table: 3 marks, Chart: 3 marks)

4. Create a table COMMISSION containing the percentage of commission to be given to salesmen in different zones as follows:

Zone	Percentage
South	10
North	12.5
East	14
West	13

Create another table SALES in the same worksheet to store salesman name, zone name, place, name of the item sold, rate per unit, quantity sold. Calculate total sales amount of each salesman. Referring the COMMISSION table, write the formula to compute the commission to be given. (Hint: Use if function and absolute cell addresses)

Using advanced filtering show the result in other parts of the worksheet.

- Show the records of various zones separately.
- Show the records of only East and West zones.
- Display the details of the items sold more than 50, in South or North zones.

(Note: Worksheet creation and formatting: 4 marks, calculations: 5 marks, filtering: 6 marks)

Evaluation Scheme for Lab Examination :

Assessment Criteria		Marks
Activity – 1 from Part A	Word Processing / Presentation	10
Activity - 2 from Part B	Spreadsheet	15
Practical Record		05
Total		30

Course Code: CAC02P	Course Title: C Programming Lab
Course Credits: 02	Hours/Week: 04
Total Contact Hours: 52	Formative Assessment Marks: 20
Exam Marks: 30	Exam Duration: 03

Programming Lab

Part A:

1. Program to read marks of five subjects, calculate percentage of marks and to display appropriate grade declaration message (using else-if ladder)
2. Program to find the greatest of three numbers (using nested if statement)
3. Program to read two integer values & a operator as character and perform basic arithmetic operations on them using switch case (+, -, *, / operations)
4. Program to reverse a number and find the sum of individual digits. Also check for palindrome.
5. Program to read numbers from keyboard continuously till the user presses 999 and to find the sum of only positive numbers
6. Program to count occurrences of a character in a string.
7. Program to calculate and display the first 'n' Fibonacci numbers
8. Program to find given number is a prime or not.
9. Program to read a string and find a) length b) reverse of it c) check palindrome string d) merge original & reversed string (using built in string library functions)
10. Program to search for a number in a list of numbers using one-dimensional array.

Part B:

1. Program to find the largest and smallest elements with their position in a one-dimensional array
2. Program to read 'n' integer values into a single dimension array and arrange them in ascending order using bubble sort method.
3. Program to perform addition and subtraction of two Matrices
4. Program to display factorial of first 'n' integers using recursive function.
5. Program to check a number is a Armstrong by defining isArm() function
6. Program to read a string and count number of letters, digits, vowels, consonants, spaces and special characters present in it.
7. Program sort a list of strings in ascending order using Pointers
8. Program to add two distances in the inch-feet format using structures (convert inches to feet if greater than 12)
9. Program to enter the information of a student like name, register number, marks in three subjects into a structure and display total, average and grade Display details in a neat form.
10. Program to input Name of the branches, Total sales of company into an array of structures. Display branch details in a tabular format. Also display the branch name that recorded the highest sales.

Evaluation Scheme for Lab Examination :

Assessment Criteria		Marks
Program – 1 from Part A	Writing the Program	5
	Execution & Formatting	5
Program -2 from Part B	Writing the Program	7
	Execution & Formatting	8
Practical Record		05

Total	30
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Course Code: CACOE1/DSCOE1	Course Title: Office Automation
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration: 03 Hours

Course Outcomes (COs):

After completing this course satisfactorily, a student will be able to:

- Compare and contrast various types of operating systems
- Explain the purpose of office automation
- Describe how information is stored and retrieved in/from computer memory
- Know about various types of office automation software and their applications
- Create document using word processing software
- Design presentation using presentation software
- Create worksheets using spreadsheet software
- Store and retrieve data in/from database management application

Course Contents

Contents	Hours
Unit – 1	
Computer software : Introduction, Software definition, Software categories, Installing and uninstalling software, Software piracy, Software terminologies Introduction to windows Operating System, operating with windows, GUI, use of help features, starting an application, essential accessories, creating shortcuts, windows explorer, control panel, finding folders and files, System utilities. MS-Office : Introduction, Office user interface, Microsoft office Components MS-Word: Introduction, Starting MS-Word, Microsoft word Environment working with word documents, working with text, working with tables checking spelling and grammar, adding graphs to the document, mail merge, header and footers, page numbers, protect the document, working with formatting tools.	12
Unit – 2	
MS-Excel: Introduction, starting MS Excel, Microsoft Excel environment, Working with Excel workbook, Working with worksheet – Entering data, Excel formatting tips and Techniques, Generating graphs, Formulas and Functions, Inserting charts, Sorting , Pivot Tables, data extraction, adding clip art, add an image from a file, Printing in Excel .	10
Unit - 3	
MS-Power point- Starting MS–Power Point , Working with power point -, Creating, Saving and Printing a presentation, Working with Animation, Adding a slide to presentation, Navigating through a presentation, Slide-sorter, Slide-show, Editing slides, Working with Graphics and Multimedia in PowerPoint (Inserting Photo, Video & Sound). The Internet : Basic internet terms, Internet applications, Internet tools, Web browser, Web browser features, Internet Explorer environment, Electronic mail, Email address structure, Advantages and disadvantages of email.	10

Unit - 4	
Database fundamentals- Basic database terms, Database Management System MS-Access: Introduction to Access, Creating Tables and Database, Data Type and Properties, Adding & Deleting Field in Table, Primary Key Fields, Queries, Forms: The Forms wizard saving forms, Modifying forms, Pages, Macro, Module, Reports, Printing Report, Forms	10

Text Book:

1. ITL Education Solution Limited, Introduction to Information Technology, Second Edition., Pearson

Reference Books:

1. Peter Norton, Introduction to Computers, 7th edition, Tata McGraw Hill Publication, 2011 2)
2. Anita Goel, Computer Fundamentals, Pearson Education, 2011.
3. Linda Foulkes, Learn Microsoft Office 2019: A comprehensive guide to getting started with Word, PowerPoint, Excel, Access, and Outlook, Packt Publishing Limited, 2020
4. Bittu Kumar, Mastering MS Office: Concise Handbook With Screenshots, V&S Publishers, 2017

Semester: II

Course Code: CAC04	Course Title: Data Structures using C
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration: 03 Hours

Course Outcomes (COs):

After completing this course satisfactorily, a student will be able to:

- Describe how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and used by algorithms
- Describe common applications for arrays, records, linked structures, stacks, queues, trees, and graphs
- Write programs that use arrays, linked structures, stacks, queues, trees, and graphs
- Demonstrate different methods for traversing trees
- Compare alternative implementations of data structures with respect to performance
- Describe the concept of recursion, give examples of its use
- Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing

Course Contents

Contents	Hours
Unit - 1	
Introduction to data structures: Introduction, Basic terminology; Elementary Data Organization, Data Structures, Data Structure Operations Introduction to Algorithms, Preliminaries: Introduction, Algorithmic notations, Control structure. Recursion: Definition; Recursion Technique Examples –Factorial, Fibonacci sequence, Towers of Hanoi. Arrays: Basic Concepts – Definition, Declaration, Initialisation, Operations on arrays, Types of arrays, Representation of Linear Arrays in memory, Traversing linear arrays, Inserting and deleting elements, Multidimensional arrays- Two Dimensional Arrays Representation of two- dimensional arrays, Sparse matrices. Sorting: Selection sort, Bubble sort, Quick sort, Insertion sort, Merge sort	12
Unit - 2	
Searching : Definition, Sequential Search, Binary search Dynamic memory management: Memory allocation and de-allocation functions - <i>malloc</i> , <i>calloc</i> , <i>realloc</i> and <i>free</i> . Linked list: Basic Concepts – Definition and Representation of linked list, Types of linked lists - Singly linked list, Doubly linked list, Header linked list, Circular linked list, Representation of Linked list in Memory; Operations on Singly linked lists– Traversing, Searching, Insertion, Deletion, Memory allocation, Garbage collection	10
Unit - 3	
Stacks: Basic Concepts –Definition and Representation of stacks- Array representation of stacks, Linked representation of stacks, Operations on stacks, Applications of stacks, Infix, postfix and prefix notations, Conversion from infix to postfix using stack, Evaluation of postfix expression using stack, Application of stack in function calls. Queues: Basic Concepts – Definition and Representation of queues- Array representation of Queues, Linked representation of Queues, Types of queues - Simple queues, Circular queues, Double ended queues, Priority queues, Operations on queues	10

Unit - 4	
<p>Trees: Definition, Tree terminologies –node, root node, parent node, ancestors of a node, siblings, terminal & non-terminal nodes, degree of a node, level, edge, path, depth</p> <p>Binary tree: Type of binary trees - strict binary tree, complete binary tree, binary search tree,; Array representation of binary tree, Traversal of binary tree- preorder, inorder and postorder traversal</p> <p>Graphs: Terminologies, Matrix representation of graphs; Traversal: Breadth First Search and Depth first search.</p>	10

Text Books :

1. Seymour Lipschutz, Data Structures with C, Schaum's Outlines Series, Tata McGraw Hill, 2011
2. R. Venkatesan and S. Lovelyn Rose, Data Structures, First Edition: 2015, Wiley India Pvt. Ltd. Publications

Reference Books:

1. Ellis Horowitz and Sartaj Sahni, Fundamentals of Data Structures, Computer Science Press, 1982.
2. Aaron M. Tenenbaum, Data structures using C, First Edition, Pearson Education
3. Kamathane, Introduction to Data structures, Pearson Education, 2004
4. Y. Kanitkar, Data Structures Using C, Third Edition, BPB
5. Padma Reddy: Data Structure Using C, Revised Edition 2003, Sai Ram Publications.
6. Sudipa Mukherjee, Data Structures using C – 1000 Problems and Solutions, McGraw Hill Education, 2007

Course Code: CAC05	Course Title: Object Oriented Programming with JAVA
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration: 03 Hours

Course Outcomes (COs):

After completing this course satisfactorily, a student will be able to:

- Understand the features of Java and the architecture of JVM
- Write, compile, and execute Java programs that may include basic data types and control flow constructs and how type casting is done
- Identify classes, objects, members of a class and relationships among them needed for a specific problem and demonstrate the concepts of polymorphism and inheritance
- The students will be able to demonstrate programs based on interfaces and threads and explain the benefits of JAVA's Exceptional handling mechanism compared to other Programming Language
- Write, compile, execute Java programs that include GUIs and event driven programming and also programs based on files

Course Contents

Contents	Hours
Unit – 1	
<p>Fundamentals of Object Oriented Programming: Introduction, Object Oriented Paradigm, Basic Concepts of OOP, Benefits and Applications of OOP.</p> <p>Introduction to Java: Java Features, Java Environment, Simple Java Program, Java Program Structure, Java Tokens, Java Statements, Java Virtual Machine.</p> <p>Java Programming Basics: Constants, Variables, Data Types, Declaration of variables, Giving values to the variable, Scope of variables, Symbolic constants, Type casting.</p> <p>Operators and Expressions: Arithmetic Operators, Relational Operators, Logical Operators, Assignment Operator, Increment and Decrement Operators, Conditional Operator, Special Operators, Mathematical functions.</p> <p>Using I/O: Byte streams and character streams, predefined streams, reading console input, reading characters, strings, writing console output.</p> <p>Decision Making & Branching: Simple if statement, if..else statement, nesting of if..else statement, the else..if ladder, the Switch statement.</p>	12
Unit – 2	
<p>Decision making & Looping -The while statement, the do statement, the for statement . Jumps in loops, Labelled loops.</p> <p>Class & Objects - Class Fundamentals, Declaring Objects, Assigning Object Reference Variables, Introducing Methods, Constructors, The 'this' keyword, Overloading Methods, Using Objects as Parameters, Returning Objects, Recursion, Understanding 'static', Introducing 'final ', Using Command-Line Arguments, Varargs : Variable-Length Arguments</p> <p>Arrays and Strings: One dimensional arrays, Creating an arrays, Two dimensional arrays , Strings, Vectors, Wrapper classes.</p>	10

Unit - 3	
Inheritance - Inheritance Basics, Using 'super', Creating Multilevel hierarchy, Method Overriding, Using Abstract Classes, Using final with Inheritance. Packages & Interfaces - Packages, Access protection in packages, Importing Packages, Interfaces. Exception Handling - Exception Handling Fundamentals – Exception Types, Uncaught Exceptions, Using try and catch, Multiple catch clauses, Nested try statements, throw, throws, finally, Java's built-in Exceptions	10
Unit - 4	
Multithreaded Programming - Introduction, Creating threads, Extending the thread class, stopping & blocking thread, Life cycle of a thread, Using thread methods, Implementing the runnable interface. Event and GUI programming: The Applet Class, Types of Applets, Applet Basics, Applet Architecture, An Applet Skeleton, Simple Applet Display Methods, Requesting Repaint, The HTML APPLET tag. Event Handling - The delegation event model, Event Classes –ActionEvent, KeyEvent & MouseEvent Classes, Event Listener Interfaces –ActionListener, KeyListener & MouseListener interfaces. Using the Delegation Event Model. Window Fundamentals, Working with Frame Windows, Creating a Frame Window in an Applet. Creating a Windowed Program, Displaying information within a window. Introducing swing – two key swing features, components and containers, the swing packages, a simple swing application, event handling. Exploring Swing- JLabel, JTextField, JButton, Checkboxes , Radio buttons , Jlist , JComboBox.	10

Text Books :

1. E Balagurusamy, Programming with Java – A Primer, Fourth Edition, Tata McGraw Hill Education Private Limited.
2. Herbert Schildt, Java : The Complete Reference, Seventh Edition, McGraw Hill Publication.

Reference Books:

1. Herbert Schildt, Java 2 - The Complete Reference, Fifth Edition, McGraw Hill publication.
2. Cay S. Horstmann, Core Java Volume I –Fundamentals, Prentice Hall.
3. Somashekara, M.T., Guru, D.S., Manjunatha, K.S, Object Oriented Programming with Java, EEE Edition, PHI.

Course Code: CAC06	Course Title: Discrete Mathematical Structures
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration: 03 Hours

Course Outcomes (COs):

After completing this course satisfactorily, a student will be able to:

- To understand the basic concepts of Mathematical reasoning, set and functions.
- To understand various counting techniques.
- Understand the concepts of various types of relations, partial ordering and equivalence relations.
- To understand the concept of probability and mathematical induction.
- Familiarize the fundamental concepts of graph theory and shortest path algorithm.
- To understand the concept of binary tree representation.

Course Contents

Contents	Hours
Unit - 1	
Mathematical logic: Introduction, statements, Connectives, negation, conjunction, disjunction, statement formulas and truth tables, conditional and bi Conditional statements, tautology, contradiction, equivalence of formulas, duality law, Predicates and Quantifiers, arguments, joint Daniel Sets: Definition, notation, inclusion and equality of sets, the power set, Operations on sets, Venn diagram, ordered pairs, and n-tuples, Cartesian product, Relations: Introduction, properties of a binary relation in a set, Relation matrix and graph of a relation, equivalence relations, compatibility relations, composition of Binary relation	12
Unit - 2	
Partial Ordering: Definition, lexicographic ordering, Partially ordered set, Hasse diagram, well-ordered set Functions: Definition and introduction, types of functions, composition of functions, inverse functions Counting: Basics of counting, Pigeonhole principle, Permutation and combination, Generalized Permutations and Combinations, generating permutation and combination, inclusion and exclusion	10
Unit - 3	
Discrete Probability: Introduction, finite probability, probabilities of complements and unions of events, probability theory, conditional probability, independence, random variables, Bayes' theorem, expected value and variance, independent random variable. Mathematical Induction: Mathematical Induction, principle of mathematical induction, proving inequalities, strong induction and well ordering Number Theory: Division algorithm, Modular arithmetic, primes and greatest common divisors, least common multiple, the Euclidean algorithm	10
Unit - 4	
Graphs: Graphs and Graph models, Graph Terminology and Special Types of Graphs, Representing Graphs and Graph Isomorphism, Connectivity, Euler and Hamilton Paths, Shortest-Path Problems, Planar Graphs, Graph Coloring. Trees: Directed tree, leaf node, branch node, ordered tree, degree of a node, forest, descendent, m-ary tree, conversion of directed tree into a binary tree.	10

Text Books:

1. J.P. Trembley and R. Manobar, Discrete Mathematical Structures, McGraw Hill Education Private Limited, New Delhi,
2. Kenneth H. Rosen, Discrete Mathematics and Its Applications, Seventh Edition, 2012.
3. Bernard Kolman, Robert C, Busby, Sharon Ross, Discrete Mathematical Structure, 2003.

Reference Books:

1. D C Sanchethi and V K Kapoor, Business Mathematics, Eleventh Revised Edition, Sulthan Chand & Sons Educational publishers, New Delhi,
2. Narsingh Deo, Graph Theory with Applications to Engg and Comp. Sci, PHI, 1986.
3. Ralph P. Grimaldi, B. V. Ramatta, Discrete and Combinatorial Mathematics, 5th Edition, Pearson, Education
4. K Chandrashekhara Rao, Discrete Mathematics, Narosa Publishing House, New Delhi

Course Code: CAC04P	Course Title: Data Structures Lab
Course Credits: 02	Hours/Week: 04
Total Contact Hours: 52	Formative Assessment Marks: 20
Exam Marks: 30	Exam Duration: 03 Hours

Programming Lab

Part A:

1. Program to sort the given list using selection sort technique.
2. Program to sort the given list using insertion sort technique.
3. Program to sort the given list using bubble sort technique.
4. Program to search an element using linear search technique.
5. Program to search an element using binary search technique.
6. Program to implement Stack operations using arrays.
7. Program to implement Queue operations using arrays
8. Program to implement dynamic array. Find smallest and largest element.

Part B:

1. Program to sort the given list using merge sort technique.
2. Program to implement circular queue using array
3. Program to search an element using recursive binary search technique
4. Program to implement Stack operations using linked list.
5. Program to implement Queue operations using linked list.
6. Program to evaluate postfix expression.
7. Program to perform insert node at the end, delete a given node and display contents of singly linked list.
8. Menu driven program for the following operations on Binary Search Tree (BST) of Integers
 - (a) Create a BST of N Integers
 - (b) Traverse the BST in Inorder, Preorder and Post Order

Evaluation Scheme for Lab Examination

Assessment Criteria		Marks
Program – 1 from Part A	Writing the Program	05
	Execution and Formatting	05
Program -2 from Part B	Writing the Program	07
	Execution and Formatting	08
Practical Record		05
Total		30

Course Code: CAC05P	Course Title: JAVA Lab
Course Credits: 02	Hours/Week: 04
Total Contact Hours: 52	Formative Assessment Marks: 20
Exam Marks: 30	Exam Duration: 04 Hours

Programming Lab

PART A

1. Program to accept student name and marks in three subjects. Find the total marks, average and grade (depending on the average marks).
2. A menu driven program to input two integers & an operator to perform basic arithmetic operations (+, -, *, and /) using switch case structure.
3. Program, which reads two numbers having same number of digits. The program outputs the sum of product of corresponding digits. (Hint Input 327 and 539 output $3 \times 5 + 2 \times 3 + 7 \times 9 = 84$)
4. Program to input Start and End limits and print all Fibonacci numbers between the ranges. (Use for loop)
5. Define a class named Pay with data members String name, double salary, double da, double hra, double pf, double grossSal, double netSal and methods: Pay(String n, double s) - Parameterized constructor to initialize the data members, void calculate() - to calculate the following salary components, and void display() - to display the employee name, salary and all salary components.

Dearness Allowance = 15% of salary

House Rent Allowance = 10% of salary

Provident Fund = 12% of salary

Gross Salary = Salary + Dearness Allowance + House Rent Allowance

Net Salary = Gross Salary - Provident Fund

Write a main method to create object of the class and call the methods to compute and display the salary details.

6. Program to create a class DISTANCE with the data members feet and inches. Use a constructor to read the data and a member function Sum () to add two distances by using objects as method arguments and show the result. (Input and output of inches should be less than 12.)
7. Program to check whether the given array is Mirror Inverse or not.
8. Program to create a class "Matrix" that would contain integer values having varied numbers of columns for each row. Print row-wise sum.
9. Program to extract portion of character string and print extracted string. Assume that 'n' characters extracted starting from mth character position.
10. Program to add, remove and display elements of a Vector

PART-B

1. Create a class named 'Member' having data members: *Name, Age, PhoneNumber, Place and Salary*. It also has a method named 'printSalary' which prints the salary of the members. Two classes 'Employee' and 'Manager' inherit the 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'department' respectively. Now, assign name, age, phone number, address and salary to an employee and a manager by making an object of both of these classes and print the same.
2. Program to implement the following class hierarchy:
Student: id, name
StudentExam (derived from Student): Marks of 3 subjects, total marks
StudentResult (derived from StudentExam) : percentage, grade
Define appropriate methods to accept and calculate grade based on existing criteria and display details of N students
3. Program to calculate marks of a student using multiple inheritance implemented through interface. Class **Student** with data members rollNo, name, String **cls** and methods to set and put data. Create another class **test** extended by class Student with data members mark1, mark2, mark3 and methods to set and put data. Create interface sports

with members sportsWt = 5 and putWt(). Now let the class results extends class test and implements interface sports. Write a Java program to read required data and display details in a neat format.

4. Program to create an abstract class named shape that contains two integers and an empty method named print Area(). Provide three classes named Rectangle, Triangle and Ellipse such that each one of the classes extends the class shape. Each one of the class contains only the method print Area() that print the area of the given shape.
5. Create a package to convert temperature in centigrade into Fahrenheit, and one more package to calculate the simple Interest. Implement both package in the Main () by accepting the required inputs for each application.
6. Program that implements a multi-threaded program has three threads. First thread generates a random integer every second, and if the value is even, second thread computes the square of the number and prints. If the value is odd the third thread will print the value of cube of the number.
7. Program to create a window when we press M or m the window displays Good Morning, A or a the window displays Good After Noon E or e the window displays Good Evening, N or n the window displays Good Night.
8. Program that creates a user interface to perform basic integer operations. The user enters two numbers in the TextFields - Num1 and Num2. The result of operations must be displayed in the Result TextField when the "=" button is clicked. Appropriate Exception handling message to be displayed in the Result TextField when Num1 or Num2 is not an integer or Num2 is Zero when division operation is applied.
9. Program to accept the employee name, employee number and basic salary as inputs and find the gross and net salaries on the following conditions.
 - if Salary <= 20000 D.A is 40% Salary; H.R.A is 10% Salary.
 - P.F 12% of Gross; PT is Rs .100
 - if Salary > 20000 D.A is 50% of salary ; H.R.A 15% of salary
 - P.F 12% of Gross ; PT is Rs.150
 - Gross = basic salary +D.A +HRA and Net = Gross -PT –PF
10. Using the swing components, design the frame for shopping a book that accepts book code, book name, and Price. Calculate the discount on code as follows.

<u>Code</u>	<u>Discount rate</u>
101	15%
102	20%
103	25%
Any other	5%

Find the discount amount and Net bill amount. Display the bill.

Evaluation Scheme for Lab Examination

Assessment Criteria		Marks
Program – 1 from Part A	Writing the Program	05
	Execution and Formatting	05
Program -2 from Part B	Writing the Program	07
	Execution and Formatting	08
Practical Record		05
Total		30

Course Code: CACOE2/DSCOE2	Course Title: Web Designing
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration: 03 Hours

Course Outcomes (COs):

After completing this course satisfactorily, a student will be able to:

- Understand various Internet related terminologies
- Explain features and evolution of Internet
- Explain the use of search engines
- Know the use of different tags available in HTML
- Design web pages using HTML5, CSS3, XML and XHTML
- Implement websites using linked web pages.

Course Contents

Contents	Hours
Unit – 1	
<p>The Internet: Introduction, Evolution, basic internet terms, Getting connect to internet, Internet applications, Data over the internet.</p> <p>Internet tools: Web browser, Web browser features, Internet Explorer environment, Electronic mail, Email address structure, checking email, sending email, email attachment, How email works, advantages and disadvantages of email.</p> <p>Search Engines: Searching an internet, refining the search, Instant messaging, Features of messengers.</p>	12
Unit – 2	
<p>Overview of HTML5 -Exploring new features of HTML5, Structuring an HTML Document, Creating an saving HTML document, Viewing an HTML document.</p> <p>Fundamentals of HTML-Understanding Elements, Root elements, Metadata elements, Style element, Section element, Header and Footer element, Address element, Basic HTML data types, Data types defined by RFC and IANA Documentation.</p> <p>Working with Text: Formatting Text with HTML Elements, Defining MARK element, Defining STRONG element, Defining CODE element, Defining SMALL element.</p> <p>Organizing Text in HTML: Arranging text, Displaying Lists.</p>	10
Unit - 3	
<p>Working with Links and URLs- Exploring the Hyperlinks, Exploring the URL, Exploring Link Relations.</p> <p>Creating Tables-Understanding Tables, Describing the table element.</p> <p>Working with Images, Colors and Canvas - Inserting images in a web page, Exploring Colors, Introducing Canvas</p> <p>Working with Forms: Exploring Form element, Exploring types of the INPUT element, Exploring the BUTTON element, Exploring the Multiple-Choice elements, Exploring TEXTAREA and LABEL elements.</p> <p>Working with Frames: <FRAMESET>, <FRAME> tag with attributes.</p>	10

Unit - 4	
<p>Overview of CSS3- Understanding the syntax of CSS, Exploring CSS Selectors, Inserting CSS in an HTML document.</p> <p>Background and Color Gradients in CSS: Exploring Background of a Web Page, Exploring Color Properties, Exploring Gradient Properties, Exploring Font properties.</p> <p>Working with Basics of XML-Exploring XML, Comparing XML with HTML, Describing the Structure of an XML document.</p>	10

Text Books

1. ITL Education Solution Limited, Introduction to Information Technology, Pearson Education, 2012
2. DT Editorial Services, HTML 5 Black Book (Covers CSS3, JavaScript, XML, XHTML, AJAX, PHP, jQuery), Second Edition, Dreamtech Publisher, 2016

Reference Books

1. Laura Lemay & Rafe Colburn, Mastering Html, CSS & Javascript, Web Publishing, 2016
2. Firuza Aibara, HTML 5 for Beginners, 2012
3. Glenn Johnson, Training Guide – Programming in HTML5 with JavaScript and CSS3 (Microsoft Press Training Guide), 2013

Scheme of Assessment for Theory Examination

Duration: 3 Hrs

Max Marks: 60

Question Pattern		Marks
Part – A		
1. Answer any SIX sub-questions (6×2=12)		12
Sub-question	Unit	
a, b	1	
c, d	2	
e, f	3	
g, h	4	
Part – B (Answer any ONE full question from each unit – 12 marks each) (Combinations of sub-questions of 3 to 6 marks)		
Unit-1		12
2.		
3.		
Unit-2		12
4.		
5.		
Unit-3		12
6.		
7.		
Unit-4		12
8.		
9.		
Total		60

Computer Application Core Courses (CAC) for BCA (Hons)

Sl. No	Course Code	Title of the Paper
1	CAC01	Fundamentals of Computers
2	CAC02	Programming in C
3	CAC03	Mathematical Foundation
4	CAC04	Discrete Mathematical Structures
5	CAC05	Object Oriented Concepts using JAVA
6	CAC06	Data Structures using C
7	CAC07	Data Base Management Systems
8	CAC08	C# and DOT NET Framework
9	CAC09	Operating System Concepts
10	CAC10	Python Programming
11	CAC11	Computer Multimedia and Animation
12	CAC12	Computer Communication and Networks
13	CAC13	Internet Technologies
14	CAC14	Statistical Computing and R Programming
15	CAC15	Software Engineering
16	CAC16	PHP and MySQL
17	CAC17	Artificial Intelligence and Applications
18	CAC18	Analysis and Design of Algorithms
19	CAC19	Data Mining and Knowledge Management
20	CAC20	Automata Theory and Compiler Design
21	CAC21	Cryptography and Network Security

Computer Application Electives (CAE) for BCA (Hons)

Sl. No	Computer Application Electives (CAE)
1	Business Intelligence
2	Cyber Law and Cyber Security
3	Data Analytics
4	Data Compression
5	Embedded Systems
6	Fundamentals of Data Science
7	Internet of Things (IoT)
8	Machine Learning
9	Mobile Application Development
10	Open-source Programming
11	Pattern Recognition
12	Storage Area Networks

Vocational Electives

Sl. No	Vocational Electives
1	DTP, CAD and Multimedia
2	Hardware and Server Maintenance
3	Web Content Management Systems
4	Computer Networking
5	Health Care Technologies
6	Digital Marketing
7	Office Automation

Open Electives in Computer Science

(For Students studying Core Courses other than Computer Science/ Computer Applications)

Sl. No	Open Electives in Computer Science
1	C Programming Concepts
2	Office Automation
3	Multimedia Processing
4	Python Programming Concepts
5	R Programming
6	E-Content Development
7	E-Commerce
8	Web Designing
9	Computer Animation
10	Accounting Package

Mangalore University
Mangalagangothri -574 199



SYLLABUS

B.A./B.Sc. (Hons) Mathematics,
B.A./B.Sc. with Mathematics as a Major/Minor Subject
(ACCORDING TO NATIONAL EDUCATION POLICY 2020)

2021

Name of the Degree Program : B.A./B.Sc.

Discipline Course : Mathematics

Starting Year of Implementation : 2021-22

Programme Outcomes (PO):

By the end of the program it is expected that the students will be benefited by the following:

PO 1	Disciplinary Knowledge: Bachelor degree in Mathematics is the culmination of in-depth knowledge of Algebra, Calculus, Geometry, differential equations and several other branches of pure and applied mathematics. This also leads to study the related areas such as computer science and other allied subjects
PO 2	Communication Skills: Ability to communicate various mathematical concepts effectively using examples and their geometrical visualization. The skills and knowledge gained in this program will lead to the proficiency in analytical reasoning which can be used for modeling and solving of real life problems.
PO 3	Critical thinking and analytical reasoning: The students undergoing the programme acquire ability of critical thinking and logical reasoning and capability of recognizing and distinguishing the various aspects of real life problems.
PO 4	Problem Solving: The Mathematical knowledge gained by the students through the programme develop an ability to analyze the problems, identify and define appropriate computing requirements for its solutions. This programme enhances students overall development and also equip them with mathematical modelling ability, problem solving skills.
PO 5	Research related skills: Student completing the program will develop the capability of inquiring about appropriate questions relating to the Mathematical concepts in different areas of Mathematics.
PO 6	Information/digital Literacy: The completion of the programme will enable the learner to use appropriate softwares to solve system of algebraic equation and differential equations.
PO 7	Self – directed learning: Student completing the program will develop an ability of working independently and to make an in-depth study of various notions of Mathematics.
PO 8	Moral and ethical awareness/reasoning: The student completing the program will develop an ability to identify unethical behavior such as fabrication, falsification or misinterpretation of data and adopting objectives, unbiased and truthful actions in all aspects of life, in general and Mathematical studies, in particular.
PO 9	Lifelong learning: The programme provides self-directed learning and lifelong learning skills. The programme helps the learner to think independently and develop algorithms and computational skills for solving real word problems.
PO 10	Ability to peruse advanced studies and research in pure and applied Mathematical sciences.

Assessment

Weightage for the Assessments (in percentage)

Type of Course	Formative Assessment/ I.A.	Summative Assessment (S.A.)
Theory	40%	60 %
Practical	50%	50 %
Projects	40%	60 %
Experiential Learning (Internship etc.)	--	--

**Contents of Courses for B.A./B.Sc. with Mathematics as Major Subject &
B.A./B.Sc. (Hons) Mathematics
(Model IIA suggested by the Karnataka State Higher Education Council)**

Semester	Course No.	Theory/ Practical	Credits	Paper Title	Marks	
					S.A.	I.A.
I	MATDSCT1.1	Theory	4	Number Theory-I, Algebra-I and Calculus-I	60	40
	MATDSCP1.1	Practical	2	Theory based Practicals on Number Theory-I, Algebra-I and Calculus-I	25	25
	MATOET1.1	Theory	3	(A) Mathematics - I (B) Business Mathematics - I	60	40
II	MATDSCT2.1	Theory	4	Number Theory-II, Algebra - II and Calculus - II	60	40
	MATDSCP2.1	Practical	2	Theory based Practicals on Number Theory-II, Algebra - II and Calculus - II	25	25
	MATOET2.1	Theory	3	(A) Mathematics - II (B) Business Mathematics-II	60	40
Exit Option with Certificate						
III	MATDSCT3.1	Theory	4	Ordinary Differential Equations and Algebra - III	60	40
	MATDSCP3.1	Practical	2	Theory based Practicals on Ordinary Differential Equations and Algebra - III	25	25
	MATOET3.1	Theory	3	(A) Ordinary Differential Equations (B) Mathematical Logic	60	40
IV	MATDSCT4.1	Theory	4	Partial Differential Equations and Integral Transforms	60	40
	MATDSCP4.1	Practical	2	Theory based Practicals on Partial Differential Equations and Integral Transforms	25	25
	MATOET4.1	Theory	3	(A) Partial Differential Equations (B) Mathematical Finance	60	40
Exit Option with Diploma						
V	MATDSCT5.1	Theory	3	Real and Complex Analysis	60	40
	MATDSCP5.1	Practical	2	Theory based Practicals on Real and Complex Analysis	25	25
	MATDSCT5.2	Theory	3	Modern Algebra - I	60	40
	MATDSCP5.2	Practical	2	Theory based Practicals Modern Algebra - I	25	25
	MATDSET5.1	Theory	3	Any ONE of the following electives: a) Vector Calculus b) Elementary Graph Theory c) Discrete Mathematics	60	40
VI	MATDSCT6.1	Theory	3	Linear Algebra - I	60	40
	MATDSCP6.1	Practical	2	Theory based Practicals on Linear Algebra - I	25	25
	MATDSCT6.2	Theory	3	Numerical Analysis	60	40

	MATDSCP6.2	Practical	2	Theory based Practicals on Numerical Analysis	25	25
	MATDSET6.1	Theory	3	Any ONE of the following electives: a) Analytical Geometry in 3D b) Linear Programming c) Special Functions d) Fourier Series and Fourier Transforms	60	40
Exit Option with Bachelor of Arts (B.A.)/ Bachelor of Science(B.Sc.) Degree						
VII	MATDSCT7.1	Theory	3	Linear Algebra -II	60	40
	MATDSCP7.1	Practical	2	Theory based Practicals on Linear Algebra -II	25	25
	MATDSCT7.2	Theory	3	Advanced Ordinary Differential Equations	60	40
	MATDSCP7.2	Practical	2	Theory based Practicals on Advanced Ordinary Differential Equations	25	25
	MATDSCT7.3	Theory	4	Advanced Real Analysis	60	40
	MATDSET 7.1	Theory	3	Any ONE of the following electives: a) Graph Theory b) Advanced Number Theory c) Mathematical Statistics d) Advanced Numerical Analysis	60	40
	MATDSET 7.2	Theory	3	Research Methodology in Mathematics	60	40
VIII	MATDSCT8.1	Theory	4	Advanced Complex Analysis	60	40
	MATDSCT8.2	Theory	4	Abstract Algebra	60	40
	MATDSCT8.3	Theory	3	General Topology	60	40
	MATDSET 8.1	Theory	3	Any ONE of the following electives: a) Operations Research b) Lattice theory c) Mathematical Modelling d) Advanced Discrete Mathematics	60	40
	MATDSET 8.2	Research Project	6 (3 + 3)	Research Project OR Any TWO of the following electives a) Theory of Modules b) Theory of Partitions c) Cryptography d) Finite Element Methods	120 OR 60 60	80 OR 40 40
Award of Bachelor of Arts Honours (B.A. Hons)/ Bachelor of Science Honours (B.Sc. Hons) Degree in Mathematics						

Abbreviation for MATDSCTx.y/MATDSCPx.y/MATDSETx.y/MATOETx.y

MAT – Mathematics;

DSC – Discipline Core; **DSE** – Discipline Elective; **OE** – Discipline Elective;

T – Theory, **P** – Practical;

x.y – xth Semester. Course y

MATOETx.y(A) - For students of Science stream who have not chosen Mathematics as one of Core subjects

MATOETx.y(B) - For Students of other than Science Stream

CURRICULUM STRUCTURE FOR UNDERGRADUATE DEGREE PROGRAM

Name of the Degree Program : B.A. / B.Sc. (Honors)

Discipline/Subject : Mathematics

Starting Year of Implementation: 2021-22

PROGRAM ARTICULATION MATRIX

Semester	Course No.	Programme Outcomes that the Course Addresses	Pre-Requisite Course(s)	Pedagogy*	Assessment**
I	MATDSCT1.1	PO 1, PO 2, PO 3	PU level Mathematics	MOOC	CLASS TESTS SEMINAR QUIZ ASSIGNMENT TERM EXAM VIVA-VOCE
II	MATDSCT2.1	PO 1, PO 2, PO 3, PO 8	MATDSCT1.1	PROBLEM SOLVING	
III	MATDSCT3.1	PO 1, PO 4, PO7, PO 8	MATDSCT2.1	SEMINAR	
IV	MATDSCT4.1	PO 1, PO 4, PO7, PO 8	MATDSCT3.1	PROJECT BASED LEARNING	
V	MATDSCT5.1	PO 1, PO 2, PO 3, PO 5	----	ASSIGNMENTS	
V	MATDSCT5.2	PO 3, PO 4, PO 7, PO10	MATDSCT2.1 MATDSCT3.1	GROUP DISCUSSION	
VI	MATDSCT6.1	PO 6, PO 7, PO 10.	MATDSCT5.2		
VI	MATDSCT6.2	PO 5, PO 8, PO 9, PO 10.	MATDSCT5.1		
VII	MATDSCT7.1	PO 3, PO 4, PO5, PO 7, PO 9.	MATDSCT6.1		
VII	MATDSCT7.2	PO 2, PO 4, PO 5, PO 10	MATDSCT3.1		
VII	MATDSCT7.3	PO 2, PO 4, PO 5, PO 10	MATDSCT5.1		
VIII	MATDSCT8.1	PO 2, PO 4, PO 5, PO 10	MATDSCT5.1		
VIII	MATDSCT8.2	PO 2, PO 4, PO 5, PO 10	MATDSCT5.2		
VIII	MATDSCT8.3	PO 2, PO 4, PO 5, PO 10	MATDSCT5.1		

*Pedagogy for student engagement is predominantly Lecture. However, other pedagogies enhancing better student engagement to be recommended for each course. This list includes active learning/ course projects / Problem based or Project based Learning / Case Studies / Self Study like Seminar, Term Paper or MOOC.

**Every Course needs to include assessment for higher order thinking skills (Applying/ Evaluating/ Creating). However, this column may contain alternate assessment methods that help formative assessment (i.e. assessment for Learning).

B.A./B.Sc. with Mathematics as a Minor in the 3rd Year

Semester	Course No.	Theory/ Practical	Credits	Paper Title	Marks	
					S.A.	I.A.
V	MATDSCMT5.1	Theory	3	Complex Analysis	60	40
	MATDSCMP5.1	Practical	2	Theory based Practicals on Complex Analysis	25	25
VI	MATDSCMT6.1	Theory	3	Numerical Analysis	60	40
	MATDSCMP6.1	Practical	2	Theory based Practicals on Numerical Analysis	25	25

Abbreviation for MATDSCMT5.1 / MATDSCMP5.1

MAT – Mathematics; DSC – Discipline Core; M – Minor; T – Theory /P – Practical;
5 – Fifth Semester; .1 – Course 1

Credit Distribution for B.A./B.Sc.(Honors) with Mathematics as Major in the 3rd Year (Model IIA suggested by the Karnataka State Higher Education Council)

Subject	Semester	Major/ Minor in the 3 rd Year	Credits					Total Credi ts
			Discipline Specific Core (DSC)	Open Elective (OE)	Discipline Specific Elective (DSE)	AECC & Languages	Skill Enhanceme nt Courses (SEC)	
Mathematics	I - IV	Major	4 Courses (4+2)x 4=24	4 Courses 3 x 4 = 12	---	(4+4=8) Courses 8x(3+1)=32	2 Courses 2x(1+1)= 4	72
Other Subject		Minor	24	--	--	--	--	24
96								
Mathematics	V & VI	Major	4 Courses 4x(3+2)=20	-----	2 Courses 2 x 3 = 06	---	2 Courses 2 x 2 = 4	30
Other Subject		Minor	10	--	--	--	--	10
(96+40)=136								
Mathematics	VII & VIII	Major	2 Courses 2x(3+2)=10 3 Courses 3 x 4 = 12 1 Course 1 x 3 = 3 Total=25	-----	2 Courses 2 x 3 = 6 Res.Meth 1 x 3 = 3 2 Courses 2 x 3 = 6 Total= 15	----	-----	40
Total No. of Courses			14	04	07	08	04	
136+40=176								

**Syllabus for B.A./B.Sc. with Mathematics as Major Subject &
B.A./B.Sc. (Hons.) Mathematics**

SEMESTER – I

MATDSCT1.1: Number Theory-I, Algebra-I and Calculus-I	
Teaching Hours : 4 Hours/Week	Credits: 4
Total Teaching Hours: 56 Hours	Max. Marks: 100 (S.A.- 60 + I.A. – 40)

Course Learning Outcomes: This course will enable the students to

- Understand the elementary concepts of Number Theory.
- Solve the system of homogeneous and non-homogeneous m linear equations in n variables.
- Sketch curves in Cartesian and polar co-ordinates.
- Identify and apply intermediate value theorem, mean value theorems and L'Hospital rule.

Unit-I: Number Theory: Division Algorithm, The Greatest Common Divisor (g.c.d), Euclidean Algorithm, Diophantine Equations, Fundamental Theorem of Arithmetic. The Theory of Congruences, Basic Properties of Congruences, Binary and Decimal Representation of Integers. Linear Congruences and The Chinese Remainder Theorem.

14 Hours

Unit-II: Matrices: Recapitulation of Symmetric and Skew Symmetric matrices, Cayley-Hamilton theorem, inverse of matrices by Cayley-Hamilton theorem (Without Proof). Algebra of Matrices, Row and column reduction to Echelon form. Rank of a matrix, Inverse of a matrix by elementary operations, Solution of system of linear equations, Criteria for existence of non-trivial solutions of homogeneous system of linear equations. Solution of non-homogeneous system of linear equations.

14 Hours

Unit-III: Polar Co-ordinates: Polar coordinates, angle between the radius vector and tangent. Angle of intersection of two curves (polar forms), length of perpendicular from pole to the tangent, pedal equations. Derivative of an arc in Cartesian, parametric and polar forms, curvature of plane curve-radius of curvature formula in Cartesian, parametric and polar and pedal forms- center of curvature, asymptotes, Tracing of curves (standard curves).

14 Hours

Unit-IV: Differential Calculus: Intermediate value theorem, Rolle's Theorem, Lagrange's Mean Value theorem, Cauchy's Mean value theorem and examples. Taylor's theorem, Maclaurin's series, Indeterminate forms and evaluation of limits using L' Hospital rule. Leibnitz theorem and its applications.

14 Hours

Reference Books:

- [1] David M. Burton., Elementary Number Theory, 7th Ed., McGraw Hill, 2011.
- [2] Gareth A. Jones and J. Marry Jones, Elementary Number Theory, Springer, 1998.
- [3] N. S Gopalakrishnan, University Algebra, 3rd Ed., New Age International Publications, 2015.
- [4] B. S. Vatssa, Theory of Matrices, New Age International Publishers, New Delhi, 2005.

- [5] A. R. Vasishtha and A. K. Vasishtha, Matrices, Krishna Prakashana Media (P) Ltd., 2008.
- [6] Shanti Narayan and P.K. Mittal, Text book of Matrices, 5th Ed., S Chand and Co. Pvt. Ltd., New Delhi, 2013.
- [7] Shanthi Narayan and P.K. Mittal, Differential Calculus, Reprint. S Chand and Co. Pvt. Ltd., New Delhi, 2014.
- [8] Debasish Sengupta, Applications of Calculus, Books and Allied (P) Ltd., 2019.
- [9] George B. Thomas and Ross L. Finney, Calculus and Analytic Geometry, Addison-Wesley, 1992.
- [10] Louis Leithold, Calculus with Analytic Geometry, 5th Ed., Harper and Row International, 1986.
- [11] Maurice D. Weir, George B. Thomas, Jr., Joel Hass and Frank R. Giordano, Thomas' Calculus, 11th Ed., Pearson, 2008.
- [12] S. Narayanan and T. K. Manicavachogam Pillay, Calculus, Vol. I & II, S. Viswanathan Pvt. Ltd., 1996.

MATDSCP1.1: Practicals on Number Theory-I, Algebra-I and Calculus-I	
Practical Hours : 4 Hours/Week	Credits: 2
Total Practical Hours: 56 Hours	Max. Marks: 50 (S.A.-25 + I.A. – 25)

Course Learning Outcomes: This course will enable the students to

- Learn *Free and Open Source Software (FOSS)* tools for computer programming.
- Solve problems on Number theory, Algebra and Calculus studied in **MATDSCT 1.1** by using FOSS softwares.
- Acquire knowledge of applications of algebra and calculus through FOSS.

Practical/Lab Work to be performed in Computer Lab (FOSS)

Suggested Softwares: Maxima/Scilab/Python.

1. Introduction to the software and commands related to the topic.
2. Program for Euclidean Algorithm.
3. Program for Divisibility tests.
4. Programs for Binary and Decimal Representation of Integers.
5. Program to solve Simultaneous Congruences involving Chinese Remainder Theorem.
6. Computation of addition and subtraction of matrices.
7. Computation of Multiplication of matrices.
8. Computation of Trace and Transpose of Matrix.
9. Computation of Rank and Row reduced Echelon form of a matrix.
10. Computation of Inverse of an invertible Matrix using Cayley-Hamilton theorem.
11. Solving systems of homogeneous and non-homogeneous linear algebraic equations.
12. Tracing of standard curves (Cartesian form).
13. Tracing of standard curves (Polar form).
14. Taylor's and Maclaurin's expansions of the given functions.

Open Elective Course

(For students of Science stream who have not chosen Mathematics as one of Core subjects)

MATOET1.1 (A): Mathematics - I	
Teaching Hours : 3 Hours/Week	Credits: 3
Total Teaching Hours: 42 Hours	Max. Marks: 100 (S.A.- 60 + I.A. – 40)

Course Learning Outcomes: This course will enable the students to

- Understand the elementary concepts of Number Theory.
- Solve the system of homogeneous and non-homogeneous m linear equations in n variables.
- Identify and apply intermediate value theorem, mean value theorems and L'Hospital rule.

Unit-I: Number Theory: Division Algorithm, The Greatest Common Divisor (g.c.d), Euclidean Algorithm, Diophantine Equations, Fundamental Theorem of Arithmetic. Theory of Congruences, Basic Properties of Congruences, Binary and Decimal Representation of Integers. Linear Congruences and The Chinese Remainder Theorem. **14 Hours**

Unit-II: Matrices: Recapitulation of Symmetric and Skew Symmetric matrices, Cayley-Hamilton theorem, inverse of matrices by Cayley-Hamilton theorem (Without Proof). Algebra of Matrices, Row and column reduction to Echelon form. Rank of a matrix, Inverse of a matrix by elementary operations, Solution of system of linear equations, Criteria for existence of non-trivial solutions of homogeneous system of linear equations. Solution of non-homogeneous system of linear equations. **14 Hours**

Unit-III: Differential Calculus: Intermediate value theorem, Rolle's Theorem, Lagrange's Mean Value theorem, Cauchy's Mean value theorem and examples. Taylor's theorem, Maclaurin's series, Indeterminate forms and evaluation of limits using L' Hospital rule. Leibnitz theorem and its applications. **14 Hours**

Reference Books:

- [1] David M. Burton., Elementary Number Theory, 7th Ed., McGraw Hill, 2011.
- [2] Gareth A. Jones and J. Marry Jones, Elementary Number Theory, Springer, 1998.
- [3] N. S Gopalakrishnan, University Algebra, 3rd Ed., New Age International Publications, 2015.
- [4] B. S. Vatssa, Theory of Matrices, New Age International Publishers, New Delhi, 2005.
- [5] A. R. Vasishtha and A. K. Vasishtha, Matrices, Krishna Prakashana Media (P) Ltd., 2008.
- [6] Shanti Narayan and P.K. Mittal, Text book of Matrices, 5th Ed., S Chand and Co. Pvt. Ltd., New Delhi, 2013.
- [7] Shanthi Narayan and P.K. Mittal, Differential Calculus, Reprint. S Chand and Co. Pvt. Ltd., New Delhi, 2014.
- [8] Debasish Sengupta, Applications of Calculus, Books and Allied (P) Ltd., 2019.
- [9] George B. Thomas and Ross L. Finney, Calculus and Analytic Geometry, Addison-Wesley, 1992.

[10] Maurice D. Weir, George B. Thomas, Jr., Joel Hass and Frank R. Giordano, Thomas' Calculus, 11th Ed., Pearson, 2008.

[11] S. Narayanan and T. K. Manicavachogam Pillay, Calculus, Vol. I & II, S. Viswanathan Pvt. Ltd., 1996.

Open Elective

(For Students of other than Science Stream)

MATOET1.1 (B): Business Mathematics-I	
Teaching Hours : 3 Hours/Week	Credits: 3
Total Teaching Hours: 42 Hours	Max. Marks: 100 (S.A.- 60 + I.A. – 40)

Course Learning Outcomes: This course will enable the students to

- Solve the system of homogeneous and non-homogeneous linear equations in n variables.
- Translate the real world problems through appropriate mathematical modeling.
- Explain the concepts and use equations, formulae and mathematical expressions in a variety of context.
- Find the extreme values of functions.
- Analyze and demonstrate the mathematical skill required in mathematically intensive areas such as economics, business etc.

Unit-I: Matrices: Definition of a matrix, types of matrices, algebra of matrices. Properties of determinants; calculations of values of determinants up to third order, Adjoint of a matrix, elementary row and column operations, solution of a system of linear equations having unique solution and involving not more than three variables. Examples on commercial mathematics.

14 Hours

Unit-II: Straight line and Conics: Straight line in economics, Break-Even point, System of straight lines, Effect of a Tax or Subsidy. Parabola in economics, The non-linear model. Rectangular hyperbola: Rectangular hyperbola in economics. Circle in economics. Inequalities and absolute values: Properties of inequalities, Linear inequality in one variable, Absolute values. Applications in economics.

14 Hours

Unit-III: Derivatives of functions: Economic applications, Demand function, Price demand, income demand, Cross demand, Law of supply, Revenue functions, Short-run production function, Short-run cost function, Relation between marginal product and marginal cost. The maxima and minima of functions: Applications of maxima and minima of functions in economics and business.

14 Hours

Reference Books:

- [1] B. S. Vatsa, Theory of Matrices, New Age International Publishers, New Delhi, 2005.
- [2] A. R. Vasishtha and A. K. Vasishtha, Matrices, Krishna Prakashana Media (P) Ltd., 2008.
- [3] Shanti Narayan and P.K. Mittal, Text book of Matrices, 5th Ed., S. Chand and Co. Pvt. Ltd., New Delhi, 2013.

- [4] E.T. Dowling, Mathematics for Economics, Schaum's Outline, 3rd Ed., McGraw Hill, London, 2011.
- [5] R.G.D. Allen, Basic Mathematics, Macmillan, UK, 1968.
- [6] N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill, New Delhi, 2007.
- [7] R. S. Soni, Business Mathematics with Applications in Business and Economics, Pitambar Publishing, India 1996.
- [8] Maurice D. Weir, George B. Thomas, Jr., Joel Hass and Frank R. Giordano, Thomas' Calculus, 11th Ed., Pearson, 2008.

SEMESTER – II

MATDSCT 2.1: Number Theory-II, Algebra-II and Calculus-II	
Teaching Hours : 4 Hours/Week	Credits: 4
Total Teaching Hours: 56 Hours	Max. Marks: 100 (S.A.- 60 + I.A. – 40)

Course Learning Outcomes: This course will enable the students to

- Understand the Euler's ϕ -function and finite continued fractions.
- Recognize the mathematical objects called Groups.
- Identify cyclic and non-cyclic groups
- Link the fundamental concepts of groups and symmetries of geometrical objects.
- Understand the concept of partial derivatives of functions of several variables.
- Find the Taylor's and Maclaurin's series of functions of two variables.
- Find the extreme values of functions of two variables.
- Understand the concepts of line integrals, multiple integrals and their applications.

Unit-I: Number Theory: Fermat's Theorem, Wilson's Theorem, Quadratic Congruence. Euler's ϕ -function, definition and properties, Euler's theorem and corollaries, finite continued fractions. **14 hours**

Unit-II: Groups: Binary Operations, Associativity, Commutativity, Examples for Binary Operations, Definition of a Group, Examples, Right inverse, Left inverse, Some properties, Abelian and Non-abelian groups, Laws of exponents, Subgroups, Intersection of subgroups, Centralizer of an element, Normalizer of a subgroup, Product of subgroups, Order of products of subgroups, Cyclic groups, Properties, Number of generators. **14 hours**

Unit-III: Partial Derivatives: Functions of two or more variables-explicit and implicit functions, partial derivatives. Homogeneous functions- Euler's theorem, total derivatives, differentiation of implicit and composite functions, Jacobians and standard properties and illustrative examples. Taylor's and Maclaurin's series for functions of two variables, Maxima-Minima of functions of two variables. **14 hours**

Unit-IV: Integral Calculus: Recapitulation of definite integrals and its properties. *Line integral:* Definition of line integral and basic properties, examples on evaluation of line

integrals. *Double integral*: Definition of Double integrals and its conversion to iterated integrals. Evaluation of double integrals by changing the order of integration and change of variables. Computation of plane surface areas, volume underneath a surface of revolution using double integral. *Triple integral*: Definition of triple integrals and evaluation-change of variables, volume as triple integral. Differentiation under the integral sign by Leibnitz rule.

14 hours

Reference Books:

- [1] David M. Burton., Elementary Number Theory, 7th Ed., McGraw Hill, 2011.
- [2] Gareth A. Jones and J. Marry Jones, Elementary Number Theory, Springer, 1998.
- [3] N. S Gopalakrishnan, University Algebra, 3rd Ed., New Age International Publications, 2015.
- [4] I. N. Herstein, Topics in Algebra, 2nd Ed., Wiley Publishers, 1975.
- [5] A. R. Vasishtha and A. K. Vasishtha, Modern Algebra, Krishna Prakashan Mandir, Meerut, U.P., 2008.
- [6] Bernald and Child, Higher Algebra, Arihant Publication India Limited, India, 2016.
- [7] Vijay K Khanna and S K Bhambri, A Course in Abstract Algebra, 5th Ed., Vikas Publishing House, India, 2016.
- [8] Shanthi Narayan and P. K. Mittal, Differential Calculus, Reprint, S. Chand and Co. Pvt. Ltd., New Delhi, 2014.
- [9] Shanti Narayan and P. K. Mittal, Integral Calculus. S. Chand Ltd., India, 2005.
- [10] George B. Thomas and Ross L. Finney, Calculus and Analytic Geometry, Addison-Wesley, 1992.
- [11] Maurice D. Weir, George B. Thomas, Jr., Joel Hass and Frank R. Giordano, Thomas' Calculus, 11th Ed., Pearson, 2008.
- [12] S. Arora and S. C. Malik, Mathematical analysis, Wiley, India, 1992.

MATDSCP2.1: Practicals on Number Theory-II, Algebra-II and Calculus-II	
Practical Hours : 4 Hours/Week	Credits: 2
Total Practical Hours: 56 Hours	Max. Marks: 50 (S.A.-25 + I.A. – 25)

Course Learning Outcomes: This course will enable the students to

- Learn *Free and Open Source Software (FOSS)* tools for computer programming.
- Solve problems on Number Theory, Algebra and Calculus by using FOSS softwares.
- Acquire knowledge of applications of algebra and calculus through FOSS.

Practical/Lab Work to be performed in Computer Lab

Suggested Softwares: Maxima/Scilab/Python.

1. Program to compute Euler's ϕ -function values for positive integers.
2. Program to write rational numbers as finite continued fractions.
3. Program to find the rational numbers corresponding to given finite continued fractions.
4. Program for verification of binary operations.
5. Programs: (i) To find identity element of a group. (ii) To find inverse of an element in a group.

6. Program to construct Cayley's table and test abelian for given finite set.
7. Program to find generators and corresponding possible subgroups of a cyclic group.
8. Finding all possible subgroups of a finite group.
9. Obtaining partial derivative of some standard functions.
10. Solutions of optimization problems.
11. Programs to develop Maclaurin's expansion for functions of two variables.
12. Program to evaluate the line integrals.
13. Program to evaluate the Double integrals with constant and variable limits.
14. Program to evaluate the Triple integrals with constant and variable limits.

Open Elective

(For students of Science stream who have not chosen Mathematics as one of the Core subjects)

MATOET2.1(A): Mathematics – II	
Teaching Hours : 3 Hours/Week	Credits: 3
Total Teaching Hours: 42 Hours	Max. Marks: 100 (S.A.- 60 + I.A. – 40)

Course Learning Outcomes: This course will enable the students to

- Recognize the mathematical objects called Groups.
- Identify cyclic and non-cyclic groups
- Link the fundamental concepts of groups and symmetries of geometrical objects.
- Find the extreme values of functions of two variables.
- Understand the concepts of line integrals, multiple integrals and their applications.

Unit-I: Groups: Binary Operations, Associativity, Commutativity, Examples for Binary Operations, Definition of a Group, Examples, Right inverse, Left inverse, Some properties, Abelian and Non-abelian groups, Laws of exponents, Subgroups, Intersection of subgroups, Centralizer of an element, Normalizer of a subgroup, Product of subgroups, Order of products of subgroups, Cyclic groups, Properties, Number of generators. 14 hours

Unit-II: Partial Derivatives: Functions of two or more variables-explicit and implicit functions, partial derivatives. Homogeneous functions- Euler's theorem, total derivatives, differentiation of implicit and composite functions, Jacobians and standard properties and illustrative examples. Taylor's and Maclaurin's series for functions of two variables, Maxima-Minima of functions of two variables. 14 hours

Unit-III: Integral Calculus: Recapitulation of definite integrals and its properties. *Line integral:* Definition of line integral and basic properties, examples on evaluation of line integrals. *Double integral:* Definition of Double integrals and its conversion to iterated integrals. Evaluation of double integrals by changing the order of integration and change of variables. Computation of plane surface areas, volume underneath a surface of revolution using double integral. *Triple integral:* Definition of triple integrals and evaluation-change of variables, volume as triple integral. Differentiation under the integral sign by Leibnitz rule. 14 hours

Reference Books:

- [1] N. S. Gopalakrishnan, University Algebra, 3rd Ed., New Age International Publications, 2015.
- [2] I. N. Herstein, Topics in Algebra, 2nd Ed., Wiley Publishers, 1975.
- [3] A. R. Vasishtha and A. K. Vasishtha, Modern Algebra, Krishna Prakashan Mandir, Meerut, U.P., 2008.
- [4] Bernald and Child, Higher Algebra, Arihant Publication India Limited, India, 2016.
- [5] Vijay K Khanna and S K Bhambri, A Course in Abstract Algebra, 5th Ed., Vikas Publishing House, India, 2016.
- [6] Shanthi Narayan and P. K. Mittal, Differential Calculus, Reprint, S Chand and Co. Pvt. Ltd., New Delhi, 2014.
- [7] Shanti Narayan and P. K. Mittal, Integral Calculus. S. Chand Ltd., India, 2005.
- [8] George B. Thomas and Ross L. Finney, Calculus and Analytic Geometry, Addison-Wesley, 1992.
- [9] Maurice D. Weir, George B. Thomas, Jr., Joel Hass and Frank R. Giordano, Thomas' Calculus, 11th Ed., Pearson, 2008.
- [10] S. Arora and S .C. Malik, Mathematical analysis, Wiley, India, 1992.

Open Elective

(For Students of other than science stream)

MATOET2.1(B): Business Mathematics-II	
Teaching Hours : 3 Hours/Week	Credits: 3
Total Teaching Hours: 42 Hours	Max. Marks: 100 (S.A.- 60 + I.A. – 40)

Course Learning Outcomes: This course will enable the students to

- Integrate concepts in international business with functioning global trade.
- Evaluate the legal, social and economic environment of business.
- To learn different techniques of simplification of real number system
- To enable student to answer competitive examinations
- Will be able to apply knowledge of business concepts and functions in an integrated manner.

Unit-I: Commercial Arithmetic: Interest: Concept of Present value and Future value, Simple interest, Compound interest, Nominal and Effective rate of interest, Examples and Problems Annuity: Ordinary Annuity, Sinking Fund, Annuity due, Present Value and Future Value of Annuity, Equated Monthly Instalments (EMI) by Interest of Reducing Balance and Flat Interest methods, Examples and Problems. **14 Hours**

Unit II: Techniques of solving problems involving number system and decimal fraction to calculate share of profit ,simplification of equations involving cost and expenditure, Average, Profit and loss. **14 Hours**

Unit III: Percentage, Ratio and proportion, Partnership, Time and work, Situations in Boats and Streams, Simple problems on trains and other moving objects, different types of problems in Calendar, number of days and dates to calculate period of payments, Stocks and shares and Problems related clock.

14 Hours

Reference Books:

- [1] R. S. Agarwal, Quantitative Aptitude, S. Chand & company Pvt. Ltd., 2014.
- [2] S. A. Bari, Practical Business Mathematics, New Literature Publishing Company, Bombay, 1971.
- [3] K. Selvakumar, Mathematics for Commerce, Notion Press, Chennai, 2014.
- [4] Dinesh Khattar and S. R. Arora, Business Mathematics with Applications, S. Chand Publishing, New Delhi, 2001.
- [5] M. K. Bhowal, Fundamentals of Business Mathematics, Asian Books Pvt. Ltd., New Delhi, 2009
- [6] Martin Anthony and Norman Biggs, Mathematics for Economics and Finance: Methods and Modelling, Cambridge University Press, Cambridge, 1996.
- [7] Ahmad Nazri and Wahidudin, Financial Mathematics and its Applications, Ventus Publishing, APS, Denmark, 2011.

B.Com (Basic/Hons)

Programme Objectives:

1. The Course focuses mainly on enhancing the employability skills of the Commerce students
2. The introduction of updated and the need of the hour concepts and contents will make a student employable and at the same time confident in his/her day to day transactions.
3. The course also meets the requirement of the young and enterprising Indians to nurture their dreams of entrepreneurship.
4. Overall the course touches upon the humane aspect of every student pursuing it and encourages them to contribute to nation building through their intellect and social capital.

Programme Outcomes:

1. This program could provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, Retail sector, Warehousing etc., well trained professionals to meet the requirements.
2. After completing graduation, students can get skills regarding various aspects like Marketing Manager, Human Resource Manager, over all Administration abilities of the Company.
3. Capability of the students to make decisions at personal & professional level will increase after completion of this course.
4. Students can independently start up their own Business.
5. Students can get thorough knowledge of finance and commerce. The knowledge of different specializations in Accounting, Costing, Banking, Taxation and Finance with the practical exposure helps the students to stand in organization.

Program Structure
Proposed Scheme of Teaching & Evaluation for B.Com (Basic/Hons) with
Commerce as Core subject

Semester I								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
1	Lang.1.1	Language-I	AECC	3+1+0	60	40	100	3
2	Lang.1.2	Language-II	AECC	3+1+0	60	40	100	3
3	B.Com.1.1	Financial Accounting	DSC	3+0+2	60	40	100	4
4	B.Com.1.2	Management Principles and Applications	DSC	4+0+0	60	40	100	4
5	B.Com.1.3	Principles of Marketing	DSC	4+0+0	60	40	100	4
6	B.Com.1.4	Digital Fluency	SEC-SB	1+0+2	60	40	100	2
7	B.com. 1.5	Yoga	SEC-VB	0+0+2	-	50	50	1
8	B.com. 1.6	Health and Wellness	SEC-VB	0+0+2	-	50	50	1
9	B.Com.1.7	Accounting for Everyone/Financial Literacy/ Managerial Economics	OEC	3+0+0	60	40	100	3
Sub-Total (A)					420	380	800	25

Semester II								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
10	Lang.2.1	Language-I	AECC	3+1+0	60	40	100	3
11	Lang.2.2	Language-II	AECC	3+1+0	60	40	100	3
12	B.Com.2.1	Advanced Financial Accounting	DSC	3+0+2	60	40	100	4
13	B.Com.2.2	Business Mathematics OR Corporate Administration	DSC	3+0+2	60	40	100	4
14	B.Com.2.3	Law & Practice of Banking	DSC	4+0+0	60	40	100	4
15	B.Com.2.4	Sports	SEC-VB	0+0+2	-	50	50	1
16	B.Com.2.5	NCC/NSS/R&R(S&G)/Cultural	SEC-VB	0+0+2	-	50	50	1
17	B.Com.2.6	Environmental Studies	AECC	2+0+0	60	40	100	2
18	B.Com.2.7	Financial Environment/Investing in Stock Markets/ Public Finance	OEC	3+0+0	60	40	100	3
Sub-Total (B)					420	380	800	25

EXIT OPTION WITH CERTIFICATION -with ability to solve well defined problems

Semester III								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
19	Lang.3.1	Language-I	AECC	3+1+0	60	40	100	3
20	Lang.3.2	Language-II	AECC	3+1+0	60	40	100	3
21	B.Com.3.1	Corporate Accounting	DSC	3+0+2	60	40	100	4
22	B.Com.3.2	Business Statistics	DSC	3+0+2	60	40	100	4
23	B.Com.3.3	Cost Accounting	DSC	3+0+2	60	40	100	4
24	B.Com.3.4	Artificial Intelligence	SEC	1+0+2	60	40	100	2
25	B.Com.3.5	Sports	SEC-VB	0+0+2	-	50	50	1
26	B.Com.3.6	NCC/NSS/R&R(S&G)/Cultural	SEC-VB	0+0+2	-	50	50	1
27	B.Com.3.7	Advertising Skills/Entrepreneurial Skills/ Modern Bank Management	OEC	3+0+0	60	40	100	3
Sub-Total(C)					420	380	800	25

Semester IV								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
28	Lang.4.1	Language-I	AECC	3+1+0	60	40	100	3
29	Lang.4.2	Language-II	AECC	3+1+0	60	40	100	3
40	B.Com.4.1	Advanced Corporate Accounting	DSC	3+0+2	60	40	100	4
31	B.Com.4.2	Costing Methods & Techniques	DSC	3+0+2	60	40	100	4
32	B.Com.4.3	Business Regulatory Framework	DSC	4+0+0	60	40	100	4
33	B.Com.4.4	Constitution of India	AECC	2+0+0	60	40	100	2
34	B.Com.4.5	Sports	SEC-VB	0+0+2	-	50	50	1
35	B.Com.3.6	NCC/NSS/R&R(S&G)/Cultural	SEC-VB	0+0+2	-	50	50	1
36	B.Com.4.7	Business Ethics / Corporate Governance/ International Trade	OEC	3+0+0	60	40	100	3
Sub-Total(D)					420	380	800	25

EXIT OPTION WITH DIPLOMA - **Ability to solve broadly defined problems.**

Semester V								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
37	B.Com.5.1	Financial Management	DSC	3+0+2	60	40	100	4
38	B.Com.5.2	Income Tax Law and Practice-I	DSC	3+0+2	60	40	100	4
39	B.Com.5.3	Auditing and Assurance	DSC	4+0+0	60	40	100	4
40	B.Com.5.4 Elective	One Course from the Selected Elective Group	DSE - 1	3+1+0	60	40	100	3
41	B.Com.5.5 Elective	GST- Law & Practice	Vocational - 1	2+0+2	60	40	100	3
42	B.Com.5.6 Elective	Internship	Internship - 1	0+0+4	-	50	50	2
43	B.Com.5.7	Sports	SEC-VB	0+0+2	-	50	50	1
44	B.Com.5.8	NCC/NSS/R&R(S&G)/Cultural	SEC-VB	0+0+2	-	50	50	1
45	B.Com.5.9	Cyber Security/Ethics & Self Awareness	SEC - VB	1+0+2	60	40	100	2
Sub-Total(E)					360	390	750	24

Semester VI								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
46	B.Com.6.1	Management Accounting	DSC	3+0+2	60	40	100	4
47	B.Com.6.2	Income Tax Law and Practice-II	DSC	3+0+2	60	40	100	4
48	B.Com.6.3	Financial Derivatives	DSC	3+0+2	60	40	100	4
49	B.Com.6.4 Elective	One courses from the Selected Elective Group	DSE - 2	3+1+0	60	40	100	3
50	B.Com.6.5	Basics of Spread Sheet Modelling OR Report on Study of Startups and Innovative Business Ideas	Vocational- 2	2+0+2	60	40	100	3
51	B.Com.6.6 Elective	Internship	Internship - 2	0+0+4	-	50	50	2
52	B.Com.6.7	Sports	SEC-VB	0+0+2	-	50	50	1
53	B.Com.6.8	NCC/NSS/R&R(S&G)/Cultural	SEC-VB	0+0+2	-	50	50	1
54	B.Com.6.9	Professional Communication	SEC - SB	2+0+0	60	40	100	2
Sub-Total(F)					360	390	750	24
Grand Total - Degree					2400	2300	4700	148

EXITOPTION WITH BACHELOR DEGREE- **Ability to solve complex problems that are ill-structured requiring multi-disciplinary skills to solve them.**

Semester VII								
Sl. N o.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
55	B.Com.7.1	International Business	DSC	4+1+0	60	40	100	4
56	B.Com.7.2	Advanced Business Statistics	DSC	4+1+0	60	40	100	4
57	B.Com.7.3	Advanced Financial Management	DSC	4+1+0	60	40	100	4
58	B.Com.7.4	One Course from the Selected Elective Group	DSE - 5	3+1+0	60	40	100	3
59	B.Com.7.5	ERP Applications	Vocational-3	2+0+2	60	40	100	3
60	B.Com.7.6	Research Methodology	-	2+0+2	60	40	100	3
Sub-Total(G)					360	240	600	21

Semester VIII								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
61	B.Com.8.1	Financial Reporting-IND.AS	DSC	3+1+0	60	40	100	3
62	B.Com.8.2	Strategic Financial Management	DSC	3+1+0	60	40	100	3
63	B.Com.8.3	Business Analytics OR Data Analysis & Decision Sciences	DSC	3+1+0	60	40	100	3
64	B.Com.8.4	One Course from the Selected Elective Group	DSE - 5	3+1+0	60	40	100	3
65	B.Com.8.5	Managing Digital Platforms	Vocational-4	2+0+2	60	40	100	3
67	B.Com.8.6	Research Projects/Internship with Viva – voce	-	0+0+12	120	80	200	6
		OR						
		Two Courses from the Selected Elective Group 8.5 (A) & 8.5 (B)	DSE-6	3+1+0	60*	40*	100*	3*
			DSE-7	3+1+0	60*	40*	100*	3*
Sub-Total (H)					420/ 420*	280/ 280*	700/ 700*	21/ 21*
GrandTotal - Honors					3180/ 3180*	2820/ 2820*	6000/ 6000*	190

* Students who do not opt Research Project / Internship shall take two elective courses such as 8.5 (A) & 8.5 (B).

Sub Total (H) and Grand Totals Honors vary accordingly.

BACHELOR DEGREE WITH HONORS - Experience of work place problem solving in the form of internship or research experience preparing for higher education or entrepreneurship experience.

Notes:

- One Hour of Lecture is equal to 1 Credit.
- One Hour of Tutorial is equal to 1 Credit (Except Languages).
- Two Hours of Practical is equal to 1 Credit

Acronyms Expanded

- **AECC** : **Ability Enhancement Compulsory Course**
- **DSC ©** : **Discipline Specific Core (Course)**
- **SEC-SB/VB** : **Skill Enhancement Course-Skill Based/Value Based**
- **OEC** : **Open Elective Course**
- **DSE** : **Discipline Specific Elective**
- **SEE** : **Semester End Examination**
- **CIE** : **Continuous Internal Evaluation**
- **L+T+P** : **Lecture+Tutorial+Practical(s)**

Note: Practical Classes may be conducted in the Business Lab or in Computer Lab or in Class room depending on the requirement. One batch of students should not exceed half (i.e., 50 or less than 50 students) of the number of students in each class/section. 2 Hours of Practical Class is equal to 1 Hour of Teaching, however, whenever it is conducted for the entire class (i.e., more than 50 students) 2 Hours of Practical Class is equal to 2 Hours of Teaching.

ELECTIVE GROUPS AND COURSES:

Discipline Specific Electives – V Semester						
Sl. No	Accounting	Finance	Banking & Insurance	Marketing	Human Resources	IT
1	Ind. AS and IFRS	Financial Markets & Intermediaries	Indian Banking System	Retail Management	Human Resources Development	Financial Analytics

Discipline Specific Electives – VI Semester						
1	e-Business & Accounting	Investment Management	Banking Innovations & Technology	Customer Relationship Marketing	Cultural Diversity at Work Place	HR Analytics
2	Accounting for Services Sector	Global Financial System & Practices	Principles & Practice of Insurance	Digital Marketing	New Age Leadership Skills	Marketing Analytics
3	Accounting for Government and Local Bodies	Risk Management	Insurance Law and Regulations	Consumer Behavior & Marketing Research	Labour Laws & Practice	ICT Application in Business

Discipline Specific Electives - VII Semester						
1	Forensic Accounting	Corporate Structuring	Banking Products & Services	Logistics & Supply Chain Management	Strategic HRM	DBMS & SQL

Discipline Specific Electives - VIII Semester	
1	Advanced Organic Chemistry
2	Advanced Inorganic Chemistry
3	Advanced Physical Chemistry
4	Advanced Biochemistry
5	Advanced Microbiology
6	Advanced Cell Biology
7	Advanced Plant Biology
8	Advanced Animal Biology
9	Advanced Human Biology
10	Advanced Environmental Biology
11	Advanced Molecular Biology
12	Advanced Genetic Engineering
13	Advanced Biotechnology
14	Advanced Food Technology
15	Advanced Pharmaceutical Technology
16	Advanced Polymer Technology
17	Advanced Nanotechnology
18	Advanced Materials Science
19	Advanced Environmental Engineering
20	Advanced Chemical Engineering
21	Advanced Metallurgical Engineering
22	Advanced Mechanical Engineering
23	Advanced Electrical Engineering
24	Advanced Computer Engineering
25	Advanced Software Engineering
26	Advanced Data Science
27	Advanced Artificial Intelligence
28	Advanced Robotics
29	Advanced Cybersecurity
30	Advanced Cloud Computing
31	Advanced Internet of Things
32	Advanced Blockchain Technology
33	Advanced Quantum Computing
34	Advanced Space Technology
35	Advanced Aerospace Engineering
36	Advanced Marine Engineering
37	Advanced Ocean Engineering
38	Advanced Coastal Engineering
39	Advanced Environmental Planning
40	Advanced Urban Planning
41	Advanced Transportation Planning
42	Advanced Infrastructure Planning
43	Advanced Energy Planning
44	Advanced Water Planning
45	Advanced Waste Planning
46	Advanced Air Quality Planning
47	Advanced Noise Planning
48	Advanced Climate Planning
49	Advanced Disaster Planning
50	Advanced Emergency Planning
51	Advanced Security Planning
52	Advanced Intelligence Planning
53	Advanced Information Planning
54	Advanced Communication Planning
55	Advanced Public Planning
56	Advanced Social Planning
57	Advanced Economic Planning
58	Advanced Financial Planning
59	Advanced Tax Planning
60	Advanced Insurance Planning
61	Advanced Retirement Planning
62	Advanced Estate Planning
63	Advanced Trust Planning
64	Advanced Will Planning
65	Advanced Probate Planning
66	Advanced Credit Planning
67	Advanced Debt Planning
68	Advanced Equity Planning
69	Advanced Real Estate Planning
70	Advanced Business Planning
71	Advanced Marketing Planning
72	Advanced Sales Planning
73	Advanced Customer Planning
74	Advanced Supplier Planning
75	Advanced Partner Planning
76	Advanced Competitor Planning
77	Advanced Industry Planning
78	Advanced Market Planning
79	Advanced Research Planning
80	Advanced Development Planning
81	Advanced Testing Planning
82	Advanced Deployment Planning
83	Advanced Maintenance Planning
84	Advanced Support Planning
85	Advanced Training Planning
86	Advanced Recruitment Planning
87	Advanced Compensation Planning
88	Advanced Benefits Planning
89	Advanced Health Planning
90	Advanced Wellness Planning
91	Advanced Fitness Planning
92	Advanced Nutrition Planning
93	Advanced Sleep Planning
94	Advanced Stress Planning
95	Advanced Anxiety Planning
96	Advanced Depression Planning
97	Advanced Bipolar Planning
98	Advanced Schizophrenia Planning
99	Advanced Personality Planning
100	Advanced Intelligence Planning

1	Innovations in Accounting	Corporate Valuation	e-Banking	E - Commerce	International HRM	Web & Social Intelligence
2	Accounting Information System	Analysis of Financial Statements	Insurance Planning & Management	Services Marketing	Employee Welfare & Social Security	Artificial Intelligence & Machine Learning in Business

NOTE: Student shall continue with the same elective group in V and VI semesters, however, he/she may change the elective group in VII semester, but shall continue in the same group in VIII semester.

B.com- Question Paper Pattern

End Semester Exams Bachelor of Commerce- B.Com

Course Code:

Name of the Course:

Duration: 2Hour

Total Marks: 60

SECTION-A

I. Answer any five of the following questions.

Questions are asked on Remembering (5x2=10)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

SECTION-B

II. Answer any four of the following questions.

Questions are asked on Understanding & Applying (4x5=20)

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.

SECTION-C

III. Answer any two of the following questions.

Questions are asked on analyzing &evaluating

(2x15=30)

15.

16.

17.

18.

Note: Break up of 40 marks for Continuous Internal Evaluation (CIE) is as follows:

- 20 marks for 2 internal exams per course per semester.
- 10 marks for Seminar/ Presentation/Activity/Project/Field work/ Assignment.
- 10 marks for Case study/ Excel / Zoho books.

Ist Semester B.Com

Course Contents

- 1.1 Financial Accounting**
- 1.2 Management Principles & Applications**
- 1.3 Principles of Marketing**
- 1.4 Digital Fluency**
- 1.5 Yoga**
- 1.6 Health and Wellness**
- 1.7 Accounting for Everyone / Financial Literacy/Managerial Economics**

Name of the Program: Bachelor of Commerce (B.Com.) Course Code: B.Com.1.1 Name of the Course: Financial Accounting		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	48 Hrs
Pedagogy: Classrooms lecture, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to <ol style="list-style-type: none"> Understand the theoretical framework of accounting as well accounting standards. Demonstrate the preparation of financial statement of manufacturing and non-manufacturing entities of sole proprietors. Exercise the accounting treatments for consignment transactions & events in the books of consignor and consignee. Understand the accounting treatment for royalty transactions & articulate the Royalty agreements. Outline the emerging trends in the field of accounting. 		
Syllabus:		Hours
Module No. 1: Theoretical Framework of Accounting		10
Introduction-Meaning and Scope of Accounting- Accounting Terminologies- Uses and Users of Accounting information-Accounting Process-Basis of Accounting: Cash and Accrual basis-Branches of Accounting-Accounting Principles-Concepts and Conventions-Accounting Standards-Indian Accounting Standards (IND AS).		
Module No. 2: Financial Statements of Sole Proprietors		10
Introduction-Meaning of Sole Proprietor-Financial Statements of Non-Manufacturing Entities: Trading Account-Income Statement/Profit & Loss Account-Balance Sheet;Financial Statements of Manufacturing Entities: Manufacturing Account-Trading Account-Profit & Loss accountant-Balance Sheet.		
Module No. 3: Consignment Accounts		10
Introduction-Meaning of Consignment-Consignment vs Sales-Pro-forma Invoice-Accounts Sales-Types Commission-Accounting for Consignment Transactions & Events in the books of Consignor and Consignee - Treatment of Normal & Abnormal Loss. -Valuation of Closing Stock-Goods sent at Cost Price and Invoice Price.		
Module No. 4:Royalty Accounts		10
Introduction-Meaning-Types of Royalty-Technical Terms: Lessee, Lessor, Minimum Rent - Short Workings -Recoupment of Short Working-Accounting Treatment in the books of Lessee and lessor - Journal Entries and Ledger Accounts including minimum rent account.		
Module No. 5: Emerging Trends in Accounting		08
Digital Transformation of Accounting-Big Data Analytics in Accounting-Cloud Computing in accounting- Accounting with drones- Forensic Accounting- Accounting for Planet--Creative Accounting-Outsourced Accounting- Predictive Accounting (Theory Only).		
Skill Developments Activities: <ol style="list-style-type: none"> Collect Annual Reports of sole proprietors and identify accounting concepts and conventions followed in the preparation of the annual reports. Collect Annual Reports of sole proprietors and identify the different components. 		

3. Preparation of Proform invoice and accounts sales with imaginary figures.
4. Collect Royalty Agreements and draft dummy royalty agreements with imaginary figures.
5. Identify latest innovations and developments in the field of accounting.
6. Any other activities, which are relevant to the course.

Text Books:

1. ICAI Study Materials on Principles & Practice of Accounting, Accounting and Advanced Accounting.
2. SP Iyengar (2005), Advanced Accounting, Sultan Chand & Sons, Vol. 1.
3. Robert N Anthony, David Hawkins, Kenneth A. Merchant, (2017) Accounting: Text and Cases, McGraw-Hill Education, 13th Edition.
4. Charles T. Horngren and Donna Philbrick, (2013) Introduction to Financial Accounting, Pearson Education, 11th Edition.
5. J.R. Monga, Financial Accounting: Concepts and Applications. Mayur Paper Backs, New Delhi, 32nd Edition.
6. S.N. Maheshwari, and. S. K. Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi, 6th Edition.
7. B.S. Raman (2008), Financial Accounting Vol. I & II, United Publishers & Distributors
8. Compendium of Statements and Standards of Accounting. The Institute of Chartered Accountants of India, New Delhi.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com.) Course Code: B.Com.1.2 Name of the Course: Management Principles and Applications		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	48 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to a) Understand and identify the different theories of organizations, which are relevant in the present context. b) Design and demonstrate the strategic plan for the attainment of organizational goals. c) Differentiate the different types of authority and chose the best one in the present context. d) Compare and chose the different types of motivation factors and leadership styles. e) Choose the best controlling techniques for better productivity of an organisation.		
Syllabus:		Hours
Module No. 1: Introduction to Management		10
Introduction-Meaning and importance of Management-Managerial Functions- Essence of Mangership-Evolution of the Management thoughts: Classical organizational theories- Neo-Classical theories-Modern organizational theories.		
Module No. 2: Planning		10
Introduction-Meaning-Nature-Purpose-Types of plans-Planning process; Strategic planning: Concept-Process-Importance and Limitations; Environmental Analysis and diagnosis: Meaning-importance and Techniques (SWOT/TOWS/WOTS-UP-BCG Matrix-Competitor Analysis); Decision-making-Concept-Importance-Committee and Group decision making Process.		
Module No. 3: Organizing		10
Introduction-Meaning-Concept and Process of Organizing - An overview-Span of management-Different types of authority (line, staff and functional)-Decentralization-Delegation of authority; Formal and Informal Structure-Principles of Organizing; Network Organisation Structure.		
Module No. 4: Staffing and Leading		10
Introduction- Staffing: Concept of Staffing-Staffing Process; Motivation: Concept- Importance-extrinsic and intrinsic motivation-Major Motivation theories: Maslow's Need-Hierarchy Theory-Hertzberg's Two-factor Theory-Vroom's Expectation Theory; Leadership: Concept-Importance-Major theories of Leadership (Likert's scale theory, Blake and Mouten's Managerial Grid theory, House's Path Goal theory, Fred Fielder's situational Leadership), Transactional leadership, Transformational Leadership, Transforming Leadership; Communication: Concept-purpose-process-Oral and written communication-Formal and informal communication networks-Barriers to communication-Overcoming barriers to communication.		
Module No. 5: Controlling and Coordination		8
Control: Concept-Process-Limitations-Principles of Effective Control-Major Techniques of control - Ratio Analysis, ROI, Budgetary Control, EVA, PERT/CPM, Emerging issues in Management; Coordination: Meaning-Nature-Importance-Principles of Coordination.		

Skill Development Activities:

1. Collect the photographs and bio-data of any three leading contributors of management thoughts.
2. Visit any business organization and collect the information on types of planning adopted by them.
3. Visit any business organization and collect different types of authority followed and also the draw the organizational structure.
4. Analyze the leadership styles of any select five companies of different sectors.
5. Visit any manufacturing firm and identify the controlling system followed.
6. Any other activities, which are relevant to the course.

Text Books:

1. Harold Koontz and Heinz Weihrich (2017), Essentials of Management: An International and Leadership Perspective, McGraw Hill Education, 10th Edition.
2. Stephen P Robbins and Madhushree Nanda Agrawal (2009), Fundamentals of Management: Essential Concepts and Applications, Pearson Education, 6th Edition.
3. James H. Donnelly, (1990) Fundamentals of Management, Pearson Education, 7th Edition.
4. B.P. Singh and A.K.Singh (2002), Essentials of Management, Excel Books
5. P C Tripathi & P N Reddy (2005), Principles of Management, TMH Publications, 3rd Edition.
6. Koontz Harold (2004), Essentials of Management, Tata McGraw Hill.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com.) Course Code: B.Com.1.3 Name of the Course: Principles of Marketing		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	48 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to <ol style="list-style-type: none"> Understand the basic concepts of marketing and assess the marketing environment. Analyze the consumer behaviour in the present scenario and marketing segmentation. Discover the new product development & identify the factors affecting the price of a product in the present context. Judge the impact of promotional techniques on the customers & importance of channels of distribution. Outline the recent developments in the field of marketing. 		
Syllabus:		Hours
Module No. 1: Introduction to Marketing		10
Introduction-Nature-Scope-Importance of Marketing; Concepts & Approaches of Marketing; Need-Want-Demand-Customer Value-Customer Creation; Evolution of marketing; Selling vs Marketing; Marketing Environment: Concept-importance-Micro and Macro Environment. Marketing Management-Meaning-importance.		
Module No. 2: Consumer Behaviour & Market segmentation		10
Consumer Behaviour: Nature and Importance-Consumer buying decision process; Factors influencing consumer buying behaviour; Market segmentation: Concept, importance and bases; Target market selection-Positioning concept-Importance and bases; Product differentiation vs. market segmentation. Marketing Mix: Product-Price-Place & Promotion.		
Module No. 3: Product and Pricing		10
Product: Concept and importance-Product classifications-Concept of product mix; Branding-packaging and labelling; Product-Support Services; Product life-cycle; New Product Development Process; Consumer adoption process. Pricing: Significance. Factors affecting price of a product. Pricing policies and strategies.		
Module No. 4: Promotion and Distribution		10
Promotion: Nature and importance of promotion; Communication process; Types of promotion: advertising, personal selling, public relations & sales promotion, and their distinctive characteristics; Promotion mix and factors affecting promotion mix decisions. Distribution Channels and Physical Distribution: Channels of distribution - meaning and importance; Types of distribution channels; Functions of middle man; Factors affecting choice of distribution channel; Wholesaling and retailing; Types of Retailers; e-retailing, Physical Distribution.		
Module No. 5: Recent Developments in Marketing		08
Social Marketing, online marketing, direct marketing, services marketing, green marketing, Rural marketing; Consumerism, Search Engine Marketing-Mobile Marketing- Marketing Analytics-Social Media Marketing-Email Marketing-Live Video Streaming Marketing-Network Marketing, any other recent developments in Marketing.		
Skill Development Activities: <ol style="list-style-type: none"> Analyze the marketing environment of your locality and identify need, wants & 		

purchasing power of customers.

2. Collect consumer behaviour towards home appliances in your locality.
3. Visit any organization and collect the information towards pricing of the products.
4. Visit any wholesalers/Retailers; collect the role of them in marketing.
5. Identify the recent developments in the field of marketing.
6. Any other activities, which are relevant to the course.

Reference Materials:

1. Philip Kotler (2015), Principles of Marketing. 13th edition. Pearson Education.
2. SaxenaRajan, (2017) Marketing Management, Tata McGraw-Hill Publishing Company Ltd., New Delhi. Fifth Edition.
3. Kumar Arun & MeenakshiN (2016), Marketing Management, Vikas Publishing House Pvt. Ltd., New Delhi. Third Edition
4. Panda Tapan (2008), Marketing Management, Excel books, New Delhi, Second Edition.
5. Michael, J. Etzel, Bruce J. Walker, William J Stanton and Ajay Pandit. Marketing: Concepts and Cases. (Special Indian Edition)., McGraw Hill Education
6. William D. Perreault, and McCarthy, E. Jerome., Basic Marketing. Pearson Education.
7. Majaro, Simon. The Essence of Marketing. Pearson Education, New Delhi.
8. Iacobucci and Kapoor, Marketing Management: A South Asian Perspective. Cengage Learning.
9. Chhabra, T.N., and S. K. Grover. Marketing Management. Fourth Edition.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com) Course Code: B.Com. 1.7 (Open Elective Course) Name of the Course: Accounting for Everyone		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	40 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to <ol style="list-style-type: none"> Analyze various terms used in accounting; Make accounting entries and prepare cash book and other accounts necessary while running a business; Prepare accounting equation of various business transactions; Analyze information from company's annual report; Comprehend the management reports of the company. 		
Syllabus:		Hours
Module No. 1: Introduction to Accounting		08
Meaning, Importance and Need, Its objectives and relevance to business establishments and other organizations, and individuals. Accounting information: meaning, users and utilities, sources of accounting information. Some Basic Terms – Transaction, Account, Asset, Liability, Capital, Expenditure & Expense, Income, Revenue, Gain, Profit, Surplus, Loss, Deficit. Debit, Credit, Accounting Year, Financial Year.		
Module No. 2: Transactions and Recording of Transactions		08
Features of recordable transactions and events, Basis of recording – vouchers and another basis. Recording of transactions: Personal account, Real Account and Nominal Account; Rules for Debit and Credit; Double Entry System, journalizing transactions; Preparation of Ledger, Cash Book including bank transactions. (Simple Problems)		
Module No. 3: Preparation of Financial Statements		08
Fundamental Accounting Equation; Concept of revenue and Capital; Preparation of financial statements. (Simple problems)		
Module No. 4: Company Accounts		08
Explanation of certain terms – Public Limited Company, Private Limited Company, Share, Share Capital, Shareholder, Board of Directors, Stock Exchange, Listed Company, Share Price, Sensex - BSE, NSE; Annual report, etc. Contents and disclosures in Annual Report, Company Balance Sheet and Statement of Profit and Loss. Content Analysis based on annual report including textual analysis.		
Module 5: Management Reports		08
Reports on Management Review and Governance; Report of Board of Directors - Management discussion analysis- Annual Report on CSR - Business responsibility report - Corporate governance report - Secretarial audit report.		
Skill Development Activities: <ol style="list-style-type: none"> Download annual reports of business Organisations from the websites and go through the contents of the annual report and present the salient features of the annual report using some ratios and content analysis including textual analysis. Prepare accounting equation by collecting necessary data from medium sized firm. Prepare financial statements collecting necessary data from small business firms. Collect the management reports of any large scale organization and analyze the same. Any other activities, which are relevant to the course. 		

Text Books:

1. Hatfield, L. (2019). Accounting Basics. Amazon Digital Services LLC.
2. Horngren, C. T., Sundem, G. L., Elliott, J. A., & Philbrick, D. (2013). Introduction to Financial Accounting. London: Pearson Education.
3. Siddiqui, S. A. (2008). Book Keeping & Accountancy. New Delhi: Laxmi Publications Pvt. Ltd.
4. Sehgal, D. (2014). Financial Accounting. New Delhi: Vikas Publishing House Pvt. Ltd.
5. Tulsian, P. C. (2007). Financial Accounting. New Delhi: Tata McGraw Hill Publishing Co. Ltd.
6. Mukharji, A., & Hanif, M. (2015). Financial Accounting. New Delhi: Tata McGraw Hill Publishing Co. Ltd.
7. Maheshwari, S. N., Maheshwari, S. K., & Maheshwari, S. K. (2018). Financial Accounting. New Delhi: Vikas Publishing House Pvt. Ltd.
8. Khan, M.Y. and Jain, P.K. Management Accounting. McGraw Hill Education.
9. Arora, M.N. Management Accounting, Vikas Publishing House, New Delhi

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com) Course Code: B.Com. 1.7 (Open Elective Course) Name of the Course: Financial Literacy		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	40 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to 1. Describe the importance of financial literacy and list out the institutions providing financial services; 2. Prepare financial plan and budget and manage personal finances; 3. Open, avail, and manage/operate services offered by banks; 4. Open, avail, and manage/operate services offered by post offices; 5. Plan for life insurance and property insurance & select instrument for investment in shares		
Syllabus:		Hours
Module No. 1: Introduction		08
Meaning, importance and scope of financial literacy; Prerequisites of Financial Literacy – level of education, numerical and communication ability; Various financial institutions – Banks, Insurance companies, Post Offices; Mobile App based services. Need of availing of financial services from banks, insurance companies and postal services.		
Module No. 2: Financial Planning and Budgeting		08
Concept of economic wants and means for satisfying these needs; Balancing between economic wants and resources; Meaning, importance and need for financial planning; Personal Budget, Family Budget, Business Budget and National Budget; Procedure for financial planning and preparing budget; Budget surplus and Budget deficit, avenues for savings from surplus, sources for meeting deficit.		
Module No. 3: Banking Services		08
Types of banks; Banking products and services – Various services offered by banks; Types of bank deposit accounts – Savings Bank Account, Term Deposit, Current Account, Recurring Deposit, PPF, NSC etc.; Formalities to open various types of bank accounts, PAN Card, Address proof, KYC norm; Various types of loans – short term, medium term, long term, micro finance, agricultural etc. and related interest rates offered by various nationalized banks and post office; Cashless banking, e-banking, Check Counterfeit Currency; CIBIL, ATM, Debit and Credit Card, and APP based Payment system; Banking complaints and Ombudsman.		
Module No. 4: Financial Services from Post Office		08
Post office Savings Schemes: Savings Bank, Recurring Deposit, Term Deposit, Monthly Income Scheme, Kishan Vikas Patra, NSC, PPF, Senior Citizen Savings Scheme (SCSS), Sukanya Samriddhi Yojana/ Account (SSY/SSA); India Post Payments Bank (IPPB). Money Transfer: Money Order, E-Money order. Instant Money Order, collaboration with the Western Union Financial Services; MO Videsh, International Money Transfer Service, Electronic Clearance Services (ECS), Money gram International Money Transfer, Indian Postal Order (IPO).		
Module 5: Protection and Investment Related Financial Services		08
Insurance Services: Life Insurance Policies: Life Insurance, Term Life Insurance, Endowment Policies, Pension Policies, ULIP, Health Insurance and its Plans, Comparison of policies		

offered by various life insurance companies. Property Insurance: Policies offered by various general insurance companies. Post office life Insurance Schemes: Postal Life Insurance and Rural Postal Life Insurance (PLI/RPLI). Housing Loans: Institutions providing housing loans, Loans under Pradhanmantri Awas Yojana – Rural and Urban.

Investment avenues in Equity and Debt Instruments: Portfolio Management: Meaning and importance; Share Market and Debt Market, Sensex and its significance; Investment in Shares – selection procedure for investment in shares; Risk element; Investment Management - Services from brokers and Institutions, and self-management; Mutual Fund.

Skill Development Activities:

1. Visit banks, post offices, and insurance companies to collect information and required documents related to the services offered by these institutions and to know the procedure of availing of these services.
2. Fill up the forms to open accounts and to avail loans and shall attach photocopies of necessary documents.
3. Prepare personal and family budget for one/six/ twelve month on imaginary figures.
4. Try to open Demat account and trade for small amount and submit the report on procedure on opening of Demat account and factors considered for trading.
5. Any other activities, which are relevant to the course.

Text Books:

1. Avadhani, V. A. (2019). Investment Management. Mumbai: Himalaya Publishing House Pvt. Ltd.
2. Chandra, P. (2012). Investment Game: How to Win. New Delhi: Tata McGraw Hill Education.
3. Kothari, R. (2010). Financial Services in India-Concept and Application. New Delhi: Sage Publications India Pvt. Ltd.
4. Milling, B. E. (2003). The Basics of Finance: Financial Tools for Non-Financial Managers. Indiana: universe Company.
5. Mittra, S., Rai, S. K., Sahu, A. P., & Starn, H. J. (2015). Financial Planning. New Delhi: Sage Publications India Pvt. Ltd.
6. Zokaityte, A. (2017). Financial Literacy Education. London: Palgrave Macmillan.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com) Course Code: B.Com. 1.7 (Open Elective Course) Name of the Course: Managerial Economics		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	40 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to 1. Describe the importance of managerial economics in decision making process. 2. Learners would be able to apply the concepts and principles in their day to day life. 3. Analyze how economic agents make decisions and choices using theoretical knowledge & practical approach.		
Syllabus:		Hours
Module No. 1: Nature and scope of business economics		08
Nature of Business Economics: Meaning, definitions, nature, scope and significance of business economics. Economic laws and principles: Meaning and nature of economic laws. Economics and business environment: Economic and Non-economic factors determining business. Business objectives: Economic, Non-Economic, Human, Social and National objectives of business.		
Module No. 2: Demand Analysis		08
Law of diminishing marginal utility: Meaning, Assumptions, Illustration, Exceptions and Uses law of demand: Meaning, Demand Function, why does the demand curve slope downwards? Exceptions to the Law of demand, determinants of demand, increase and decrease in demand. Price elasticity: Meaning, types of price elasticity and methods of measurement of price elasticity. Factors of determining elasticity demand. Income elasticity, cross elasticity and promotional elasticity.		
Module No. 3: Supply, Cost and Revenue analysis		08
Supply: Meaning, Law of supply, exceptions to the law of supply and determinants of supply. Elasticity of supply: Meaning and types of elasticity of supply. Cost concepts: Opportunity cost, total cost, variable cost, fixed cost and marginal cost. Cost-output relationships in the short run and long run. Concepts of revenue: Total revenue, average revenue and marginal revenue. Revenue curves under perfect and imperfect competition.		
Module No. 4: Production and market analysis		08
Production analysis: Law of variable proportion and law of returns to scale. Perfect competition: Meaning and features. Monopoly: Meaning, features and price-output determination. Price discrimination: types, price- output determination under discriminating monopoly. Monopolistic competition: Meaning, features and price-output determination under monopolistic competition. Oligopoly: Meaning, features and types. Kinked demand curve.		
Module No. 5: Business Cycles Analysis		08
Business Cycles Analysis: Business Cycles Nature and Phases of a Business Cycle, Game Theory, Information Super Highways, Small-world Model, Theories of Business Cycle – Psychological, Profit, Monetary, Innovation, Cobweb, Samuelson and Hicks Theories.		

Skill Development Activities:

1. Prepare personal and family budget for one/six/ twelve month on imaginary figures.
2. Study the supply and demand theory of a product as your choice.
3. Any other activities, which are relevant to the course.

References:

1. Sundharam K.P.M. & Sundharam E.N. – Business Economics, Sultanchand & Sons, New Delhi.
2. Ahuja H.L. – Business Economics, Sultanchand & Sons, New Delhi
3. Mehta P.L., Managerial Economics, Sultanchand & Sons, New Delhi.
4. Dwivedi D.N., Managerial Economics, Vikas Publishing House Pvt. Ltd., New Delhi.
5. Mithani D.M., Managerial Economics, Himalaya Publishing House, Mumbai.
6. Peterso H. Craig and W.Cris Lewis – Managerial Economics, Pearson Education, Singapore.
7. Salvatore Dominic – Managerial Economics, McGraw Hill, New York.

Note: Latest edition of text books may be used.

IInd Semester B.Com

B. Course Contents

2.1 Advanced Financial Accounting

2.2 Business Mathematics / Corporate Administration

2.3 Law & Practice of Banking

2.4 Sports

2.5 NCC/NSS/R&R (S&G)/Cultural

2.6 Environmental Studies

2.7 Financial Environment / Investing in Stock Markets/Public Finance

Name of the Program: Bachelor of Commerce (B.Com.) Course Code: B.Com.2.1 Name of the Course: Advanced Financial Accounting		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	48 Hrs
Pedagogy: Classrooms lecture, Case studies, Tutorial classes, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to		
a) Understand & compute the amount of claims for loss of stock & loss of Profit. b) Learn various methods of accounting for hire purchase transactions. c) Deal with the inter-departmental transfers and their accounting treatment. d) Demonstrate various accounting treatments for dependent & independent branches. e) Prepare financial statements from incomplete records.		
Syllabus:		Hours
Module No. 1: Insurance Claims for Loss of Stock & Loss of Profit		10
Introduction-Meaning of fire-computation of Claim for loss of stock- Computations of Claim for loss of Profit-Average Clause.		
Module No. 2: Hire Purchase Accounting		10
Introduction-Meaning of hire purchase-difference between hire purchase and instalment-Nature-features-terms used-Ascertainment of Interest-Accounting for hire purchase transactions-Repossession.		
Module No. 3: Departmental Accounts		10
Introduction-meaning-advantages and disadvantages-methods of departmental accounting-basis of allocation of common expenditure among different departments-types of departments-inter department transfer and its treatment		
Module No. 4: Accounting for Branches		10
Introduction-difference between branch accounts and departmental accounts-types of branches-Accounting for dependent & independent branches; Foreign branches: Accounts for foreign branches-Techniques for foreign currency translation. (Theory only).		
Module No. 5: Conversion of Single Entry into Double Entry		08
Introduction - Meaning-Limitations of Single Entry System-Difference between Single entry and Double entry system - Problems on Conversion of Single Entry into Double Entry.		
Skill Developments Activities: <ol style="list-style-type: none"> Identify the procedure & documentations involved in the insurance claims. Collect hire purchase agreements and draft dummy hire purchase agreements with imaginary figures. Identify the common expenditures of an organisation among various departments. Collect the procedure and documentations involved in the establishment of various branches. Visit any sole proprietor firm and identify the steps involved in the conversion of single entry into double entry system. Any other activities, which are relevant to the course. 		
Text Books:		

1. ICAI Study Materials on Principles & Practice of Accounting, Accounting and Advanced Accounting.
2. SP Iyengar (2005), Advanced Accounting, Sultan Chand & Sons, Vol. 1.
3. Robert N Anthony, David Hawkins, Kenneth A. Merchant, (2017) Accounting: Text and Cases, McGraw-Hill Education, 13th Edition.
4. Charles T. Horngren and Donna Philbrick, (2013) Introduction to Financial Accounting, Pearson Education, 11th Edition.
5. J.R. Monga, Financial Accounting: Concepts and Applications. Mayur Paper Backs, New Delhi, 32nd Edition.
6. S.N. Maheshwari, and. S. K. Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi, 6th Edition.
7. B.S. Raman (2008), Financial Accounting Vol. I & II, United Publishers & Distributors
8. Compendium of Statements and Standards of Accounting. The Institute of Chartered Accountants of India, New Delhi.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com.) Course Code: B.Com. 2.2 Name of the Course: Business Mathematics		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	48 Hrs
Pedagogy: Classrooms lecture, Case studies, Tutorial classes, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to		
a) Understand the number system and indices applications in solving basic business problems.		
b) Apply concept of commercial arithmetic concepts to solve business problems.		
c) Make use of theory of equation in solving the business problems in the present context.		
d) Understand and apply the concepts of Set Theory, Permutations & Combinations and Matrices solving business problems.		
e) Apply measurement of solids in solving simple business problems.		
Syllabus:		Hours
Module No. 1: Number System and Indices		10
Introduction - Meaning - Natural Numbers - Even & Odd Numbers - Prime, Rational Number and its features & Irrational Numbers - simple problems on finding sum of natural, Odd and Even numbers- HCF and LCM, problems thereon; Indices-Introduction, Laws of indices, application of laws for simplification, simple problems.		
Module No. 2: Commercial Mathematics		10
Introduction - Meaning of Simple and Compound interest and problems thereon,-Annuities, types & problems on present and future value of annuity; Ratios and Proportions-meaning and problems thereon-problems on speed, time and work.		
Module No. 3: Theory of Equation		10
Introduction - Meaning-Problems on Linear equations and solving pure and adfected quadratic equations (factor and Sridharacharya methods only), problems on Simultaneous equations (Elimination method only).		
Module No. 4: Set Theory, Permutations & Combinations and Matrices		10
Introduction - Meaning & types of sets-Laws of Sets-Venn diagram-problems thereon; Meaning and problems on permutations and combinations; Matrices-Meaning & types of Matrices, simple problems on addition, subtraction and multiplication.		
Module No. 5: Measurement of Solids		08
Introduction - Meaning and problems on Area and perimeter/circumference of Triangle, Square, Rectangle, Circle, Cone and Cylinder.		
Skill Developments Activities: <ol style="list-style-type: none"> 1. Show the number of ways in which your telephone number can be arranged to get odd numbers. 2. Visit any Commercial Bank in your area and collect the information about types of loans and the rates of interest on loans. 3. Use Matrix principles to implement food requirement and protein for two families. 4. Measure your classroom with the help of a tape and find the cost of the carpet for the floor area of the classroom. 		

5. Any other activities, which are relevant to the course.

Text Books:

1. Saha and Rama Rao, Business Mathematics, HPH.
2. S.N.Dorairaj, Business Mathematics, United Publication.
3. R. Gupta, Mathematics for Cost Accountants.
4. S. P. Gupta, Business Mathematics.
5. Madappa and Sridhara Rao, Business Mathematics.
6. Padmalochana Hazarika, Business Mathematics.
7. Dr.B.H.Suresh, Quantitative Techniques, Chetana Book House.
8. Dr. Padmalochan Hazarika, A Textbook of Business Mathematics, S. Chand, New Delhi, No. 4, 2016.
9. A. P. Verma, Business Mathematics, Asian Books Private Limited, New Delhi, No. 3, January 2007.
10. D. C. Sancheti & V. K. Kapoor, Business Mathematics, S. Chand, New Delhi, 2014
11. A Lenin Jothi, Financial Mathematics, Himalaya Publications, Mumbai, No. 1, 2009.
12. B. M. Aggarwal, Business Mathematics, Ane Books Pvt. Ltd., No. 5, 2015

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com.) Course Code: B.Com.2.2 Name of the Course: Corporate Administration		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	48 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to a) Understand the framework of Companies Act of 2013 and different kind of companies. b) Identify the stages and documents involved in the formation of companies in India. c) Analyze the role, responsibilities and functions of Key management Personnel in Corporate Administration. d) Examine the procedure involved in the corporate meeting and the role of company secretary in the meeting. e) Evaluate the role of liquidator in the process of winding up of the company.		
Syllabus:		Hours
Module No. 1: Introduction to Company		10
Introduction - Meaning and Definition - Features - Highlights of Companies Act 2013 - - Kinds of Companies - One Person Company-Private Company-Public Company-Company limited by Guarantee-Company limited by Shares- Holding Company-Subsidiary Company-Government Company-Associate Company- Small Company-Foreign Company-Global Company-Body Corporate-Listed Company.		
Module No. 2: Formation of Companies		10
Introduction - Promotion Stage: Meaning of Promoter, Position of Promoter & Functions of Promoter, Incorporation Stage: Meaning & contents of Memorandum of Association & Articles of Association, Distinction between Memorandum of Association and Articles of Association, Certificate of Incorporation, Subscription Stage - Meaning & contents of Prospectus, Statement in lieu of Prospects and Book Building, Commencement Stage - Document to be filed, e-filing, Register of Companies, Certificate of Commencement of Business; Formation of Global Companies: Meaning - Types -Features - Legal Formalities-Administration.		
Module No. 3: Company Administration		10
Introduction - Key Managerial Personnel - Managing Director, Whole time Directors, the Companies Secretary, Chief Financial Officer, Resident Director, Independent Director, Auditors - Appointment - Powers - Duties & Responsibilities. Managing Director - Appointment - Powers - Duties & Responsibilities. Audit Committee, CSR Committee. Company Secretary - Meaning, Types, Qualification, Appointment, Position, Rights, Duties, Liabilities & Removal or dismissal.		
Module No. 4: Corporate Meetings		10
Introduction - Corporate meetings: types - Importance - Distinction; Resolutions: Types - Distinction; Requisites of a valid meeting - Notice - Quorum -Proxies - Voting - Registration of resolutions; Role of a company secretary in convening the meetings.		
Module No. 5: Winding Up		08
Introduction - Meaning- Modes of Winding up -Consequence of Winding up - Official Liquidator - Role & Responsibilities of Liquidator - Defunct Company - Insolvency Code.		
Skill Development Activities: 1. Collect the Companies Act 2013 from the Ministry of Corporate Affairs website and		

prepare the highlights of the same.

2. Visit any Registrar of the Companies; find out the procedure involved in the formation of the companies.
3. Visit any Company and discuss with Directors of the same on role and responsibilities and prepare report on the same.
4. Collect the copy of notice of the Meeting and Resolutions, Prepare the dummy copy of Notice and resolutions.
5. Contact any official liquidator of an organisation and discuss the procedure involved on the same and prepare report.
6. Any other activities, which are relevant to the course.

Text Books:

1. S.N Maheshwari, Elements of Corporate Law, HPH.
2. Balchandran, Business Law for Management, HPH
3. Dr. P.N. Reddy and H.R. Appanaiah, Essentials of Company Law and Secretarial Practice, HPH.
4. K. Venkataramana, Corporate Administration, SHBP.
5. N.D. Kapoor: Company Law and Secretarial Practice, Sultan Chand.
6. M.C. Bhandari, Guide to Company Law Procedures, Wadhwa Publication.
7. S.C. Kuchal, Company Law and Secretarial Practice.
8. S.C. Sharm, Business Law, I.K. International Publishers

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com.) Course Code: B.Com. 2.3 Name of the Course: Law and Practice of Banking		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	48 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to a) Summarize the relationship between Banker & customer and different types of functions of banker. b) Analyse the role, functions and duties of paying and collecting banker. c) Make use of the procedure involved in opening and operating different accounts. d) Examine the different types of negotiable instrument & their relevance in the present context. e) Estimate possible developments in the banking sector in the upcoming days.		
Syllabus:		Hours
Module No. 1: Introduction to Banking		10
Introduction- Meaning - Need - Importance - Primary, Secondary & Modern functions of banks - Origin of banking- Banker and Customer Relationship (General and special relationship) - Origin and growth of commercial banks in India - Types of Banks in India-Banks' Lending - changing role of commercial banks. RBI: History-Role & Functions.		
Module No. 2: Paying and Collecting Banker		10
Paying banker: Introduction - Meaning - Role - Functions - Duties - Precautions and Statutory Protection and rights - Dishonor of Cheques - Grounds of Dishonor - Consequences of wrongful dishonor of Cheques; Collecting Banker: Introduction - Meaning - Legal status of collecting banker - Holder for value -Holder in due course - Duties & Responsibilities - Precautions and Statutory Protection to Collecting Banker.		
Module No. 3: Customers and Account Holders		10
Introduction - Types of Customers and Account Holders - Procedure and Practice in opening and operating accounts of different customers: Minors - Joint Account Holders- Partnership Firms - Joint Stock companies - Executors and Trustees - Clubs and Associations and Joint Hindu Undivided Family.		
Module No. 4: Negotiable Instruments		10
Introduction - Meaning & Definition - Features - Kinds of Negotiable Instruments: Promissory Notes - Bills of Exchange - Cheques - Crossing of Cheques - Types of Crossing; Endorsements: Introduction - Meaning - Essentials & Kinds of Endorsement - Rules of endorsement.		
Module No. 5: Recent Developments in Banking		08
Introduction - New technology in Banking - E-services - Debit and Credit cards - Internet Banking-Electronic Fund Transfer- MICR - RTGS - NEFT -ECS- Small banks-Payment banks-Digital Wallet-Crypto currency- KYC norms - Basel Norms - Mobile banking-E-payments - E-money. Any other recent development in the banking sector.		
Skill Development Activities: 1. Refer RBI website and identify the different types of banks operating in India. 2. Visit any Public sector bank & discuss with the branch manager about the role and functions as a paying and collecting banker.		

3. Collect and fill dummy account opening forms as different types of customer.
4. Draft specimen of Negotiable instruments: bill of exchange, Promissory Notes and Cheques.
5. Identify and prepare report on pros and cons of recent development in the field of banking sector.
6. Any other activities, which are relevant to the course.

Text Books:

1. Gordon & Natarajan, Banking Theory Law and Practice, HPH, 24th Edition
2. S. P Srivastava (2016), Banking Theory & Practice, Anmol Publications
3. Maheshwari. S.N. (2014), Banking Law and Practice, Kalyani Publishers, 11 edition
4. Shekar. K.C (2013), Banking Theory Law and Practice, Vikas Publication, 21st Edition.
5. Dr. Alice Mani (2015), Banking Law and Operation, SBH.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com) Course Code: B.Com. 2.7 (Open Elective Course) Name of the Course: Financial Environment		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	2 Hrs	24 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to <ol style="list-style-type: none"> 1. Understand the fundamentals of Indian Economy and its significance. 2. Evaluate the impact of monetary policy on the stakeholders of the Economy. 3. Assess the impact of fiscal policy on the stakeholders of the Economy. 4. Examine the status of inflation, unemployment and labour market in India 5. Inference the financial sector reforms in India. 		
Syllabus:		Hours
Module No. 1: Fundamentals of India Economy		05
Introduction - Production & Cost-Demand & Supply-Perfect & Imperfect Competition-Monopoly-National Income Accounting-Business Cycle-Open Economy-Utility theory-GDP-GNP-impact- other Marco financial indicators.		
Module No. 2: Monetary Policy		05
Introduction - Meaning-objectives-qualitative & quantitative measures for credit control. Influence of policy rates of RBI: Repo-Reverse repo- Marginal standing facility and Bank rate. Influence of reserve ratios of RBI: CRR-SLR-Exchange rates-lending/deposit rates-design & issues of monetary policy-LAF - RBI Role, functions and its Governance		
Module No. 3: Fiscal Policy		05
Introduction - Meanings-objectives- public expenditure-public debt-fiscal & budget deficit-Keynesian approach-fiscal policy tools-fiscal policy effects on employment-supply side approach-design & issues of fiscal policy-fiscal budget- Role of Ministry of Finance in Fiscal Policy.		
Module No. 4: Inflation, Unemployment and Labour market		05
Introduction - Inflation: Causes of rising & falling inflation-inflation and interest rates-social costs of inflation; Unemployment - natural rate of unemployment-frictional & wait unemployment. Labour market and its interaction with production system; Phillips curve-the trade-off between inflation and unemployment-sacrifice ratio-role of expectations adaptive and rational		
Module 5: Financial Sector Reforms:		04
Introduction - Financial sector reforms - Recommendation & action taken -SARFESI Act-Narasimham Committee I & II- Kelkar Committee- FRBM Act - Basel-BIS-history-need-mission-objectives-Basel norms I, II & III- criticism of Basel norms-Implementations of Basel norms in India- impact of Basel norms on Indian banks.		
Skill Development Activities: <ol style="list-style-type: none"> 1. Collect last ten year GDP rate and examine the same. 2. Collect last two years monetary policy rates of RBI and analyse the impact of the same. 		

3. Collect last five years fiscal policy of Indian Government and analyse the impact of the same on rural poor.
4. Collect last five year data on inflation, unemployment rate and labour market conditions and critically prepare the report.
5. Identify the recent financial sector reforms in India.
6. Any other activities, which are relevant to the course.

Text Books:

1. V K Puri and S K Mishra, Indian Economy, HPH.
2. Datt and Sundharam's, Indian Economy, S Chand
3. Ramesh Singh, Indian Economy, McGraw Hill education.
4. Khan and Jain, Financial Services, Mcgraw Hill Education, 8th edition
5. RBI working papers
6. Mistry of Finance, GOI of working papers
7. SEBI Guidelines Issued from time to time.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com) Course Code: B.Com.2.7 (Open Elective Course) Name of the Course: Investing in Stock Markets		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	40 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to <ol style="list-style-type: none"> 1. Explain the basics of investing in the stock market, the investment environment as well as risk & return. 2. Analyze Indian securities market; 3. Examine EIC framework and conduct fundamental analysis; 4. Perform technical analysis; 5. Invest in mutual funds market. 		
Syllabus:		Hours
Module No. 1: Basics of Investing		08
Basics of Investment & Investment Environment. Risk and Return, Avenues of Investment - Equity shares, Preference shares, Bonds & Debentures, Insurance Schemes, Mutual Funds, Index Funds. Indian Security Markets - Primary Market, Secondary Market and Derivative Market. Responsible Investment.		
Module No. 2: Fundamental Analysis		08
Top down and bottom up approaches, Analysis of international & domestic economic scenario, Industry analysis, Company analysis (Quality of management, financial analysis: Both Annual and Quarterly, Income statement analysis, position statement analysis including key financial ratios, Cash flow statement analysis, Industry market ratios: PE, PEG, Price over sales, Price over book value, EVA), Understanding Shareholding pattern of the company.		
Module No. 3: Technical Analysis		08
Trading rules (credit balance theory, confidence index, filter rules, market breath, advances vs declines and charting (use of historic prices, simple moving average and MACD) basic and advanced interactive charts. Do's& Don'ts of investing in markets.		
Module No. 4: Indian Stock Market		08
Market Participants: Stock Broker, Investor, Depositories, Clearing House, Stock Exchanges. Role of stock exchange, Stock exchanges in India- BSE, NSE and MCX. Security Market Indices: Nifty, Sensex and Sectoral indices, Sources of financial information. Trading in securities: Demat trading, types of orders, using brokerage and analyst recommendations		
Module 5: Investing in Mutual Funds		08
Concept and background on Mutual Funds: Advantages, Disadvantages of investing in Mutual Funds, Types of Mutual funds- Open ended, close ended, equity, debt, hybrid, index funds and money market funds. Factors affecting choice of mutual funds. CRISIL mutual fund ranking and its usage, calculation and use of Net Asset Value.		
Skill Development Activities: <ol style="list-style-type: none"> 1. Work on the spreadsheet for doing basic calculations in finance. 2. Learners will also practice technical analysis with the help of relevant software. 3. Practice use of Technical charts in predicting price movements through line chart, bar chart, candle and stick chart, etc., moving averages, exponential moving average. 4. Calculate of risk and return of stocks using price history available on NSE website. 5. Prepare equity research report-use of spreadsheets in valuation of securities, fundamental 		

analysis of securities with the help of qualitative and quantitative data available in respect of companies on various financial websites, etc.

6. Any other activities, which are relevant to the course.

Text Books:

1. Chandra, P. (2017). Investment Analysis and Portfolio Management. New Delhi: Tata McGraw Hill Education.
2. Kevin, S. (2015). Security Analysis and Portfolio Management. Delhi: PHI Learning. Ranganatham,
3. M., & Madhumathi, R. (2012). Security Analysis and Portfolio Management. Uttar Pradesh: Pearson (India) Education.
4. Pandian, P. (2012). Security Analysis and Portfolio Management. New Delhi: Vikas Publishing House.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Commerce (B.Com) Course Code: B.Com.2.7 (Open Elective Course) Name of the Course: PUBLIC FINANCE		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	40 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to		
a) Identify the basis of Money and sources of Public Finance b) Identify the stages of business cycles and take appropriate decisions.		
Syllabus:		Hours
Module No. 1: Money		08
Meaning, definitions, functions & classification - money and near money. Demand and supply of money: determinants; High – powered money and the money multiplier.		
Module No. 2: Value of money and its application		08
Value of Money: meaning and theories - The quantity Theory of money – Fisher’s Theory and the Cambridge Equations, Friedman’s restatement of the quantity theory- Measurement of Value of money: Index Numbers – meaning, types and uses. Inflation: meaning, types, causes, effects and remedies -stagflation.		
Module No. 3: Business Cycles		08
Meaning features, phases- causes: Hawtrey’s theory, Hick’s theory and Schumpeter’s Theory – Measures to control business cycles.		
Module No. 4: Public Finance		08
Meaning, Difference between public Finance and Private Finance ; Components of public finance principle of maximum social advantage. Public Revenue – Meaning, Sources, Cannons of taxation. Public Expenditure – Meaning and Classification (Heads of Public Expenditure) Public Debt – Meaning Sources types of Public debt and methods of redemption.		
Module 5: Fiscal Policy and Deficit Finance		08
Public Budget - Meaning, Objectives, Components and types Fiscal Policy – Meaning, Objectives and Components Role of Fiscal policy in developing economy – Deficit finance.		
Skill Development Activities: <ol style="list-style-type: none"> 1. Acquire basics of money market operations& functioning of the money market through intermediaries. 2. Acquire knowledge about the functioning of the economic system & about economic fluctuations. 3. Gains hand on experience of working of the banking system & the monetary policy. 4. Understand the importance of Inter-National Finance 5. Any other activities, which are relevant to the course. 		
Books for reference: <ol style="list-style-type: none"> 1. F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson 		

Education, 6th edition, 2009.

2. F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, Foundations of Financial Markets and Institutions, Pearson Education, 3rd edition, 2009.

3. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition, 2011.

4. M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7th edition, 2011.

5. N. Jadhav, Monetary Policy, Financial Stability and Central Banking in India, Macmillan, 2006.

6. Musgrave Public Finance theory and Practice, Tata Mc Graw Hill, 5th Edition, 2011.

7. Taylor, 'Public Finance'.

Note: Latest edition of text books may be used.

ಮಂಗಳೂರು
MANGALORE



ವಿಶ್ವವಿದ್ಯಾನಿಲಯ
UNIVERSITY

ಕ್ರಮಾಂಕ/No. :MU/ACC/CR.28/2021-22/A8

ಕುಲಸಚಿವರ ಕಛೇರಿ

ಮಂಗಳಗಂಗೋತ್ರಿ - 574 199

Office of the Registrar

Mangalagangothri - 574 199

ದಿನಾಂಕ/Date: 24.12.2021

NOTIFICATION

Sub: Modified Syllabus of Computer Applications, a vocational course for B.Com (Basic/Hons) Degree Programmes under NEP 2020-reg

Pursuant to the above, the modified syllabus of Computer Applications, a vocational course for B.Com (Basic/Hons) Degree Programmes under NEP 2020 is hereby notified for implementation with effect from the academic year 2021-22 subject to the ratification of Academic Council meeting .

Copy of the Syllabus shall be downloaded from the Mangalore University Website.
www.mangaloreuniversity.ac.in


REGISTRAR.

To:

1. The Principals of all the Colleges affiliated to Mangalore University.
2. The Registrar (Evaluation), Mangalore University.
3. Prof. Manjaiah D.H, Chairman, UG Combined BOS in Computer Applications & Computer Science & Department of Computer Science, Mangalore University, Mangalagangothri.
4. The Assistant Registrar/The Superintendent, Academic Section, O/o the Registrar, Mangalore University.
5. The Director, DUIMS, Mangalore University – with a request to publish in the Website.
6. Guard File.

B.Com (Computer Applications) (Basic/Hons) (Vocational)

Programme Objectives (PO):

PO1: Impart advanced learning to students in the discipline of Commerce, specifically with the application of software technology for professional requirements, merging the academic domains of Commerce and Computer Applications

PO2: To impart central knowledge and skills to the students in emerging areas of commerce like accounting, auditing, finance, marketing, HR, company laws, taxation etc with computing skills for effective domain enrichment

PO3: To groom students with desired competence in commerce education and research with computing leverage.

PO4: To strengthen theoretical and applied aspects of commerce for preparing the students for higher education and research.

PO5: To equip the students with necessary skill sets pertaining to computing principles, software technologies and business practices in software solutions essential for gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge.

PO6: To impart demonstratable knowledge, skills and values in order to support students' eventual progression to higher learning and gainful career with resilient value system.

Programme Outcomes (PO)

The Commerce graduates should be able to:

PO1: Apply the knowledge of commerce and computers to obtain constructive solutions to complex business & management problems.

PO2: Understand the concepts of key areas in computer science and apply latest technologies to solve problems in the areas of computer applications in business and commerce

PO3: Design solutions for Socio-economic, commerce and business problems and plan case study, processes to meet the specifications with consideration for sustainable development.

PO4: Use modern computing models and tools to conduct investigations of complex economic, business and management problems including analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Understand digital ethics - what can be made possible by digital technology and what is ethically desirable, in order to be successful leaders in the business world

PO6: Use digital edge in order to function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings, communicate effectively with the business community & IT professionals and with society at large.

PO7: Demonstrate knowledge and understanding of Commerce, Management & Software engineering principles and apply these to one's own work, as a member and leader in a team.

PO8: Recognize the need for and have the preparation and ability to engage in independent and life – long learning in the broadest context of technological change.

Program Structure
Proposed Scheme of Teaching & Evaluation for B.Com (Computer Applications)(Basic/Hons) with Commerce as Core subject

Semester I							
Sl. No.	Course Code	Title of the Course	Credits	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks
1	Lang.1.1	Language-I	3	3+1+0	60	40	100
2	Lang.1.2	Language-II	3	3+1+0	60	40	100
3	B.Com.1.1	Financial Accounting	4	3+0+2	60	40	100
4	B.Com.1.2	Information Technology	3	3+0+0	60	40	100
5	B.Com.1.3	Problem solving with C	3	3+0+0	60	40	100
6	B.Com.1.4	IT & C Lab	2	0+0+4	25	25	50
7	B.Com.1.5	Digital Fluency	2	1+0+2	30	20	50
8	B.com. 1.6	Yoga	1	0+0+2	-	25	25
9	B.com. 1.7	Health and Wellness	1	0+0+2	-	25	25
10	B.Com.1.8	Accounting for Everyone/Financial Literacy/Managerial Economics	3	3+0+0	60	40	100
Sub–Total (A)			25		415	335	750

Semester II							
Sl. No.	Course Code	Title of the Course	Credits	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks
11	Lang.2.1	Language-I	3	3+1+0	60	40	100
12	Lang.2.2	Language-II	3	3+1+0	60	40	100
13	B.Com.2.1	Advanced Financial Accounting	4	3+0+2	60	40	100
14	B.Com.2.2	Operating System	3	3+0+0	60	40	100
15	B.Com.2.3	Desktop Publishing	3	3+0+0	60	40	100
16	B.Com.2.4	Linux & DTP Lab	2	0+0+4	25	25	50
17	B.Com.2.5	Sports	1	0+0+2	-	25	25
18	B.Com.2.6	NCC/NSS/R&R(S&G)/Cultural	1	0+0+2	-	25	25
19	B.Com.2.7	Environmental Studies	2	2+0+0	30	20	50
20	B.Com.2.8	Financial Environment/Investing in Stock Markets/ Public Finance	3	3+0+0	60	40	100
Sub–Total(B)			25		415	335	750

EXIT OPTION WITH CERTIFICATION-with ability to solve well defined problems

Semester III							
Sl. No.	Course Code	Title of the Course	Credits	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks
21	Lang.1.1	Language-I	3	3+1+0	60	40	100
22	Lang.1.2	Language-II	3	3+1+0	60	40	100
23	B.Com.3.1	Corporate Accounting	4	3+0+2	60	40	100
24	B.Com.3.2	Java Programming	3	3+0+0	60	40	100
25	B.Com.3.3	DBMS	3	3+0+0	60	40	100
26	B.Com.3.4	Java & DBMS lab	2	0+0+4	25	25	50
27	B.Com.3.5	Artificial Intelligence	2	1+0+2	30	20	50
28	B.Com.3.6	Sports	1	0+0+2	-	25	25
29	B.Com.3.7	NCC/NSS/R&R(S&G)/Cultural	1	0+0+2	-	25	25
30	B.Com.3.8	Advertising Skills/Entrepreneurial Skills/Modern Bank Management	3	3+0+0	60	40	100
Sub-Total(C)			25		415	335	750

Semester IV							
Sl. No.	Course Code	Title of the Course	Credits	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks
31	Lang.1.1	Language-I	3	3+1+0	60	40	100
32	Lang.1.2	Language-II	3	3+1+0	60	40	100
33	B.Com.4.1	Advanced Corporate Accounting	4	3+0+2	60	40	100
34	B.Com.4.2	Web Application Development	3	3+0+0	60	40	100
35	B.Com.4.3	Computerized Accounting	3	3+0+0	60	40	100
36	B.Com.4.4	Web & Tally Lab	2	0+0+2	25	25	50
37	B.Com.4.5	Constitution of India	2	2+0+0	30	20	50
38	B.Com.4.6	Sports	1	0+0+2	-	25	25
39	B.Com.4.7	NCC/NSS/R&R(S&G)/Cultural	1	0+0+2	-	25	25
40	B.Com.4.8	Business Ethics/ Corporate Governance/ International Trade	3	3+0+0	60	40	100
Sub-Total(D)			25		415	335	750

EXIT OPTION WITH DIPLOMA –Ability to solve broadly defined problems.

Semester V							
Sl. No.	Course Code	Title of the Course	Credits	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks
41	B.Com.5.1	Financial Management	4	3+0+2	60	40	100
42	B.Com.5.2	VB.NET Programming	3	3+0+0	60	40	100
43	B.Com.5.3	Computer Graphics and Animations	3	3+0+0	60	40	100
44	B.Com.5.4	VB.Net & CG lab	2	0+0+4	50	50	100
45	B.Com.5.4 Elective	One Course from the Selected Elective Group	3	3+1+0	60	40	100
46	B.Com.5.6 Elective	GST- Law & Practice	3	2+0+2	60	40	100
47	B.Com.5.6 Elective	Internship	2	0+0+4	-	50	50
48	B.Com.5.7	Sports	1	0+0+2	-	25	25
49	B.Com.5.8	NCC/NSS/R&R(S&G)/ Cultural	1	0+0+2	-	25	25
50	B.Com.5.7	Cyber Security/Ethics & Self Awareness	2	1+0+2	30	20	50
Sub–Total(E)			24		380	370	750

Semester VI							
Sl. No.	Course Code	Title of the Course	Credits	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks
51	B.Com.6.1	Software Engineering	3	3+0+0	60	40	100
52	B.Com.6.2	Information securities & Cyber Laws	3	3+0+0	60	40	100
53	B.Com.6.3	Project	2	0+0+4	50	50	100
54	B.Com.6.3	Financial Derivatives	4	3+0+2	60	40	100
55	B.Com.6.4 Elective	One courses from the Selected Elective Group	3	3+1+0	60	40	100
56	B.Com.6.5	Basics of Spread Sheet Modeling OR Report on Study of Startups and Innovative Business Ideas	3	2+0+2	60	40	100
57	B.Com.6.6 Elective	Internship	2	0+0+4	-	50	50
58	B.Com.6.7	Sports	1	0+0+2	-	25	25
59	B.Com.6.8	NCC/NSS/R&R(S&G)/ cultural	1	0+0+2	-	25	25
60	B.Com.6.9	Professional Communication	2	2+0+0	30	20	50
Sub–Total(F)			24		380	370	750
Grand Total - Degree			148		2420	2080	4500

EXIT OPTION WITH BACHELOR DEGREE-Ability to solve complex problems that are ill-structured requiring multi-disciplinary skills to solve them.

Semester VII							
Sl. No.	Course Code	Title of the Course	Credits	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks
61	B.Com.7.1	International Business	4	4+1+0	60	40	100
62	B.Com.7.2	Advanced Business Statistics	4	4+1+0	60	40	100
63	B.Com.7.3	Advanced Financial Management	4	4+1+0	60	40	100
64	B.Com.7.4	One Course from the Selected Elective Group	3	3+1+0	60	40	100
65	B.Com.7.5	ERP Applications	3	2+0+2	60	40	100
66	B.Com.7.6	Research Methodology	3	2+0+2	60	40	100
Sub-Total(G)			21		360	240	600

Semester VIII							
Sl. No.	Course Code	Title of the Course	Credits	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks
67	B.Com.8.1	Financial Reporting-IND.AS	4	3+0+2	60	40	100
68	B.Com.8.2	Strategic Financial Management	4	4+0+0	60	40	100
69	B.Com.8.3	Business Analytics OR Data Analysis & Decision Sciences	4	3+0+2	60	40	100
70	B.Com.8.4	One Course from the Selected Elective Group	3	3+1+0	60	40	100
71	B.Com.8.5	Managing Digital Platforms	3	2+0+2	60	40	100
72	B.Com.8.6	Research Projects/Internship with Viva – voce	6	0+0+12	120	80	200
		OR	3*	3+1+0	60*	40*	100*
		Two Courses from the Selected Elective Group 8.5 (A) & 8.5 (B)	3*	3+1+0	60*	40*	100*
Sub–Total (H)			21/ 21*		420/ 420*	280/ 280*	700/ 700*
Grand Total - Honors			190		3200/ 3200*	2600/ 2600*	5800/ 5800*

* Students who do not opt Research Project / Internship shall take two elective courses such as 8.5 (A) & 8.5 (B).

Sub Total (H) and Grand Totals Honors vary accordingly.

BACHELOR DEGREE WITH HONORS – Experience of work place problem solving in the form of internship or research experience preparing for higher education or entrepreneurship experience.

Notes:

- **One Hour of Lecture is equal to 1 Credit.**
- **One Hour of Tutorial is equal to 1 Credit (Except Languages).**
- **Two Hours of Practical is equal to 1 Credit**

Acronyms Expanded

- **AECC : Ability Enhancement Compulsory Course**
- **DSC © : Discipline Specific Core (Course)**
- **SEC-SB/VB : Skill Enhancement Course-Skill Based/Value Based**
- **OEC : Open Elective Course**
- **DSE : Discipline Specific Elective**
- **SEE : Semester End Examination**
- **CIE : Continuous Internal Evaluation**
- **L+T+P : Lecture+Tutorial+Practical(s)**

Note: Practical Classes may be conducted in the Business Lab or in Computer Lab or in Class room depending on the requirement. One batch of students should not exceed half (i.e., 50 or less than 50 students) of the number of students in each class/section. 2 Hours of Practical Class is equal to 1 Hour of Teaching, however, whenever it is conducted for the entire class (i.e., more than 50 students) 2 Hours of Practical Class is equal to 2 Hours of Teaching.

ELECTIVE GROUPS AND COURSES:

Discipline Specific Electives - V Semester						
Sl. No	Accounting	Finance	Banking & Insurance	Marketing	Human Resources	IT
1	Ind. AS and IFRS	Financial Markets & Intermediaries	Indian Banking System	Retail Management	Human Resources Development	Financial Analytics

Discipline Specific Electives - VI Semester						
1	e-Business & Accounting	Investment Management	Banking Innovations & Technology	Customer Relationship Marketing	Cultural Diversity at Work Place	HR Analytics
2	Accounting for Services Sector	Global Financial System & Practices	Principles & Practice of Insurance	Digital Marketing	New Age Leadership Skills	Marketing Analytics
3	Accounting for Government and Local Bodies	Risk Management	Insurance Law and Regulations	Consumer Behavior & Marketing Research	Labour Laws & Practice	ICT Application in Business

Discipline Specific Electives - VII Semester						
1	Forensic Accounting	Corporate Structuring	Banking Products & Services	Logistics & Supply Chain Management	Strategic HRM	DBMS & SQL

Discipline Specific Electives - VIII Semester						
1	Innovations in Accounting	Corporate Valuation	e-Banking	E - Commerce	International HRM	Web & Social Intelligence
2	Accounting Information System	Analysis of Financial Statements	Insurance Planning & Management	Services Marketing	Employee Welfare & Social Security	Artificial Intelligence & Machine Learning in Business

NOTE: Student shall continue with the same elective group in V and VI semesters, however, he/she may change the elective group in VII semester, but shall continue in the same group in VIII semester.

Scheme of Assessment for Theory Examination

Duration: 3 Hrs

Max Marks: 60

Question Pattern		Marks
Part – A		
1. Answer any SIX sub-questions (6×2=12)		12
Sub-question	Unit	
a, b	1	
c, d	2	
e, f	3	
g, h	4	
Part – B		
(Answer any ONE full question from each unit – 12 marks each)		
(Combinations of sub-questions of 3 to 6 marks)		
Unit-1		12
2.		
3.		
Unit-2		12
4.		
5.		
Unit-3		12
6.		
7.		
Unit-4		12
8.		
9.		
Total		60

SEMESTER - 1

Name of the Program: Bachelor of Commerce (B.Com.- Computer Applications) Course Code: B.Com.1.2 Name of the Course: Information Technology.		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	42 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & Computer lab.		
Course Outcomes: On successful completion of the course, the Students will be able to		
a) Be able to apply knowledge of computing analyze a problem, and identify and define the computing requirements appropriate to its solution b) Be able to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs c) Be able to effectively integrate IT based solutions into the user environment		
Syllabus:		Hours
Unit- 1		12
Introduction to Computers: Introduction, Characteristics computers, Evolution computers, Generation of Computers, Classification of computers, the computer system, Application of computers. Number system: Introduction, Number system, Conversion between Decimal to Binary and vice versa Computer Architecture: Introduction, Central processing unit, main memory unit, interconnection of units, cache, communication between various units of a computer system. Primary memory: Introduction, memory representation, memory hierarchy, Random access memory: Types of RAM, Read-only memory, Types of ROM.		
Unit- 2		10
Secondary Storage: Introduction, classification, magnetic tape, magnetic disk, Optical disk Storage organization and the types (CD ,DVD , Blue-ray), Memory stick, Universal serial bus, Mass storage devices. Input devices: Introduction, Types of input devices - keyboard, mouse, joystick, Touch screen, scanner, Optical character recognition, Optical Mark Recognition, Magnetic ink character recognition, Bar code reader Output devices: Introduction, Types of output, Classification of output devices- printer, plotter, Monitor, Terminals		
Unit- 3		10
Computer Program: Introduction, algorithm, flowchart. Computer languages: Introduction, Evolution of programming languages, classification of programming languages, generation of programming languages, Features of a good programming language, selection of a programming language. Computer software: Introduction, software definition, relationship between software and hardware, software categories, terminology software Network basics: Computer networks, Network topologies, Network devices.		

Unit- 4	10
<p>Internet basics: Introduction, Evolution, Basic internet terms, getting connected to internet, internet Applications.</p> <p>Working with Application Software, Productivity software: Word processing software, Spreadsheet software (excel)</p> <p>Presentation software: Introduction, , PowerPoint environment, creating a new presentation, working with different views, using masters, adding animation, adding transition, running slides.</p>	
<p>Skill Development Activities:</p> <ol style="list-style-type: none"> 1. Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs. 2. Integrate IT based solutions into the user environment. 3. Working with database, RDBMS. 4. Any other activities, which are relevant to the course. 	
<p>Text Books:</p> <ol style="list-style-type: none"> 1. ITL Education Solutions Limited, Introduction to Information Technology, Pearson Education India; 2nd edition, 2012. 2. Peter Norton, Introduction to Computers, 7th Edition, Tata McGraw Hill Publication, 2017 (Unit - IV). 	

Name of the Program: Bachelor of Commerce (B.Com.- Computer Applications)

Course Code:B.Com.1.3

Name of the Course: Problem Solving with C

Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	42 Hrs

Pedagogy:

Classrooms lecture, Case studies, Group discussion, Seminar & computer lab.

Course Outcomes: On successful completion of the course, the Students will be able to

- a) To apply programming knowledge to create solutions to challenging problems, including specifying, designing, implementing and validating solutions for new problems.

Syllabus:	Hours
Unit - 1	12
Overview of C : History of C , Importance of C Program, Basic structure of a C-program, Execution of C Program. C Programming Basic Concepts: Character set, C token, Keywords and identifiers, Constants, Variables, data types, Declaration of variables, assigning values to variables, defining symbolic constants. Input and output with C: Formatted I/O functions - printf and scanf, control stings and escape sequences, output specifications with printf functions; Unformatted I/O functions to read and display single character and a string - getchar, putchar, gets and puts functions.	
Unit - 2	10
Operators & Expressions: Arithmetic operators; Relational operators; Logical operators; Assignment operators; Increment & Decrement operators; Bitwise operators; Conditional operator; Special operators; Operator Precedence and Associativity; Evaluation of arithmetic expressions; Type conversion. Control Structures: Decision Making and Branching -Decision making with if statement, simple if statement, the if else statement, nesting of if ... else statements, the else if ladder, the switch statement, the ?: operator, the go to statement. Decision making and looping - The while statement, the do statement, for statement, nested loops, exit, break, jumps in loops.	
Unit - 3	10
Derived data types in C: Arrays - declaration, initialization and access of one-dimensional and two dimensional arrays. Programs using one- and two-dimensional arrays, sorting and searching arrays. Handling of Strings: Declaring and initializing string variables, reading strings from terminal, writing strings to screen, Arithmetic operations on characters, String handling functions - strlen, strcmp, strcpy, strstr and strcat; Character handling functions - toascii, toupper, tolower, isalpha, isnumeric etc	
Unit - 4	10

User-defined functions: Need for user-defined functions, Declaring, defining and calling C functions, return values and their types, Categories of functions: With/without arguments, with/without return values. Nesting of functions.

Recursion: Definition, example programs.

Structures and unions: Structure definition, giving values to members, structure initialization, comparison of structure variables, arrays of structures, arrays within structures, Structure and functions, structures within structures. Unions

Skill Development Activities:

1. Functional, logic and also learn skills of problem solving and implementation of solution
2. Specifying, designing, implementing and validating solutions for new problems.
3. Any other activities, which are relevant to the course.

Reference Materials:

1. E. Balagurusamy, **Programming in ANSI C**, McGraw Hill Education India Private Limited; Seventh edition, (2017)
2. .M. T. Somashekara, D. S. Guru, K. S. Manjunatha, **Problem Solving with C**, PHI Learning Pvt. Ltd.; Second edition, 2018
3. Hanly, **Problem Solving and Program Design in C**, Pearson Education India;7 edition, 2013
4. Satish Jain, **Programming & Problem Solving Through C Language**, BPB Publications, 2012

Note: Latest edition of text books may be used.

Course Code: B.Com.1.4	Course Title: IT & C Lab
Course Credits:2	Hours/Week:04
Total Contact Hours:52	Formative Assessment Marks:25
Exam Marks:25	Exam Duration:3 hrs

PRACTICAL EXERCISES

PART-A

WORD

1. Prepare a word document that includes the following features inserting picture, bulleting and numbering, formatting (size, bold, underline, italic, superscript, subscript, color etc), border and shading, paragraph and line alignment.
2. Prepare a word document with a table to insert Roll No, name, class, and marks in three subjects. Find total and average.
3. Prepare a interview call letters for five candidates. The letter shall contain information about company, job profile and instructions about the interview. Using mail merge features.

POWER POINT

Prepare a Power point presentation with at least four slides (in each exercise) including picture, chart and other contents. Apply various transition and animations.

Exercise No. 1: About your college.

Exercise No. 2: Indian Banking System

PART-B

EXCEL

1. Create an EMPLOYEE data having employees name, designation and basic pay of 5 employees. Calculate DA, HRA, Gross Pay, Income tax, Net pay, Provident fund as per the following rule
 DA=10% of basic pay
 HRA= if basic pay is< 2500, 10% of basic pay else 25% of basic pay
 Gross=DA+HRA+Basic pay
 Provident fund=12% of Basic pay
 Professional tax=Rs 100 if gross is<10000 else 200
 Net Pay=Gross- Professional tax - Provident Fund
2. Prepare a STUDENT table. Insert following information such as RollNo, Name, Class and Marks in three subjects. The insert details of 5 students. Calculate total marks, percentage, result (pass or fail), and Grade (distinction, first class, second class, pass class) as per usual rules. Draw a column chart showing the RollNo versus Percentage scored.

3. Create a table containing Zones and percentage of commission to be given to a sales man

<u>Zone</u>	<u>Percentage</u>
South	10%
North	12.5%
East	14%
West	13%

Create another table in the same worksheet to store salesman names, zone names, places, names of items sold, rate per unit, quantity sold. Calculate total sales amount for each salesman. For the above table write the formula to compute the commission to be given.

- Show the records of various zones separately.
- Show the records of only East and West zones.
- Display the details of the items which are sold more than 50 no.s in South or North zones.

PART-C

C PROGRAMS

1. Write a program to read radius of a circle and find area and circumference of the circle.
2. Write a program to read three numbers and find the largest of three numbers using nested if statement.
3. Write a program to generate n Fibonacci numbers.
4. Write a program to read a multi-digit number find the sum of the digits, reverse the number and check it for palindrome
5. Program to read marks scored by n students and find the average of marks (Demonstration of single dimensional array).
6. Write a program to add two matrices (Demonstration of two dimensional arrays).
7. Write a program to read a string and to find the number of alphabets, digits, vowels, consonants, spaces and special characters.
8. Write a program to find the nC_r of a given number using factorial function.
9. Write a program using structure, read N students RollNo, Name and Marks in three subjects. Calculate Total, Percentage and Grade for N students.

Assessment Criteria		Marks
Activity-1 from Part A	Word/ PowerPoint	06
Activity-2 from Part B	Excel	07
Activity-3 from Part C	C Program	07
Practical Record		05
Total		25

SEMESTER - II

Name of the Program: Bachelor of Commerce (B.Com.- Computer Applications)

Course Code: B.Com. 2.2

Name of the Course: Operating System

Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	42 Hrs

Pedagogy:

Classrooms lecture, Case studies, Tutorial classes, Group discussion, Seminar & computer lab.

Course Outcomes: On successful completion of the course, the Students will be able to

- a) Analyze the structure of OS and basic architectural components involved in design
- b) Analyze the various resource management techniques
- c) Interpret the mechanisms adopted for file sharing
- d) conceptualize the components involved in designing a contemporary OS
- e) To be familiar with various types of operating systems

Syllabus:	Hours
UNIT I	12
Introduction: Operating system, Mainframe systems (Batch systems, Multiprogrammed systems, Time sharing systems) Operating System Structures: System Components, Operating System Services Process Management: Process concept, Process Scheduling, Operations on process, Cooperative Process Threads: Overview, Multithreading Models.	
UNIT II	10
CPU Scheduling: Basic concepts, Scheduling criteria, Scheduling algorithms. Process Synchronization: Background, the critical section Problems, Synchronization, Semaphore, Classic problems synchronization Deadlocks: System model, deadlock characterization, Methods for handling deadlocks, Deadlock prevention, Deadlock avoidance, Deadlock detection	
UNIT III	10
Memory Management: Background, Swapping, contiguous Memory allocations, Paging, segmentation Virtual Memory: Background, demand paging, process creation, page replacement, allocation of frames and thrashing. File Management: File concept, Access methods, Directory structure, Protection.	

UNIT IV	10
<p>Linux: An introduction, reason for its popularity, Linux file system, login and logout.</p> <p>Linux commands:</p> <p>Command format, Wild card characters</p> <p>Directory oriented commands – ls, mkdir, rmdir, cd, pwd</p> <p>Fileoriented commands – cat, cp,rm, mv, wc</p> <p>File Access Permissions , chmod command</p> <p>Communication oriented commands – write, mail, wall</p> <p>General purpose commands – date, who, who am i, man, cal, expr</p> <p>Pipe and Filters related commands - Redirection, pipe, sort, grep</p> <p>vi editor, Shell programming</p>	
<p>Skill Developments Activities:</p> <ol style="list-style-type: none"> 1. Study structure of OS and basic architectural components involved in designing operatingsystem of a company. 2. Visit any information technology company in your area and collect the informationabout File system Mounting, File sharing, Protection etc. 2. Any other activities, which are relevant to the course. 	
<p>Text Books:</p> <ol style="list-style-type: none"> 1. Silberschartz, Galvin and Gagne, Operating Systems Concepts, 8th Edition, JohnWiley & sons, Pvt. Ltd.2008 2. B Mohamed Ibrahim, Linux: A Practical Approach, Laxmi Publications; First edition, ,2016 <p>Reference Books:</p> <ol style="list-style-type: none"> 1. Pramod Chandra P. Bhatt, An Introduction to Operating Systems: Concepts and Practice(GNU/Linux), Prentice Hall India Learning Private Limited; Fourth edition, 2013 2. Richard Blum, Christine Bresnahan, Linux Command Line and Shell Scripting Bible, Thirddedition, Wiley, 2015. 3. Sobell, Practical Guide to Linux Commands Editor, Pearson Education India; 3 edition, 2013. <p>Note: Latest edition of text books may be used.</p>	

Name of the Program: Bachelor of Commerce (B.Com.- Computer Applications) Course Code: B.Com.2.3 Name of the Course: Desktop Publishing		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	4 Hrs	48 Hrs
Pedagogy: Classrooms lecture, Case studies, Group discussion, Seminar & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will be able to		
a) Gain basic understanding of the field of desktop publishing b) Acquire skills of preparing projects for publication which include layout and design c) Learn both the technical and aesthetic aspects of text, image manipulation and integration d) Learn using design as a means of communication, along with using tools to implement effective design strategies		
Syllabus:		Hours
UNIT - I		12
Introducing InDesign CS4: Getting started with InDesign CS4, Exploring the InDesign CS4 workspace, working with custom workspace, creating a new document, saving a document, closing the document and quitting the application. Working with Documents: Opening an existing document, Introducing master page, working with text, working with the type on a path tool, performing basic formatting tasks, performing advance formatting tasks, working with paragraph styles. Working with drawing tools and objects: Using shape tools, using pencil tool, using pen tool, transforming objects. Publishing the document : Creating a table of contents, creating and applying styles in TOC, importing styles, printing a document, exploring the types of print options, saving the document as a PDF file		
UNIT - II		10
Introduction to Corel DRAW graphics suit x4: New and enhanced features in Coreldraw graphics suit X4. Getting started with Coreldraw X4, Exploring the workspace of Coreldraw X4, drawing basic geometric figures, saving the drawing, opening an existing document, previewing with the drawing, working with page layout, closing the drawing and quitting Coreldraw. Working with lines: About lines in Coreldraw: Drawing a curve, drawing calligraphic lines, About outline tool: defining lines and outlines setting, creating a calligraphic outline, adding an arrowhead. Working with objects: Selecting and deselecting objects, deleting objects, sizing objects, rotating objects, combining objects, grouping in Coreldraw: grouping object, ungrouping objects. Selecting color for an object, filling objects. Working with text: Types of text: preparing a layout for using the text, creating artistic text, creating paragraph text, converting text from one type to another, changing the appearances of text, changing a font, changing the font size and color of the text, changing the alignment, applying effects to the text, wrapping paragraph text around objects, fitting text to an object using curve command.		

Working with bitmaps: About vector and bitmap image, change vector images into bitmap images, importing a bitmap into a drawing, cropping, resampling and resizing a bitmap.

UNIT - III

10

Getting Familiar with CS4: Introducing and launching Photoshop CS4, Exploring the new interface. Move tool, eyedropper tool, zoom tool, type tool. The layer palette, the channels palette, the color palette, the history palette, the brush palette, clone source palette, the actions palette. Opening an existing file or Photoshop document, creating a new document, saving files, reverting files, closing files.

Working with images and selections: Changing the resolution of an image, changing the size of a document Editing images: rotating an image, cropping an image, trim command. Working with selections tool: Marquee tool, working with selections. Lasso tools(3 types of tools only meaning) Magic wand tool(only meaning exclude different options)

Drawing painting and retouching tools: Setting the current foreground and background colors, Exploring color picker dialog box (only meaning exclude different components), using eyedropper tool. Using retouching tool, healing brush tool, patch tool, clone stamp tool, eraser tool, background eraser tool, magic eraser tool.

Master layers in Photoshop: Working with layers, creating a new layer, hiding and showing layers, deleting layers, Applying blend modes.

UNIT - IV

10

Getting Started with Flash Professional CS6: Starting Flash Professional CS6, Creating new flash File, Exploring the Flash Professional Cs6 workshop (The application Bar, Stage, panels, using tool panels, properties inspector). Transform Panel, swatches panel, color panel, scene panel. Understanding Timeline and layers, Motion Editor, Creating or choosing a new workspace, Saving Flash Files.

Working with Graphics: Bitmap and vector graphics, Merge Drawing mode, Object drawing mode, Primitive drawing mode, Creating graphics in flash professional CS6, Selecting Objects(Using selection tool, Subselection tool, lasso tool, selection using lasso tool, Lasso tool with polygon modifier, line tool), Drawing rectangles and ovals, Rectangles and shapes, ovals and circles, polygon and stars, pencil tool, pen tool. Draw straight line with the pen tool, creating a curved path using pen tool, Adding anchor points on paths, deleting corner and curve points, painting with the brush tool, spray brush tool, Drawing patterns with the deco tool. Paint bucket tool, In bottle tool, eyedropper tool, using eraser tool, Transforming objects, Distorting objects, rotating and skewing objects. Using gradient and bitmap fills(All)

Working with symbols and instances: Using symbols, creating symbols, duplicate symbols, create instances, editing instance properties, break apart a symbol instance, editing symbols

Timeline with timeline: Working with timeline, about layer, create a layer, rename layer, outline layer, viewing layer, guide layer. Creating animation, types of animation, Classification of animation in the timeline. Understanding motion tweens, Easing tween animation, orienting objects to the path, swapping targets, motion presets.

Skill Development Activities:

- a) Identify the tasks and use appropriate software and documentation to create specific projects in desktop publishing house in the local area.
- b) Create and present publication project using and describing the principles and skills necessary for its creation.
- c) Evaluate projects according to criteria defined in technology application standards for desktop publishing
- c) Any other activities, which are relevant to the course.

Text Books:

1. Ramesh Bangia, **Learning Desk Top Publishing (DTP)**, Khanna Book Publishing Co. (P)Ltd.; 1 edition, 2016.
2. Satish Jain, **BPB DTP Course**, BPB, 2014
3. Satish Jain, Adobe Flash Professional CS6 Training Guide Paperback, First edition, BPB Publications, 2016

Reference Books:

1. Kogent Learning Solutions Inc., **InDesign CS6 in Simple Steps**, Dreamtech Press, 2012
2. Kogent Learning Solutions Inc., **Photoshop CS6 in Simple Steps**, Dreamtech Press, 2012
3. Kogent Learning Solutions Inc., **"Flash CS6 in Simple Steps", First Edition, Dreamtech Press, 2013.**
4. Kogent Learning Solutions Inc., **CorelDRAW X7 in Simple Steps**, Dreamtech Press, 2014.

Note: Latest edition of text books may be used.

Course Code: B.Com.2.4	Course Title: Linux & DTP lab
Course Credits:2	Hours/Week:04
Total Contact Hours:52	Formative Assessment Marks:25
Exam Marks:25	Exam Duration:3 hrs

PRACTICAL EXERCISES

PART-A

Linux

1. Write a shell script to accept 'n' integers and count +ves, -ves and zeros separately. Also find the sum of +ves, and -ves.
2. Write a shell script to accept student name and marks in 3 subjects. Find the total marks and grade (depending on the total marks).
3. Write a shell script program to copy the content of one file1 to file2 and display the content of both the files.
4. Write a menu driven shell script for the following.
 - a) To list files and directories.
 - b) Renaming a file (check for the existence of the source file).
 - c) To display the current working directory
 - d) To list the users logged in
 - e) Exit

PART-B

Adobe InDesign

1. Design College day invitation by using InDesign tools.
2. Design a Newspaper cutting.

Adobe Coreldraw X4

1. Create any banner in Corel Draw using different tools.
2. Create Business card (visiting card) in CorelDraw using different tools.

PART-C

Adobe Photoshop

1. Create image in Photoshop painting tools or use existing images copy the portions of one image to another image. Use Toolbox options. Marquee Tool (Rectangular Marquee, elliptical Marquee), Move, Lasso Tool, Magic wand and Crop Tools.
2. Create images of artistic architectures using Photoshop painting tools (brush, pencil, color, paint bucket tools), Drawing tools and retouching tools.
3. Create image or use existing images to create a new layer, delete layer, show and hide layers and apply different blend modes.

Adobe Flash

1. Create a moving butterfly using simple motion tween animation in Adobe Flash.
2. Using Adobe Flash, design a building in background using different tools and simple motion tween animation for moving the bus.

Assessment Criteria		Marks
Activity-1 from Part A	Linux	06
Activity-2 from Part B	Adobe InDesign/ Adobe Coreldraw X4	07
Activity-3 from Part C	Adobe Photoshop/ Adobe Flash	07
Practical Record		05
Total		25

MANGALORE



UNIVERSITY

MANGALAGANGOTRI

Syllabus

Bachelor of Business Administration (BBA PROGRAMME)

As per NEP 2020 and as per resolutions of BOS on BBA held on 22-10-2021

**Department of Business Administration
(Faculty of Commerce)
Mangalore University, Mangalagangotri**

Bachelor of Business Administration

1. Programme Objectives:

The objectives of BBA Programme are:

- To impart knowledge of the fundamentals of Management theory and its application in problem solving.
- Select and apply appropriate tools for decision making required for solving complex managerial problems.
- To develop problem-solving skills through experiential learning and innovative pedagogy to ensure utilization of knowledge in professional careers.
- To develop sound knowledge of the entrepreneurial process and inculcate creativity and innovation among students.
- To produce industry ready graduates have highest regard for Personal & Institutional Integrity, Social Responsibility, Teamwork and Continuous Learning.
- To develop a positive attitude and life skills to become a multi faceted personality with a sense of environmental consciousness and ethical values.

2. Programme Outcomes (PO):

On successfully completing the program the student will be able to:

- Understand concepts and principles of management/business; identify the opportunities in the corporate environment and manage the challenges
- Demonstrate the knowledge of management science to solve complex corporate problems using limited resources. Display enhanced personality and soft skills
- Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- Demonstrate entrepreneurial competencies
- Exhibit managerial skills in the areas of marketing, finance, HR, etc.
- Identify business opportunities, design and implement innovations in workspace.
- Possess a sturdy foundation for higher education

3. Program Specific Outcomes (PSO):

On the successful completion of B.B.A., the students will be able to:

PSO1: Acquire Practical learning through summer internship, industrial visit and Business Plan etc.

PSO2: Demonstrate analytical and problem-solving skills through specialization in Finance, Human Recourse, and Marketing to solve the business issues.

PSO3: Understand and develop the new dimensions of knowledge through open electives to cater the need of the industry.

PSO4: Comprehend the core concepts, methods and practices in management.

PSO5: Venture into his/her own business or excel in executive roles in private /government sector.

PSO6: Demonstrate the ability to create business plans

PSO7: Develop an understanding of business that reflects the moral responsibility of business to all relevant stakeholders and the natural environment.

PSO8: Matured Individuals and responsible Citizens to the country

PSO9: Demonstrate Ability to work in Groups

4. Structure of BBA Syllabus:

First Semester BBA (Basic/Honors)							
Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
Lang. 1.1	Language - I	AECC	3+1+0	60	40	100	3
Lang. 1.2	Language - II	AECC	3+1+0	60	40	100	3
BBA. 1.1	Management Principles & Practice	DSCC	4+0+0	60	40	100	4
BBA. 1.2	Fundamentals of Business Accounting	DSCC	3+0+2	60	40	100	4
BBA. 1.3	Marketing Management	DSCC	4+0+0	60	40	100	4
BBA. 1.4	Digital Fluency	SEC	1+0+2	30	20	50	2
BBA. 1.5	Business Organization / Office Organization and Management	O E C	3+0+0	60	40	100	3
BBA. 1.6	Health and Wellness +	SEC-VB	0+0+2	-	25	25	1
	Physical Education & Yoga		0+0+2	-	25	25	1
	Total			390	310	700	25
Second Semester BBA (Basic/Honors)							
Course Code	Title of the Course	Category of Courses	Teaching Hours per Week (L + T + P)	SEE	CIE	Total Marks	Credits
Lang. 2.1	Language - I	AECC	3+1+0	60	40	100	3
Lang. 2.2	Language - II	AECC	3+1+0	60	40	100	3
BBA. 2.1	Corporate Accounting & Reporting	DSCC	3+0+2	60	40	100	4
BBA. 2.2	Human Resource Management	DSCC	4+0+0	60	40	100	4
BBA. 2.3	Business Environment	DSCC	4+0+0	60	40	100	4
BBA. 2.4	Environmental Studies	AECC	2+0+0	30	20	50	2
BBA. 2.5	People Management / Retail Management	O E C	3+0+0	60	40	100	3
BBA. 2.6	Physical Education-Sports	SEC-VB	0+0+2	-	25	25	1
BBA. 2.6	NCC/NSS/R&R(S&G) /Cultural	SEC- VB	0+0+2	-	25	25	1
	Total			390	310	700	25

EXIT OPTION WITH CERTIFICATION

Acronyms Expanded

➤ AECC	: Ability Enhancement Compulsory Course
➤ DSC C	: Discipline Specific Core (Course)
➤ SEC	: Skill Enhancement Course
➤ SB/VB	: Skill Based/Value Based
➤ OEC	: Open Elective Course
➤ DSE	: Discipline Specific Elective
➤ SEE	: Semester End Examination
➤ CIE	: Continuous Internal Evaluation
➤ L+T+P	: Lecture + Tutorial + Practical(s)

Note:

1. One Hour of Lecture is equal to 1 Credit.
2. One Hour of Tutorial is equal to 1 Credit (Except Languages).
3. Two Hours of Practical is equal to 1 Credit.

Practical Classes may be conducted in the Business Lab or in Computer Lab or in Class room depending on the requirement. One batch of students should not exceed half (i.e., 30 or less than 30 students) of the number of students in each class/section. 2 Hours of Practical Class is equal to 1 Hour of Teaching, however, whenever it is conducted for the entire class (i.e., more than 30 students) 2 Hours of Practical Class is equal to 2 Hours of Teaching

5. Pedagogy:

In addition to Conventional Time-Tested Lecture Method, the following approaches may be adopted as and when found appropriate and required:

1. **Case Based Learning:** Practical exposure can be given to students through Case based learning/critical learning tool. It enhances skills of students in analyzing the organizational problems and learning to arrive at critical decisions. They learn to apply concepts, principles and analytical skills to solve the real situation problems.
2. **Experiential/Live Projects/Grass Root Projects:** To bridge the gulf between the theory and practice, the students have to be encouraged to take up experiential projects/Live Projects/Grass Root Projects in companies/organizations/factories.
3. **Team Spirit and Building:** To internalize the core curriculum, working in teams and developing team spirit is essential. Interdisciplinary learning across outside the faculty would help students in equipping with these skills.
4. **ICT enabled teaching with global touch:** With the use of modern ICT technology students' learning in class room marches towards digitization. Getting connected to people through e-mode who are located all over the world and who bring real-time insights from their industries, their customers, happenings in their local place and environment.
5. **Leadership Building:** Apart from developing a strong background in the functional areas of Commerce and Business, the Model Curriculum focuses on developing New Age Leadership capabilities among the students.
6. **Emphasis on Indian Business Models:** Over the past two decades, several Indian Business domains and organizations have made remarkable contribution in developing innovative business models by occupying a space in the global business scenario. The academia can make use of such examples in the pedagogy.

6. Suggestive Guidelines for Continuous Internal Evaluation and Semester End Examination.

The CIE and SEE will carry 40% and 60% weightage each, to enable the course to be evaluated for a total of 100 marks, irrespective of its credits. The evaluation system of the course is comprehensive & continuous during the entire period of the Semester. For a course, the CIE and SEE evaluation will be on the following parameters:

Sl. No.	Parameters for the Evaluation	Marks
1. Continuous Internal Evaluation (CIE)		
A.	Continuous & Comprehensive Evaluation (CCE)	15 Marks
B.	Internal Assessment Tests (IAT)	25 Marks
Total of CIE (A+B)		40 Marks
2. Semester End Examination (SEE)		
C.	Semester End Examination (SEE)	60 Marks
Total of CIE and SEE (A + B + C)		100 Marks

a) **Continuous & Comprehensive Evaluation (CCE):** The CCE will carry a maximum of 15% weightage (15 marks) of total marks of a course. Before the start of the academic session in each semester, a faculty member should choose for his/her course, minimum of five of the following assessment methods with three (3.0) marks each:

- i. Individual Assignments
- ii. Seminars/Class Room Presentations/ Quizzes
- iii. Group Discussions /Class Discussion/ Group Assignments
- iv. Case studies/Case lets
- v. Participatory & Industry-Integrated Learning/ Field visits
- vi. Practical activities / Problem Solving Exercises
- vii. Participation in Seminars/ Academic Events/Symposia, etc.
- viii. Mini Projects/Capstone Projects
- ix. Any other academic activity

b) **Internal Assessment Tests (IAT):** The IAT will carry a maximum of 25% weightage (25 marks) of total marks of a course, under this component, two tests will have to be conducted in a semester for 25 marks each and the same is to be scaled down to 25 marks.

c) In case of 50 percentage of CIE weightage courses, faculty members can choose assessments methods accordingly for the required marks as mentioned above.

7. Suggestive Template for IAT

Internal Assessment Test
Bachelor of Business Administration (BBA)
Course Code: Name of the Course

Duration: 1 Hour

Total Marks: 25

SECTION-A

I. Answer any two of the following questions. (Questions are asked on Remembering)

(2 x 2= 4)

- 1.
- 2.
- 3.

SECTION- B

II. Answer any two of the following questions. (Questions are asked on Understanding and Applying)

(2 x5= 10)

- 4.
- 5.
- 6.

SECTION- C

III. Answer any one of the following questions. (Questions are asked on analyzing and evaluating)

(1x 11=11)

- 7.
- 8.

Note: Internal Test question papers format is prepared based on Revised Bloom's Taxonomy.
(https://www.apu.edu/live_data/files/333/blooms_taxonomy_action_verbs.pdf)

8. Semester End Examination (SEE):

The Semester End Examination for all the courses for which students who get registered during the semester shall be conducted. SEE of the course shall be conducted after fulfilling the minimum attendance requirement as per the Universities/Institutes' norms.

Suggestive Template for SEE

Semester End Examination
Bachelor of Business Administration (BBA)
Course Code: Name of the Course

Duration: 3 Hours

Total Marks: 60

SECTION-A

Answer any five of the following questions. Each question carries 2 marks (5 x 2= 10)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

SECTION- B

Answer any four of the following questions. Each question carries 5 marks (4 x5=20)

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.

SECTION- C

Answer any three of the following questions. Each question carries 10 marks
(3x 10=30)

- 15.
- 16.
- 17.
- 18.
- 19.

BBA FIRST SEMESTER

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 1.1 Name of the Course: Management Principles & Practice		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	56 Hrs
Pedagogy: Classrooms lecture, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will demonstrate <ul style="list-style-type: none"> • The ability to understand concepts of business management, principles and function of management. • The ability to explain the process of planning and decision making. • The ability to create organization structures based on authority, task and responsibilities. • The ability to explain the principles of direction, importance of communication, barrier of communication, motivation theories and leadership styles. • The ability to understand the requirement of good control system and control techniques. 		
Syllabus:		Hours
Module No. 1: INTRODUCTION TO MANAGEMENT		10
Introduction –Meaning, Evolution of management thought, Pre-Scientific Management Era, Classical Management Era, Neo-Classical Management Era, Modern Management Era; Nature and Characteristics of Management - Scope and Functional areas of Management; Management as a Science, Art or Profession; Management and Administration; Principles of Management.		
Module No. 2: PLANNING AND DECISION MAKING		08
Nature, Importance and Purpose of Planning - Planning Process; Objectives; Types of plans (Meaning only); Decision making- Importance and steps; MBO and MBE (Meaning only)		
Module No. 3: ORGANIZING AND STAFFING		12
Nature and purpose of Organization; Principles of Organizing; Delegation of Authority; Types of Organization - Departmentation, Committees; Centralization vs Decentralization of Authority and Responsibility, Span of Control; Nature and importance of Staffing		
Module No. 4: DIRECTING AND COMMUNICATING		12
Meaning and Nature of Direction, Principles of Direction; Communication - Meaning and Importance, Communication Process, Barriers to Communication, Steps to overcome Communication Barriers, Types of Communication; Motivation theories – Maslow’s Need Hierarchy Theory, Herzberg’s Two Factor Theory, Mc. Gregor’s X and Y theory. Leadership – Meaning, Formal and Informal Leadership, Characteristics of Leadership; Leadership Styles – Autocratic Style, Democratic Style, Participative Style, Laissez Faire Leadership Styles, Transition Leadership, Charismatic Leadership Style.		
Module No. 5: COORDINATING AND CONTROLLING		10
Coordination–Meaning, Importance and Principles. Controlling–Meaning and steps in controlling, Essentials of Effective Control system, Techniques of Control (in brief).		
Module No. 6: BUSINESS SOCIAL RESPONSIBILITY AND MANAGERIAL ETHICS		04

Business Social Responsibility - Meaning, Arguments for and against Business Social Responsibility; Green management - Meaning, Green Management Actions; Managerial Ethics – Meaning - Importance of Ethics in Business, Factors that determine Ethical or Unethical behavior.

Skill Developments Activities:

1. Two cases on the above syllabus should be analyzed by the teacher in the classroom and the same needs to be recorded by the student in the Skill Development Book.
2. Draw different types of Organization structure.
3. Draw Control charts.

Text Books:

1. Stephen P. Robbins, Management, Pearson
2. Koontz and O'Donnell, Management, McGraw Hill.
3. L M Prasad, Principles of management, Sultan Chand and Sons
4. V.S.P Rao /Bajaj, Management process and organization, Excel Books.GH25
5. Appanniah and Reddy, Management, HPH.
6. T. Ramaswamy: Principles of Management, HPH.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 1.2 Name of the Course: Fundamentals of Business Accounting		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	56 Hrs
Pedagogy: Classrooms lecture, tutorials, and problem solving.		
Course Outcomes: On successful completion of the course, the Students will demonstrate <ul style="list-style-type: none"> • Understand the framework of accounting as well accounting standards. • The Ability to pass journal entries and prepare ledger accounts • The Ability to prepare subsidiaries books • The Ability to prepare trial balance and final accounts of proprietary concern. • Construct final accounts through application of tally. 		
Syllabus:		Hours
Module No. 1: INTRODUCTION TO FINANCIAL ACCOUNTING		08
Introduction – Meaning and Definition – Objectives of Accounting – Functions of Accounting – Users of Accounting Information – Limitations of Accounting – Accounting Cycle - Accounting Principles – Accounting Concepts and Accounting Conventions. Accounting Standards – objectives-significance of accounting standards. List of Indian Accounting Standards.		
Module No. 2: ACCOUNTING PROCESS		12
Meaning of Double entry system - Process of Accounting - Kinds of Accounts - Rules - Transaction Analysis - Journal - Ledger - Balancing of Accounts - Trial Balance - Problems on Journal, Ledger Posting and Preparation of Trial Balance.		
Module No. 3: SUBSIDIARY BOOKS		14
Meaning - Significance - Types of Subsidiary Books -Preparation of Purchases Book, Sales Book, Purchase Returns Book, Sales Return Book, Bills Receivable Book, Bills Payable Book. Types of Cash Book- Simple Cash Book , Double Column Cash Book , Three Column Cash Book and Petty Cash Book(Problems only on Three Column Cash Book and Petty Cash Book), Bank Reconciliation Statement - Preparation of Bank Reconciliation Statement (Problems on BRS)		
Module No. 4: FINAL ACCOUNTS OF PROPRIETARY CONCERN		10
Preparation of Statement of Profit and Loss and Balance Sheet of a proprietary concern with special adjustments like depreciation, outstanding and prepaid expenses, outstanding and received in advance of incomes, provision for doubtful debts, drawings and interest on capital.		
Module No. 5: ACCOUNTING SOFTWARE		12

Introduction-meaning of accounting software, types accounting software-accounting software Tally-Meaning of Tally software – Features - Advantages, Creating a New Company, Basic Currency information, other information, Company features and Inventory features. Configuring Tally - General Configuration, Numerical symbols, accounts/inventory info - master configuration -voucher entry configuration. Working in Tally: Groups, Ledgers, writing voucher, different types of voucher, voucher entry Problem on Voucher entry - Generating Basic Reports in Tally-Trail Balance, Accounts books, Cash Book, Bank Books, Ledger Accounts, Group Summary, Sales Register and Purchase Register, Journal Register, Statement of Accounts, and Balance Sheet.

Skill Developments Activities:

1. List out the accounting concepts and conventions.
2. Prepare a Bank Reconciliation Statement with imaginary figures
3. Collect the financial statement of a proprietary concern and record it.
4. Prepare a financial statement of an imaginary company using tally software.

Text Books:

1. Hanif and Mukherjee, Financial Accounting, Mc Graw Hill Publishers
2. Arulanandam & Raman; Advanced Accountancy, Himalaya Publishing House
3. S.Anil Kumar,V.Rajesh Kumar and B.Mariyappa–Fundamentals of Accounting, Himalaya Publishing House.
4. Dr. S.N. Maheswari, Financial Accounting, Vikas Publication
5. S P Jain and K. L. Narang, Financial Accounting, Kalyani Publication
6. Radhaswamy and R.L. Gupta, Advanced Accounting , Sultan Chand
7. M.C. Shukla and Goyel, Advanced Accounting, S Chand.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 1.3 Name of the Course: Marketing Management		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	56 Hrs
Pedagogy: Classrooms lecture, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will demonstrate <ul style="list-style-type: none"> • Understand the concepts and functions of marketing. • Analyse marketing environment impacting the business. • Segment the market and understand the consumer behaviour • Describe the 4 Ps of marketing and also strategize marketing mix • Describe 7 Ps of service marketing mix. 		
Syllabus:		Hours
Module No. 1: INTRODUCTION TO MARKETING		10
Meaning and Definition, Concepts of Marketing, Approaches to Marketing, Functions of Marketing. Recent trends in Marketing-E- business, Tele-marketing, M-Business, Green Marketing, Relationship Marketing, Concept Marketing, Digital Marketing, social media marketing and E-tailing (Meaning only).		
Module No. 2: MARKETING ENVIRONMENT		10
Micro Environment – The company, suppliers, marketing intermediaries competitors, public and customers; Macro Environment- Demographic, Economic, Natural, Technological, Political, Legal, Socio-Cultural Environment.		
Module No. 3: MARKET SEGMENTATION AND CONSUMER BEHAVIOUR		10
Meaning and Definition, Bases of Market Segmentation, Requisites of Sound Market Segmentation; Consumer Behavior-Factors influencing Consumer Behavior; Buying Decision Process.		
Module No. 4: MARKETING MIX		20
Meaning, Elements of Marketing Mix (Four P's) – Product, Price, Place, Promotion. Product-Product Mix, Product Line, Product Lifecycle, New Product Development, Reasons for Failure of New Product, Branding, Packing and Packaging, Labeling, Pricing – Objectives, Factors influencing Pricing Policy, Methods of Pricing; Physical Distribution–Meaning, Factors affecting Channel Selection, Types of Marketing Channels. Promotion – Meaning and Significance of Promotion, Personal Selling and Advertising (Meaning Only)		
Module No. 5: SERVICES MARKETING		06
Meaning and definition of services, difference between goods and services, features of services, seven P's of services marketing (concepts only).		

Skill Developments Activities:

1. Two cases on the above syllabus should be analyzed and recorded in the skill development
2. Design a logo and tagline for a product of your choice
3. Develop an advertisement copy for a product.
4. Prepare a chart for distribution network for different products.

Text Books:

1. Philip Kotler, Marketing Management, Prentice Hall.
2. Lovelock Christopher, Services Marketing: People, Technology, Strategy, PHI
3. William J. Stanton, Michael J. Etzel, Bruce J Walker, Fundamentals of Marketing, McGraw Hill Education.
4. Bose Biplab, Marketing Management, Himalaya Publishers.
5. J.C. Gandhi, Marketing Management, Tata McGraw Hill.
6. Ramesh and Jayanti Prasad: Marketing Management, I.K. International
7. Sontakki, Marketing Management, Kalyani Publishers.
8. P N Reddy and Appanniah, Marketing Management

Note: Latest edition of text books may be used.

BBA 1.4 – Digital Fluency (SEC)			
Course Credits	02	Total Contact Hours	30
Internal Assessment Marks : 20		Semester End Examination Marks : 30	

Common Syllabus for all UG Programmes

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 1.5 (OEC) Name of the Course: Business Organization		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	45 Hrs
Pedagogy: Classrooms lecture, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will demonstrate: <ul style="list-style-type: none"> • An understanding of the nature, objectives and social responsibilities of business • An ability to describe the different forms of organisations • An understanding of the basic concepts of management • An understanding of functions of management. • An understanding of different types of business combinations 		
Syllabus:		Hours
Module No. 1: INTRODUCTION TO BUSINESS		10
Business: Meaning, Nature, Scope and Social responsibility of Business, Objectives, Essentials of successful business; Functional areas of business. Concept of Business Organisation.		
Module No. 2: FORMS OF BUSINESS ORGANIZATION:		12
Sole proprietorship: Definitions, Features, Merits and Demerits. Partnership: Definitions, partnership deed, Features, Merits and Demerits. Joint Stock Company: Definitions, Features, Merits and Demerits. Co- operatives: Definitions, Features, Merits and Demerits.		
Module No. 3: PUBLIC ENTERPRISES		08
Departmental Undertaking: Definitions, Features, Merits and Demerits. Public Corporations: Definitions, Features, Merits and Demerits. Government Companies: Definitions, Features, Merits and Demerits		
Module No. 4: BUSINESS COMBINATIONS		08
Meaning Definitions, Causes, Types, Forms, merits and demerits of Business Combinations, Recent Trends in Business Combinations.		
Module No 5: MANAGEMENT OF ORGANIZATIONS		07
Management- Meaning, Definitions, Difference between Management and Administration, Levels of Management, Objectives of Management, Functions of management- planning, organizing, staffing, directing, coordinating, controlling, Principles of Management.		
Skill Developments Activities: <ol style="list-style-type: none"> 1. Preparation of partnership deed 2. Draw a business tree 3. Make a list of 10 PSUs 4. Prepare a list of different types of business combinations 		

Text Books:

1. C B. Guptha - Business Organisation and Management, Sultan Chand & Sons.
2. Dr. S. C. Saxena - Business Administration & Management, Sahitya Bhawan.
3. Y K. Bhushan. Fundamentals of Business Organisation and Management, Sultan Chand & Sons.
4. R K. Sharma, Business – Organisations and Management, Kalyani Publishers.
5. I.M. Sahai, Padmakar Asthana - Business Organisation & Administration, Sahitya Bhawan Publications, Agra

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 1.5 Name of the Course: Office Organization and Management (OEC)		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	45 Hrs
Pedagogy: Classrooms lecture, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the Students will demonstrate a) An understanding of basic knowledge of office organisation and management b) Demonstrate skills in effective office organisation c) Ability to maintain office records d) Ability to maintain digital record. e) Understanding of different types of organisation structures and responsibilities as future office managers.		
Syllabus:		Hours
Module No. 1: FUNDAMENTALS OF OFFICE MANAGEMENT		08
Introduction: Meaning, importance and functions of modern office Modern Office Organisation: Meaning; Steps in office organisation; Principles of Office organisation, Organisation structure types, Nature of office services: Types of services in a modern office, decentralisation and centralisation of office services, Departmentation of Office Office management: Meaning, Elements and major processes of Office management Office Manager: Functions and qualifications of Office manager.		
Module No. 2: ADMINISTRATIVE ARRANGEMENT AND FACILITIES		07
Office Accommodation and its Importance: Location of Office, Choice of Location: Urban vs Suburban, Factors to be Considered in Selecting the Site, Securing Office Space, Office Lay-out: Objectives of Office Lay-out, Principles of Office Lay-out, Steps in Lay-out Planning, Advantages of a Good Lay-out. Types of offices: Open Office and Private Office- advantages and disadvantages.		
Module No. 3: OFFICE ENVIRONMENT		10
Meaning and Components of Office Environment: Interior Decoration, Colour Conditioning, Floor Coverings, Furnishings, Furniture and Fixtures: Types of Furniture, Choice between Wooden and Steel Furniture, Principles Governing Selection of Furniture Lighting and Ventilation, Noise: Internal Noise, External Noise Cleanliness, Sanitation and Health Safety and Security		
Module No. 4: RECORDS MANAGEMENT		10

<p>Introduction to records: Importance of Records, types of office records, Records Management: Meaning, Principles of Record Keeping, Functions of 'Records Management</p> <p>Filing: Elements of Filing and Filing Functions, Objectives and Importance of Filing, Advantages of Filing, Essentials of a Good Filing System, Classification of Files, Filing Procedure or Routine.</p>	
<p>Filing Methods: Horizontal Filing -meaning, types and advantages, Vertical Filing- meaning, equipment used, advantage and disadvantages.</p> <p>Centralisation and Decentralisation of Filing- Centralised filing and Decentralised Filing Office manual: contents, Importance, types of office manuals.</p> <p>Indexing: Meaning, importance, advantages and essentials of good indexing, type of index Retention and disposal of files: Meaning and benefits of record retention, need for disposal of files, life-cycle stages of files.</p>	
Module No. 5: OFFICE MECHANISATION AND DATA PROCESSING	10
<p>Meaning, Importance and Objectives of Office Mechanisation, Advantages and disadvantages of Office Mechanisation, Factors Determining Office Mechanisation</p> <p>Kinds of Office Machines: Duplicating Machines and Photocopying Machines, Accounting, tabulating and computing machines, communication machines</p> <p>Introduction to Data and Information: Distinction between Data and Information, Importance of Data and Information, Classification of Data, Classification of Information, Data Lifecycle (chart), Data Collection Methods- Primary and secondary data collection methods</p> <p>Data presentation Methods of Presentation of Data</p> <p>Data processing using computers: Components of Computers, Input and Output Devices, Software used in Computers (names and uses only), Computer Applications in Office' Management, Advantages and Limitations of Computerisation</p>	
<p>Skill Developments Activities:</p> <ol style="list-style-type: none"> 1. Visit an office and enlist the different types of machines used in the office 2. Identify the different types of stationery used in offices today 3. Draw a data life cycle chart 4. Draw charts indicating different types of office layouts. 	
<p>Text Books:</p> <ol style="list-style-type: none"> 1. S.P Arora, Office Organisation and Management, Vikas Publishing House Pvt Ltd 2. M.E Thakuram Rao, Office organisation and Management, Atlantic 3. Judith Read, Mary Lea Ginn, Record Management, 10th Edition, Cengage Learning. <p>Note: Latest edition of text books may be used.</p>	

BBA 1.6 – Physical Education- Yoga/Health and Wellness (SEC-VB)	
Course Credits	02
Total Contact Hours	30
Internal Assessment Marks: 25+25	Semester End Examination Marks : Nil

Common Syllabus for all UG Programmes

BBA SECOND SEMESTER

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 2.1 Name of the Course: Financial Accounting and Reporting		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	56 Hrs
Pedagogy: Classrooms lecture, tutorials, and Problem Solving.		
Course Outcomes: On successful completion of the course, the Students will demonstrate <ul style="list-style-type: none"> • The ability to prepare final accounts of partnership firms • The ability to understand the process of public issue of shares and accounting for the same • The ability to prepare final accounts of joint stock companies. • The ability to prepare and evaluate vertical and horizontal analysis of financial statements • The ability to understand company's annual reports. 		
Syllabus:		Hours
Module No. 1: FINAL ACCOUNTS OF PARTNERSHIP FIRM		10
Meaning of Partnership Firm, Partnership deed-clauses in partnership deed, Preparation of Final accounts of partnership firm-Trading and Profit and Loss Account, Profit and Loss Appropriation Account, Partners capital account and Balance sheet. Goodwill- Nature, Factors influencing goodwill and methods of valuation of goodwill (Average and super profit methods)		
Module No. 2: ISSUE OF SHARES		08
Meaning of Share, Types of Shares – Preference shares and Equity shares – Issue of Shares at par, at Premium, at Discount: Pro-Rata Allotment; Journal Entries relating to issue of shares; Preparation of respective ledger accounts; Preparation of Balance Sheet in the Vertical form (Practical Problems).		
Module No. 3: FINAL ACCOUNTS OF JOINT STOCK COMPANIES		12
Statutory Provisions regarding preparation of Company Final Accounts – Treatment of Special Items, Managerial Remuneration, Tax deducted at source, Advance payment of Tax, Provision for Tax, Depreciation, Interest on debentures, Dividends, Rules regarding payment of dividends, Transfer to Reserves, Preparation of Profit and Loss Account and Balance Sheet (Vertical Form Schedule -III) (Practical Problems).		
Module No. 4: FINANCIAL STATEMENTS ANALYSIS		12
Comparative Statements - Comparative Income Statement, Comparative Balance Sheet; Common size Statements – Common Size Income Statement, Common Size Balance Sheet – Trend Percentages. (Analysis and Interpretation)		
Module No. 5: CORPORATE FINANCIAL REPORTING PRACTICES		10

Corporate Financial Reporting - meaning, types, characteristics of Corporate financial report, users of corporate financial report; Components corporate financial report– general corporate information, financial highlights, letter to the shareholders from the CEO, management's discussion and analysis; Financial Statements-balance sheet, income statement, cash flow statement, and notes to the financial statements; Auditor's report; Significant Accounting Policies; Corporate Governance Report; Corporate Social Responsibility Report (Discuss only Role and Significance of above components of corporate financial report).

Skill Developments Activities:

1. Collect financial statement of a company for five years and analyse the same using trend analysis.
2. Refer annual reports of two companies and list out the components.
3. Draft a partnership deed as per Partnership Act.
4. List out the accounting policies in annual report of the company

Text Books:

1. Maheshwari S.N & Maheshwari S.K., Advanced Accountancy, Vikas Publication House Pvt. Ltd.
2. Jain and Narang, Advanced Accountancy, Kalyani Publications.
3. R. L. Gupta, Principles and Practice of Accountancy, Sultan Chand & Sons.
4. D. Chandra Bose, Advanced Accounting II, PHI Learning Pvt. Ltd.
5. M.C Shukla, T.S Grewal and S.C Gupta, Advanced Accounts II, Chand & Company.
6. Basu & Das, Advanced Accountancy, Vikas Publication House Pvt Ltd.
7. Arulanandam M.A. and Raman K.S., Advanced Accountancy, Himalaya Publishing House.

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 2.2 Name of the Course: Human Resource Management		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	56 Hrs
Pedagogy: Classroom's lecture, tutorials, Group discussion, Seminar, Case studies & field work etc.,		
Course Outcomes: On successful completion of the course, the students will be able to demonstrate <ul style="list-style-type: none"> • Ability to describe the role and responsibility of Human resources management functions on business • Ability to describe HRP, Recruitment and Selection process • Ability to describe to induction, training, and compensation aspects. • Ability to explain performance appraisal and its process. • Ability to demonstrate Employee Engagement and Psychological Contract. 		
Syllabus:		Hours
Module No. 1: INTRODUCTION TO HUMAN RESOURCE MANAGEMENT		10
Meaning and Definition of HRM – Features Objectives, Differences between Human Resource Management and Personnel Management, Importance, Functions and Process of HRM, Role of HR Manager, Trends influencing HR practices		
Module No. 2: HUMAN RESOURCE PLANNING, RECRUITMENT & SELECTION		14
Human Resource Planning: Meaning and Importance of Human Resource Planning, Process of HRP HR Demand Forecasting- Meaning and Techniques (Meanings Only) and HR supply forecasting. Succession Planning – Meaning and Features Job Analysis: Meaning and Uses of Job Analysis, Process of Job Analysis – Job Description, Job Specification, Job Enlargement, Job Rotation, Job Enrichment (Meanings Only) Recruitment – Meaning, Methods of Recruitment, Factors affecting Recruitment, Sources of Recruitment Selection – Meaning, Steps in Selection Process, Psychometric tests for Selection, Barriers to effective Selection, Making Selection effective; Placement, Gamification – Meaning and Features.		
Module No. 3: INDUCTION, TRAINING AND COMPENSATION		10
Induction: Meaning, Objectives and Purpose of Induction, Problems faced during Induction, Induction Program Planning. Training: Need for training, Benefits of training, Assessment of Training Needs and Methods of Training and Development; Kirkpatrick Model; Career Development. Compensation: Direct and Indirect forms of Compensation (Meaning Only), Compensation Structure.		
Module No. 4: PERFORMANCE APPRAISAL, PROMOTION & TRANSFERS		14

Performance appraisal: Meaning and Definition, Objectives and Methods of Performance Appraisal – Uses and Limitations of Performance Appraisal, Process of Performance Appraisal
 Promotion: Meaning and Definition of Promotion, Purpose of Promotion, Basis of Promotion.
 Transfer: Meaning of Transfer, Reasons for Transfer, Types of Transfer, Right Sizing of Work Force, Need for Right Sizing

Module No. 5: EMPLOYEE ENGAGEMENT AND PSYCHOLOGICAL CONTRACT

08

Employee Engagement (EE): Meaning and Types of EE, Drivers of Engagement - Measurement of EE, Benefits of EE.
 Psychological contract: Meaning and features.

Skill Developments Activities:

1. Preparation of Job Descriptions and Job specifications for a Job profile
2. Choose any MNC and present your observations on training program
3. Develop a format for performance appraisal of an employee.
4. Discussion of any two Employee Engagement models.
5. Analysis of components of pay structure based on the CTC sent by the Corporate to the institute for the various jobs of different sectors.

Textbooks:

1. Aswathappa, Human Resource Management, McGraw Hill
2. Edwin Flippo, Personnel Management, McGraw Hill
3. C.B.Mamoria, Personnel Management, HPH
4. Subba Rao, Personnel and Human Resources Management, HPH
5. Reddy & Appanniah, Human Resource Management, HPH
6. Madhurimalal, Human Resource Management, HPH
7. S.Sadri & Others: Geometry of HR, HPH
8. Rajkumar: Human Resource Management I.K. Intl
9. Michael Porter, HRM and Human Relations, Juta & Co.Ltd.
10. K. Venkataramana, Human Resource Management, SHBP Chartered Accountants of India, New Delhi.

Note: Latest edition of textbooks may be used.

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 2.3 Name of the Course: BUSINESS ENVIRONMENT		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
4 Credits	4 Hrs	56 Hrs
Pedagogy: Classrooms lecture, tutorials, Group discussion, Seminar, Case studies.		
Course Outcomes: On successful completion Student will demonstrate <ul style="list-style-type: none"> • An Understanding of components of business environment. • Ability to analyse the environmental factors influencing business organisation. • Ability to demonstrate Competitive structure analysis for select industry. • Ability to explain the impact of fiscal policy and monetary policy on business. • Ability to analyse the impact of economic environmental factors on business. 		
Syllabus:		Hours
Module No. 1: INTRODUCTION BUSINESS ENVIRONMENT		12
Meaning of business, scope and objectives Business, business environment, Micro and Macro-environment of business (social, cultural, economic, political, legal technological and natural) Impact of these factors on decision making in business, Environmental analysis, and Competitive structure analysis of Business.		
Module No. 2: GOVERNMENT AND LEGAL ENVIRONMENT		16
Government Functions of the State, Economic role of government, State intervention in business- reasons for and types of state intervention in business. Impact of Monetary policy, Fiscal policy, Exim policy and industrial policy on business. Legal environment - Various laws affecting Indian businesses.		
Module No. 3: ECONOMIC ENVIRONMENT AND GLOBAL ENVIRONMENT		13
An overview of economic environment, nature of the economy, structure of economy, factors affecting economic environment. Globalisation of business; meaning and dimensions, stages, essential conditions of globalisation, foreign market entry strategies, merits and demerits of globalisation of business, Impact of Globalisation on Indian businesses, Forms of globalisation of businesses- MNCs, TNCs etc.		
Module No. 4: TECHNOLOGICAL ENVIRONMENT		10
Meaning and features; types of innovation, Impact of Technological changes on business, Technology and Society, Technological Acquisition modes, IT revolution and business, Management of Technology.		
Module No. 5: NATURAL ENVIRONMENT		05
Meaning and nature of physical environment. Impact of Natural environment on business.		

Skill Developments Activities:

- a) List out key features of recent Monetary policy published by RBI impacting businesses.
- b) Give your observation as to how technology has helped society.
- c) Draft Five Forces Model for Imaginary business.
- d) Identify the benefits of Digital transformation in India.

Text Books:

1. Dr. K Ashwatappa: Essentials Of Business Environment
2. Sundaram & Black: The International Business Environment; Prentice Hall
3. Chidambaram: Business Environment; Vikas Publishing
4. Upadhyay, S: Business Environment, Asia Books
5. Chopra, BK: Business Environment in India, Everest Publishing
6. Suresh Bedi: Business Environment, Excel Books
7. Economic Environment of Business by M. Ashikary.
8. Business Environment by Francis Cherrinulam

Note: Latest edition of text books may be used.

BBA 2.4 – Environment Studies (AECC)			
Course Credits	02	Total Contact Hours	30
Internal Assessment Marks : 20		Semester End Examination Marks : 30	

Common Syllabus for all UG Programmes

Name of the Program: Bachelor Business Administration (BBA) Course Code: BBA.2.5 (OEC) Name of the Course: People Management		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	45 Hrs
Pedagogy: Classroom's lecture, tutorials, Group discussion, Seminar, Case studies.		
Course outcome: On successful completion of the course, student will demonstrate: <ol style="list-style-type: none"> 1. Ability to examine the difference between People Management with Human resource Management 2. Ability to explain the need for and importance of People Management. 3. Ability to explain role of manager in different stages of performance management process 4. Ability to list modern methods of performance and task assessment. 5. Ability to analyse the factors influencing the work life balance of an working individual. 		
Syllabus:		Hours
Module No. 1: INTRODUCTION TO PEOPLE MANAGEMENT		06
Diversity in organisation: age, gender, ethnicity, race, and ability. People Management: Meaning, Features, Significance of people management, Difference between People Management and Human Resource Management, impact of individual and organizational factors on people management.		
Module No. 2: GETTING WORK DONE AND ASSESSMENT AND EVALUATION		12
Getting work done: Challenges of getting work done, significance of prioritization and assigning work to team members. Performance Management: meaning, role of a manager in the different stages of the performance management process, Types of Performance assessment, Assessment and Evaluation Process of evaluation of tasks in the organisation. Modern tools of assessment and evaluation of tasks and performance.		
Module No. 3: BUILDING PEER NETWORKS AND ESSENTIALS OF COMMUNICATION		12
Building Peer Networks: Understanding the importance of peer networks in an organization; being able to influence those on whom you have no authority; challenges Peer networking and different types of people networking in the workplace. Essentials of Communication: Concept of the communication process with reflection on various barriers to effective communication and ways to overcome, Types of Communication and Channels of Communication.		
Module No. 4: MOTIVATION		08
Meaning, Importance and need for motivation, team motivation- meaning, importance team motivation, types of Motivators and Modern methods of motivation		
Module No. 5: MANAGING SELF		07

Reflection on what does it mean to be a people manager; building a personal development plan for oneself, Self-Stress Management: Causes for stress, work life Balance, Importance of Work life balance, Factors influencing Work life Balance.

Skill Developments Activities:

1. Analyse two cases on any of the above content indicated above.
2. List out the modern tools to performance assessment and evaluation.
3. Conduct a survey of work life balance of working individuals
4. Draft a Career development of working individual in the middle level management.

Text Books:

1. Mc. Shane, Steven L. and Mary Ann Von Glinow, Organizational Behavior: Emerging Knowledge and Practice for the Real World. McGraw-Hill, latest edition, ISBN: 0-07-115113-3.
2. Bernardin, H. John and Joyce E. A. Russell. Human Resource Management: An Experiential Approach. McGraw-Hill, 6/e. ISBN: 0078029163
3. Argyris, C. (1974). Personality vs. Organization. Organizational Dynamics. Vol. 3. No. 2, Autumn.
4. Blume, B. Baldwin, T. and Ryan, K. (2013). Communication Apprehension. A barrier to students leadership, adaptability and multicultural appreciation. Academy of Management Learning & Education, Jun, Vol. 12 Issue 2, p158-172.
5. Colquitt, J.A., LePine, J.A., & Wesson, M.J. (2009) Organizational Behavior: Improving Performance and Commitment in the Workplace (International edition). New York: McGraw-Hill.
6. Goleman, D. (1998). Working with Emotional Intelligence. Bantam Books,

Note: Latest edition of text books may be used.

Name of the Program: Bachelor of Business Administration (BBA) Course Code: BBA 2.5 (OEC) Name of the Course: RETAIL MANAGEMENT		
Course Credits	No. of Hours per Week	Total No. of Teaching Hours
3 Credits	3 Hrs	45 Hrs
Pedagogy: Classroom's lecture, tutorials, Group discussion, Seminar, Case studies.		
Course Outcomes: On successful completion Student will demonstrate ; a) An understanding of the types and forms of Retail business. b) Ability to examine Consumer Behaviour in various environments. c) Ability to analyse various Retail operations and evaluate them. d) Ability to analyse various marketing mix elements in retail operations. e) An understanding of Information Technology in retail business.		
Syllabus:		Hours
Module No. 1: INTRODUCTION TO RETAIL BUSINESS		08
Definition – functions of retailing - types of retailing – forms of retail business ownership. Retail theories – Wheel of Retailing – Retail life cycle. Retail business in India: Influencing factors – present Indian retail scenario.		
Module No. 2: CONSUMER BEHAVIOUR IN RETAIL BUSINESS		08
Buying decision process and its implication on retailing – Influence of group and individual factors, Customer shopping behaviour, Customer service and customer satisfaction.		
Module No. 3: RETAIL OPERATIONS		08
Factors influencing location of Store - Market area analysis – Trade area analysis – Rating Plan method - Site evaluation. Retail Operations: Stores Layout and visual merchandising, Stores designing, Space planning, Inventory management, Merchandise Management, Category Management.		
Module No. 4: RETAIL MARKETING MIX		14
Introduction -Product: Decisions related to selection of goods (Merchandise Management revisited) – Decisions related to delivery of service. Pricing: Influencing factors – approaches to pricing – price sensitivity - Value pricing – Markdown pricing. Place: Supply channel – SCM principles – Retail logistics – computerized replenishment system – corporate replenishment policies. Promotion: Setting objectives – communication effects - promotional mix.		
Module No. 5: INFORMATION TECHNOLOGY IN RETAILING		07
Non store retailing (e-retailing) - The impact of Information Technology in retailing - Integrated systems and networking – EDI – Bar coding – Electronic article surveillance – Electronic shelf labels – Customer database management system.		
Skill Developments Activities: 1. Draw a retail life cycle chart and list the stages 2. Draw a chart showing a store operations 3. List out the major functions of a store manager diagrammatically 4. List out the current trends in e-retailing 5. List out the Factors Influencing in the location of a New Retail outlet		
Text Books:		

1. Suja Nair; Retail Management, HPH
2. Karthic – Retail Management, HPH
3. S.K. Poddar & others – Retail Management, VBH.
4. R.S Tiwari ; Retail Management, HPH

Note: Latest edition of text books may be used.

BBA 2.6 – Physical Education-Sports/ NCC/NSS/R&R(S&G) /Cultural (SEC-VB)	
Course Credits	02
Total Contact Hours	30
Internal Assessment Marks : 25+25	Semester End Examination Marks : Nil

Common Syllabus for all UG Programmes

ಮಂಗಳೂರು
MANGALORE



ವಿಶ್ವವಿದ್ಯಾನಿಲಯ
UNIVERSITY

ಕ್ರಮಾಂಕ/ No. : MU/ACC/CR.23/2021-22/A8

ಕುಲಸಚಿವರ ಕಛೇರಿ

ಮಂಗಳಗಂಗೋತ್ರಿ - 574 199

Office of the Registrar

Mangalagangothri - 574 199

ದಿನಾಂಕ/Date: 21/01/2022

NOTIFICATION

Sub: Syllabus of Economics as a core subject for B.A Degree
Programme Prepared as per NEP 2020-reg

Ref: Decision of the Academic Council meeting dated: 17.12.2021.

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Pursuant to the above, the syllabus of Economics as a core subject for B.A Degree Programmes prepared as per model curriculum of NEP 2020 is hereby notified for implementation with effect from the academic year 2021-22.

Copy of the Syllabus can be downloaded from the Mangalore University website. [www.mangaloreuniversity.ac.in](http://www.mangaloreuniversity.ac.in)

**(Draft approved by the Registrar)**

  
For REGISTRAR.

To:

- 1) The Principals of the Colleges concerned.
- 2) The Registrar (Evaluation), Mangalore University.
- 3) Dr. Vishwanatha, Chairman, UG BOS in Economics & Chairman, PG Dept. of Economics, Mangalore University.
- 4) The Assistant Registrar/The Superintendent, Academic Section, O/o the Registrar, Mangalore University.
- 5) The Director, DUIMS, Mangalore University - with a request to publish in the Website.
- 6) Guard File.

National Education Policy 2020(NEP2020)

**Syllabus of Four Years BA Economics (Honors)**

**I and II Semester**

**Prepared and Approved**

**By**

**Board of Studies (UG),**

**Dept of Economics**

**Mangalore University**

**November 2021**

## **PREAMBLE**

Education empowers Mankind. A holistic education paradigm will effectively focus on developing knowledge, employable skill sets, appropriate attitudes and an overall personality. NEP is focused towards imparting such an education system.

India's first education policy of the 21st century is 'National Education Policy 2020' proposes the revision and revamping of all aspects of the education structure, including its regulation and governance. It seeks to create a new system that is aligned with the developmental aspirations & goals of 21st century education, including SDG4, while building upon India's traditions and value systems.

NEP aims for India to have an education system by 2040 that is second to none, with equitable access to the highest-quality education for all learners regardless of social or economic background and seeks to *“ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” by 2030.*”

### **Vision of the National Education Policy 2020**

- ✓ An education system that contributes to an equitable and vibrant knowledge society, by providing high-quality education to all.
- ✓ Develops a deep sense of respect towards the fundamental rights, duties and Constitutional values, bonding with one's country, and a conscious awareness of one's role and responsibilities in a changing world.
- ✓ Instils skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen.

As India is enjoying the demographic dividend, which will last till 2055 and to reap the benefits, a good education policy was the need of the hour. Hence there is lot of hopes on the NEP, which has come as cure the edu-ailments and top lug the shortcomings of the education system which marred for 36 years and strengthen our education system. Expectations on NEP is high. As every good policy success lies in the implementation and active participation of its stake holders, so is the NEP. The success or failure of NEP lies in all our hands. Hence Let all of us join our hands in making the NEP successful.

As enshrined in the National Education Policy-2020 vision of introducing course curriculum for undergraduate studies under Choice Based Credit System (CBCS), the main objective of framing this curriculum of BA/B.Sc.(Basic/Hons) in Economics is to impart the students a holistic understanding of the subject giving substantial weight age to the core contents, skill, value-based and ability enhancement. The syllabus has given due importance on the main streams of the body of knowledge on Economics” with due recognition of its wide spectrum. The ultimate goal of the syllabus is to enable the students to have an in-depth knowledge on the subject and enhance their scope of employment at every level of exit. Adequate emphasis has been given on then wand emerging techniques and understanding of the subject under the changing regime and global context.

There is a need to strengthen the students to understand essential aspects of economics in diverse subject areas not only in social sciences, but also among other natural and physical sciences. The curriculum lays focus on creating new knowledge, acquiring new skills and capabilities in Economics producing an intelligent human resource serving the Economy and society

## PREFACE

The course curriculum for undergraduate studies under choice-based credit system (CBCS) for BA/B.Sc. in Economics (Basic/ Hons) is framed in this document. As a first step the first and second semester Syllabus and the entire course structure is prepared in this document. This exercise was undertaken as part of the nationwide curriculum restructuring initiative by the National Educational Policy-2020. Many online and offline meetings both formal and informal meetings were held by the committee taking the inputs from number of colleagues from the universities and colleges, who helped with crucial inputs as to the content of the course. This curriculum is a fresh exercise, but also represents a continuous effort of deliberations with various stakeholders.

A graduate is the one who acquires skills of identifying a problem and factors responsible for the problem; acquires and appreciates problem-solving skills; logically employs problem solving tools, spatially and temporally; identifies timely needs of the community and contributes to them; takes the community together creating an equitable ecosystem; works towards creating employment opportunities and work domains for different skill sets and knowledge disciplines; blends with various social and economic situations making life happier for the self and of the communities; envisages and employs various attitudes and skill sets for the betterment of the Nation, blending local and regional variations and utilizes them to benefit the economy.

Economics is a domain which seamlessly connects the sciences with day-to-day economic demands of the people and policy making issues of the Government. Proposing and developing a curriculum for the subject of Economics is unique in many ways. Hence, a competent subject expert committee was constituted by Karnataka State Higher Education Council, Government of Karnataka. The assigned task of this committee was to design a model curriculum structure and syllabus for both undergraduate and post graduate programmes of Economics.

Due efforts are taken to incorporate subject matter that seeks to create students with the ability of the problem-solving critical thinking, analytical thinking, model building, doing estimations, team work and collaboration etc. It is hoped that a student after a rigorous training in the BA/B.Sc. Economics (Hons) degree will have host of employment opportunities and will be an asset to the nation.



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## EXECUTIVE SUMMARY

Economics is the study to understand the ways to make accurate choices. By studying economics one can make the efficient choices in managing scarce resources such as money and time. It is not only helpful to increase the standard of living of the individual and their households and also in the policy decisions for the economic development of the Nation. Overall, the objective of Economics is to improve well-being of Indians and thereby developing Indian Economy, since it serves as a centre for developing ideas and innovations.

The economic graduates will be trained to make the best choices among these seemingly infinite possibilities. These rigourously trained economists will play a vital role in the Economic Development of the nation.

The implementation of NEP 2020 has given the great opportunity to make the structure and syllabus of Economics more dynamic and rigorous. Hence the Curriculum committee in Economics has prepared the model structure and syllabus for the first two semesters as the first step towards it.

The committee though has taken the confidence and suggestions of the BOS chairpersons of all the state Universities as it is reiterated that the complete autonomy to the respective BOS of the Universities/Institutes remains intact even as per HEC. The committee has identified different category of courses to be studied by the **Economics Students namely Discipline Specific Core Course (DSCC), Ability Enhancement Courses (AECC), Skill Enhancement Courses (SEC),GE(Generic Electives), Discipline Specific Electives (DSE) etc., by keeping wide choices by considering the present context.**

The members of the committee strongly felt that rigorous training, continuous assessment is the key to improve the quality of the economics students and the fellow fraternity members should leave no stone unturned to ensure it in total.

## Introduction

Economics is a popular and much sought-after course owing to its policy relevance and application to business as well as real life situations. However, in the conventional graduate programmes, Economics education was more class-room based with very less practical orientation. Further, with changing technology, emergence of newer issues like uncertainty, pandemics, climate change and business data analytics; the skill requirements are changing. New business models demand newer skills to successfully manage the change. Therefore, keeping in mind the aspirations of the NEP, the emerging skill matrix and the progression of the student at various levels, the Curriculum Committee of Economics finalized the following programme structure to be taught for BA/B.Sc. (Basic and Honors).

### Program Outcome

The four-year Bachelor of Arts and Science (B.A./B.Sc Basic/Honors) in Economics programme in economics is designed with option for multiple entry and exit. The students will be taught theory as well as the practical aspects of Economic Science. They would begin with fundamental concepts and then as they progress to higher semesters they would be introduced to more sophisticated and intricate concepts.

The main focus would be on conceptual clarity and practical usage of the knowledge gained. To make the students to ‘think like an economist’ is the main motto of the curriculum. They will also be exposed to quantitative approaches and tools to understand the economic relationships and also to analyse the data for framing as well as evaluating socio-economic policies. With varied electives and approaches to study socio-economic problems and policies, the graduates will be prepared to review and evaluate policies. The whole process aims at making them more inquisitive about the economic phenomena. After graduation, the students can apply their knowledge, skills and competencies across a broad range of occupations. They enjoy a rewarding career in academic, business, corporate, science, health care, government, or any field that uses the information to answer critical questions and inform decision-making.

### Learning Objectives

The Graduates will demonstrate:

- ✓ Knowledge of the principles, methodologies, value systems, and thought processes employed in understanding economic behavior of human beings;
- ✓ Ability to solve problems in microeconomics and macroeconomics;

- ✓ Understanding of contemporary economic issues and the impact of public and social policies to resolve them;
- ✓ Understanding of markets and how they function;
- ✓ Ability to identify, formulate and solve problems related to global, national and local socio-economic development.
- ✓ Ability to design and conduct Social and Behavioral experiments;
- ✓ Ability to design Questionnaires and other Survey tools.
- ✓ Ability to structure and analyse economic data with statistical tools, software and equipment;
- ✓ Ability to critically evaluate academic and policy research in economics;
- ✓ Ability to visualize and work on multidisciplinary tasks;
- ✓ Knowledge of professional and ethical responsibilities;
- ✓ Ability to communicate effectively in both verbal and written form;
- ✓ Confidence for self-education and ability for life-long learning.
- ✓ Participation and success in competitive examinations like UPSC/KPSC Civil Services, Indian Economic Services etc.;
- ✓ Ability to prepare and understand simple financial statements

### **Program Outcomes**

The Programme outcomes (POs) are expected to be as under:

- Students will be able to understand economic vocabulary, methodologies, tools and analysis procedures.
- Students will be familiar with the knowledge and application of micro economics for the formulation of policies and planning.
- Students will learn to apply economic theories and concepts to contemporary social issues, as well as analysis of policies.
- Students will be able to understand the impact of government policies and will be able to assess the consequences of the policies on the parties involved.
- As the programme along with economics contains like statistics, mathematics, it enhances them to compute and assess the real situation of the economy including the size and changes of population, income pattern, and rate of development with pattern of savings and investments and social security measures adopted in the country.
- Understand the basics of Quantitative techniques their applications

- Critically evaluate the on going economic developments in India and abroad
- Understand research methods in economics
- Student develops an awareness of career choices and the option for higher studies.

### **NEED FOR CURRICULUM DEVELOPMENT**

As per the NEP 2020 initiatives, it is intended to formulate Curriculum to eliminate the disparities among the students studying in different Universities/Institutes. The need for the curriculum development in Economics emerges due to the following reasons

1. **Changing Economic Scenario;** The Indian Economy is witnessing a radical amount of the changes in the economic policies since the introduction of the New Economic policy in 1991, followed by second and third generation reforms. India is not only inviting the FDI but at the same time also promoting Atmanirbhar Abhiyaan (A Self-reliant India).Market economy has expanded creating new opportunities and hence a new economics curriculum is prepared which helps the student to utilize the emerging.
2. **Credit transfer:** Credit transfer is approved by the UGC and the Government that allows the allows students to transfer course from their existing university to a new UGC approved university. The same number of credits in all the Universities in Karnataka is the first step to towards the credit transfer from University to University.
3. **Different Syllabus for BA and BSC in Economics:** All these years the BA and BSC in Economics had the same syllabus and as a path breaking the committee has prepared the separate syllabus for BA and BSC in Economics which suits to the needs of the changing time.
4. **Skill Enhancement:** The new curriculum focuses more on hands on training, internship and thereby enhancing the skills of the students. The papers like data **analytics etc further helps to develop the skills in the students.**

## PEDAGOGY

The goal of economics pedagogy is to awaken a student's critical consciousness and empower them with economic tools that help them in taking the crucial decision which helps them with economic tools through which they can make the efficient choices in managing scarce resources such as resources, money and time.

1. **Importance to theory as well as application:** all these years economics curriculum was concentrating more on teaching theoretical aspects, but the new curriculum gives importance to application through many hands-on training, case studies, empirical studies etc.
2. **Utilisation of ICT:** in order to make the Critical and creative thinking among the students better the ICT tools will be used. It includes case studies of research-led teaching, via presentations, websites and other media
3. **Research-based and research –led teaching:** The theories will be explained with application. In order to give more hands-on training, the Projects and internships are introduced in the economics curriculum. The students will do the research project of their choice under the supervision of the research guide.
4. **Exposure to Mathematics and Statistics :** in today's world, economics is using more of Statistics and Mathematics in economic analysis. Hence the curriculum is designed in such a way which gives more exposure to Mathematics and Statistics training.
5. **Brain Storming Approach:** Students will be deliberately involved either in groups or as individuals to deliberately discuss the possible implications or solutions to the Indian economic problems. The teacher will guide the process and help the students to think in right perspective and direction. This will help the teachers understand the extent of the student understanding and take corrective steps, but also helps in student involvement in the curriculum.
6. **Prominence to Indian economic contribution and Indian examples;** The western economic theories were taught ignoring the contribution of Indian economists. The new curriculum also emphasises on the Indian economist contribution, their theories and application. The teachers may highlight the Indian economic contribution and Indian examples in the pedagogy.

### Exit Options and Credit Requirements

A Certificate/Diploma/Bachelor Degree or Bachelor Degree with Honours in Economics both in BA/B.Sc.inEconomicsisawardedatthecompletionofeveryprogressiveyear.

| Exit Option with                                                                                                        | Certificate/Diploma/Degree/<br>Honors                     |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Successful completion of First year(two semesters)of the four years multidisciplinary undergraduate degree programme.   | Certificate in Economics (Arts/Science)                   |
| Successful completion of second year(four semesters)of the four years multidisciplinary undergraduate degree programme  | Diploma in Economics (Arts/Science)                       |
| Successful completion of three year (six semesters) of the four years multidisciplinary undergraduate degree Programme  | Bachelor of Arts/Science Degree in Economics              |
| Successful completion of four year (eight semesters) of the four years multidisciplinary undergraduate degree Programme | Bachelor of Arts/ Science Degree with Honors in Economics |
| Successful completion of Five year (Ten semesters) of the Five years multidisciplinary degree programme                 | Master of Arts/ Science Degree With Honors in Economics   |

A student will be allowed to enter/re-enter only after the odd semester and they can only exit after even semester. Re-entry at various as lateral academic programmes based on the above mentioned earned proficiency test records.

The validity of the eared credit will be for a maximum period year or as specified by the academic bank of credits (ABC).

### CONTINUOUS INTERNAL EVALUATION AND SEMESTER END EXAMINATION

Total marks for each course shall be based on continuous assessments and term end examinations. As per the decision of the Karnataka State Higher Education Council, it is necessary to have uniform pattern of 40: 60 for CIA and Semester End examinations respectively, among all the Universities, their affiliated and autonomous colleges. The committee deliberated on the same and suggested the following pattern for the CIE Marks.

| Sl.No.                                     | Parameters for the Evaluation              | Marks           |
|--------------------------------------------|--------------------------------------------|-----------------|
| <b>Continuous Internal Evaluation(CIE)</b> |                                            |                 |
| A                                          | Continuous & Comprehensive Evaluation(CCE) | <b>20Marks</b>  |
| B                                          | Internal Assessment Tests(IAT)             | <b>20Marks</b>  |
|                                            | Total of CIE(A+B)                          | <b>40Marks</b>  |
| C                                          | Semester End Examination (SEE)             | <b>60Marks</b>  |
|                                            | <b>Total of CIE and SEE(A+B+C)</b>         | <b>100Marks</b> |

**Evaluation process of IA marks may be as follows:**

- The first component (C1), of assessment is for 20 marks. This shall be based on test, assignment, seminar, case study, field work, project work etc. This assessment and score process should be completed after completing 50% of syllabus of the course/s and with in the first half of the semester.
- The second component (C2), of assessment is for 20 marks. This shall be based on test, assignment, seminar, case study, field work, internship / industrial practicum / project work etc. This assessment and score process should be based on completion of the remaining 50 percent of syllabus of the courses of the semester.
- During the 17<sup>th</sup> – 20<sup>th</sup> week of the semester, a semester end examination of 3 hours duration shall be conducted by the University for each course. This forms the third and final component of assessment (C3) and the maximum marks for the final component will be 60%.
- In case of a student who has failed to attend the C1 or C2 on a scheduled date, it shall be deemed that the student has dropped the test. However, in case of a student who could not take the test on scheduled date due to genuine reasons, such a candidate may appeal to the concerned teacher/ Program Coordinator / HOD and suitable decision taken accordingly.
- For assignments, tests, case study analysis etc., of C1 and C2, the students should bring their own answer scripts (of A4 size), graph sheet etc., required for such tests/assignments and these be stamped by the concerned department using their department seal at the time of conducting tests/ assignment/work etc.

The outline for continuous assessment activities for Component-I(C1) and Component II(C2) of a course shall be as under:



Outline for continuous assessment activities for C1 and C2

| Activities                                                                                                     | C1             | C2              | Total Marks |
|----------------------------------------------------------------------------------------------------------------|----------------|-----------------|-------------|
| Session Test                                                                                                   | 10marks        | 10marks         | 20          |
| Seminars etc.                                                                                                  | 10marks        |                 | 10          |
| Case study / Assignment<br>/Field work / Project<br>work/Academic Economics<br>Quiz/Review of the Book/<br>etc |                | 10marks         | 10          |
| <b>Total</b>                                                                                                   | <b>20marks</b> | <b>20 marks</b> | <b>40</b>   |

Suggestive Template for Semester- end Examination BA in Economics

Course Code:  
Duration: 3 Hours

Name of the Paper:  
Total Marks: 60

**SECTION-A**

Answer any five questions out of eight questions given below. (Questions for testing conceptual clarity)  
(2X5=10)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

**SECTION-B**

Answer any four of the following out of six questions given below. (Questions for testing the knowledge of theories and application)  
(5X4=20)

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.

### **SECTION-C**

Answer any three of the following out of five questions given below. (Questions for testing the critical ability of understanding)

(10X3=30)

- 15.
- 16.
- 17.
- 18.
- 19.

### **Suggestive Template for IAT**

Internal Assessment Test BA in Economics

Course Code:

Name of the Paper:

Duration:90Minutes

Total Marks: 35

### **SECTION-A**

Answer any two of the following questions. Questions for testing conceptual clarity)

(5X2=10)

- 1.
- 2.
- 3.

### **SECTION-B**

Answer any one of the following questions. (Questions for testing the knowledge of theories and application)

(10X1=10)

- 5.
- 6.

### **SECTION-C**

Answer any one of the following questions. Questions for testing the critical ability of understanding)

(15X1=15)

- 7.
- 8

## **Structure of BA Honors In Economics**

## Acronyms Expanded

|                  |                                                  |
|------------------|--------------------------------------------------|
| <b>AECC</b>      | Ability Enhancement Compulsory Course            |
| <b>DSCC</b>      | Discipline Specific Core Course                  |
| <b>SEC/SB/VB</b> | Skill Enhancement Course-Skill Based/Value Based |
| <b>OEC</b>       | Open Elective Course                             |
| <b>DSE</b>       | Discipline Specific Elective                     |

## B.A PROGRAM

### Proposed Scheme of Teaching and Evaluation for B.A(Hons) with Economics as Major

| Semester-I |                          |                                                                                                               |                     |                                 |     |     |             |         |
|------------|--------------------------|---------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------|-----|-----|-------------|---------|
| Sl No.     | Course Code              | Title of Course                                                                                               | Category of Courses | Teaching Hours per Week (L+T+P) | SEE | CIE | Total Marks | Credits |
| 1          | Economics-C1             | Basic Economics-I                                                                                             | DSC                 | 3+0+0                           | 60  | 40  | 100         | 3       |
| 2          | Economics-C2             | Contemporary Indian Economy                                                                                   | DSC                 | 3+0+0                           | 60  | 40  | 100         | 3       |
| 3          | Open Electives-Economics | 1. Kautilya's Arthshastra<br>2. Pre-reforms Indian Economy<br>3. Development Studies<br>4. Business Economics | OEC                 | 3+0+0                           | 60  | 40  | 100         | 3       |
| Sub-Total  |                          |                                                                                                               |                     |                                 |     |     |             | 09      |

| Semester – II                            |                          |                                                                                                                               |                     |                                 |     |     |             |         |
|------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------|-----|-----|-------------|---------|
| Sl No.                                   | Course Code              | Title of the Course                                                                                                           | Category of Courses | Teaching Hours per Week (L+T+P) | SEE | CIE | Total Marks | Credits |
| 1                                        | Economics-C3             | Basic Economics-II                                                                                                            | DSC                 | 3+0+0                           | 60  | 40  | 100         | 3       |
| 2                                        | Economics-C4             | Karnataka Economy                                                                                                             | DSC                 | 3+0+0                           | 60  | 40  | 100         | 3       |
| 3                                        | Open Electives-Economics | 1. Contemporary Indian Economy<br>2. Sustainable Development<br>3. Economics of Business Environment<br>4. Monetary Economics | OEC                 | 3+0+0                           | 60  | 40  | 100         | 3       |
| Sub-Total                                |                          |                                                                                                                               |                     |                                 |     |     |             | 09      |
| Exit option with Certificate (48Credits) |                          |                                                                                                                               |                     |                                 |     |     |             |         |

### List of Open Electives

| Semester | Open Elective Papers                                                                                                           |
|----------|--------------------------------------------------------------------------------------------------------------------------------|
| I        | 7. Kautilya's Arthshastra<br>8. Development Studies<br>9. Pre-Reforms Indian Economy<br>10. Business Economics                 |
| II       | 7. Contemporary Indian Economy<br>8. Sustainable Development<br>9. Economics of Business Environment<br>10. Monetary Economics |

SYLLABUS FOR FIRST TWO SEMESTERS  
OF BA HONORS IN ECONOMICS

**BA (Hons) Economics**  
**Semester1**

**DSC1.2: Basic Economics–I (Economic Analysis -I) 3credits**

**Course Outcomes:**

By the end of the course the student will be able to:

1. Identify the facets of an economic problem.
2. Learn basic economic concepts and terms.
3. Explain the operation of a market system;
4. Analyse the production and cost relationships of a business firm;
5. Evaluate the pricing decisions under different market structures; and
6. Use basic cost-benefit calculations as a means of decision making (i.e., thinking like an economist)

| Content of Basic Economics1                                                                                                                                                                                                                                           | 42 Hrs |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <b>Unit– 1 Basic Concepts in Economics</b>                                                                                                                                                                                                                            | 14     |
| <b>ChapterNo.1Nature and Scope of Economics</b> <ul style="list-style-type: none"> <li>• Meaning of Economics</li> <li>• Nature of Economics</li> <li>• Scope of Economics</li> <li>• Methods of Economics</li> <li>• Why Study Economics?</li> </ul>                 | 5      |
| <b>ChapterNo.2Role of an Economist</b> <ul style="list-style-type: none"> <li>• Thinking Like an Economist</li> <li>• The Economist as Scientist</li> <li>• The Economist as Policy Adviser</li> <li>• Economic Policy</li> </ul>                                     | 4      |
| <b>ChapterNo.3EconomicSystem</b> <ul style="list-style-type: none"> <li>• Types of Economic Activities</li> <li>• Organisation of Economic Activities</li> <li>• Circular Flow of Economic Activities</li> <li>• Evolution of the Present Economic Systems</li> </ul> | 5      |
| <b>Practicum:</b> 1.Group Discussions on Choice Problem<br>2.Assignmenton Types of Economic Systems                                                                                                                                                                   |        |
| <b>Unit – 2 Demand, Supply and Markets</b>                                                                                                                                                                                                                            | 14     |



|                                                                                                                                                                                                    |   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| <b>Chapter No. 4. Firms and Household</b>                                                                                                                                                          |   |
| <ul style="list-style-type: none"> <li>• Meaning of Firms and Household</li> <li>• Relationship Between Firms and Household</li> <li>• Input Markets</li> <li>• Output Markets</li> </ul>          | 4 |
| <b>Chapter No.5.Demand and Supply</b>                                                                                                                                                              | 5 |
| <ul style="list-style-type: none"> <li>• Individual Demand</li> <li>• Market Demand</li> <li>• Demand Determinants</li> <li>• Supply and its Determinants</li> <li>• Market Equilibrium</li> </ul> |   |

|                                                                                                                                                                                                                                                                                                                            |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>Chapter No.6.Elasticity and its Measurement</b>                                                                                                                                                                                                                                                                         | 5  |
| <ul style="list-style-type: none"> <li>• Types of Elasticity of Demand</li> <li>• Price, Income and Cross Elasticities</li> <li>• Measurement of Elasticity of Demand</li> <li>• Determinants of Elasticity of Demand</li> </ul> <b>Practicum:</b> 1.Estimation of demand elasticities<br>2.solving an equilibrium problem |    |
| <b>Unit –3Cost and Market Structures</b>                                                                                                                                                                                                                                                                                   | 14 |
| <b>Chapter No. 7 Production and Costs</b>                                                                                                                                                                                                                                                                                  | 4  |
| <ul style="list-style-type: none"> <li>• Production Function</li> <li>• Total Production Cost</li> <li>• Marginal Production Cost</li> <li>• Average Production Cost</li> <li>• Revenue Functions</li> </ul>                                                                                                               |    |
| <b>Chapter No.8.Cost and Revenue Analysis</b>                                                                                                                                                                                                                                                                              | 5  |
| <ul style="list-style-type: none"> <li>• Cost in the Short run</li> <li>• Fixed Costs and Variable Costs</li> <li>• Marginal Costs</li> <li>• Long run and MC</li> <li>• TR,MR, AR</li> </ul>                                                                                                                              |    |
| <b>Chapter No.9.Types Markets</b>                                                                                                                                                                                                                                                                                          | 5  |
| <ul style="list-style-type: none"> <li>• Markets</li> <li>• Perfect and Imperfect Competition</li> <li>• Features of Perfect Competition</li> <li>• Monopoly, Oligopoly and Monopolistic Competition</li> <li>• Pricing Strategies</li> </ul>                                                                              |    |
| <b>Practicum:</b> 1. Calculation of various costs and comparing them with production concepts; a mini-project can be taken up wherever possible<br>2.Studying the real-life pricing mechanism through a project/case studies                                                                                               |    |
| <b>References(indicative)</b>                                                                                                                                                                                                                                                                                              |    |
| 1. Cohen, A.J. (2020). <i>Macroeconomics for Life: Smart Choices for All? + My Lab Economics with Pearson e Text</i> (updated 2 <sup>nd</sup> ed.). Toronto,ON:PearsonCanadaInc.Type:Textbook:ISBN:9780136716532                                                                                                           |    |
| 2. Cohen, A.J. (2015). <i>Microeconomics for Life: Smart Choices for You + My Lab Economics with Pearson e Text</i> (2 <sup>nd</sup> ed.). Toronto, ON: Pearson Canada Inc.Type:Textbook:ISBN:9780133899368                                                                                                                |    |
| 3. Case Karl E. and Fair Ray C. Principles of Economics, Pearson Education Asia,2014.                                                                                                                                                                                                                                      |    |
| 4. MankiwN.Gregory.PrinciplesofEconomics,Thomson,2013.                                                                                                                                                                                                                                                                     |    |
| 5. Stiglitz J.E. and Walsh C.E. Principles of Economics, W.W. Norton & Co, NewYork, 2011.                                                                                                                                                                                                                                  |    |

## Semester I

|                                                         |                             |
|---------------------------------------------------------|-----------------------------|
| Course Title: <b>DSC1.3:Contemporary Indian Economy</b> |                             |
| Total Contact Hours:42                                  | Course Credits:3            |
| Formative Assessment Marks:40                           | Duration of ESA/Exam: 3 Hrs |
| Model Syllabus Authors:                                 | SummativeAssessmentMarks:60 |

### Course Pre-requisite(s):

### Course Outcomes (COs):

At the end of the course the student should be able to:

- i. Understand the current problems of Indian Economy
- ii. Identify the factors contributing to the recent growth of the Indian economy
- iii. Evaluate impact of LPG policies on economic growth in India
- iv. Analyze the sector specific policies adopted for achieving the aspirational goals
- v. Review various economic policies adopted

| Content of Course1                                                                                                                                                                                                                                                                                                                                  | 42 Hrs |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <b>Unit–1 ECONOMIC REFORMS AND AGRICULTURE</b>                                                                                                                                                                                                                                                                                                      | 14     |
| <b>Chapter No.1 Recent Issues</b> <ul style="list-style-type: none"> <li>Genesis and Impact of new Economic policy</li> <li>India's population policy</li> <li>Demographic Dividend</li> <li>India's human development in global perspective</li> </ul>                                                                                             | 4      |
| <b>Chapter No.2 Urbanization and governance</b> <ul style="list-style-type: none"> <li>Urbanization and Smart City Mission</li> <li>Urban Informal sector</li> <li>Urban Infrastructure</li> <li>Urban Environmental Problems</li> </ul>                                                                                                            | 4      |
| <b>ChapterNo.3EconomicReformsandAgriculture</b> <ul style="list-style-type: none"> <li>Agriculture and WTO</li> <li>Price policy and Subsidies</li> <li>Commercialisation and Diversification</li> <li>Food security and PDS</li> <li>Impact of public investment on agricultural growth</li> <li>Agrarian Crisis, Farm Incomes, MGNREGS</li> </ul> | 6      |
| <b>Practicum</b> <ol style="list-style-type: none"> <li>Mini project to ascertain the impact of pandemic on lives of different sections of population</li> <li>Field visits to understand the agrarian situation</li> </ol>                                                                                                                         |        |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>Unit-2 NEW POLICY INITIATIVES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14 |
| <b>Chapter No.4. Industrial Policy</b> <ul style="list-style-type: none"> <li>• New Industrial Policy and changes</li> <li>• Public sector reform</li> <li>• Privatisation and Disinvestment</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4  |
| <ul style="list-style-type: none"> <li>• Competition Policy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |
| <b>Chapter No.5.Changing Economic Environment</b> <ul style="list-style-type: none"> <li>• Ease of Doing Business</li> <li>• Performance of MSMEs</li> <li>• Role of MNC's in Industrial Development</li> <li>• Make in India, development of economic and social infrastructure</li> <li>• National Monetization Pipeline</li> </ul> <p>(The teacher should include the latest policy of the government)</p> <b>Chapter No.6.Fiscal Policy</b> <ul style="list-style-type: none"> <li>• Tax, Expenditure ,Budgetary deficits</li> <li>• Pension and Fiscal Reforms</li> <li>• Public debt management and reforms</li> <li>• Fiscal Responsibility and Budget Management(FRBM)Act</li> <li>• GST ,Fiscal Federalism and Fiscal Consolidation</li> <li>• Recommendation of the Current Finance Commission</li> </ul> <b>Practicum:</b> Mini-projects to assess the business climate | 5  |
| <b>Unit-3MONETARYPOLICY,FOREIGNTRADEANDINVESTMENT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 14 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| <b>Chapter No.7 Money Market</b> <ul style="list-style-type: none"> <li>• Organisation of India's money market</li> <li>• Financial sector reforms</li> <li>• Interest rate policy</li> <li>• Review of monetary policy of RBI</li> </ul>                                                                                                                                                                                                                                                                  | 3 |
| <b>Chapter No.8. Capital Markets</b> <ul style="list-style-type: none"> <li>• Working of SEBI in India</li> <li>• Changing roles of the Reserve Bank of India</li> <li>• Commercial banks,</li> <li>• Development Finance Institutions</li> <li>• Foreign banks and non-banking financial institutions</li> <li>• Analysis of price behaviour in India, Anti-inflationary measures</li> <li>• Demonetization and its impact</li> </ul>                                                                     | 5 |
| <b>Chapter No.9. Foreign Trade and Investment</b> <ul style="list-style-type: none"> <li>• India's foreign trade</li> <li>• India Balance of payment since 1991</li> <li>• New Exchange Rate Regime: Partial and full convertibility</li> <li>• Capital account convertibility</li> <li>• FDI– Trends and Patterns</li> <li>• New EXIM policy, WTO and India</li> <li>• Bilateral and Multilateral Trade Agreements and Associations</li> </ul>                                                            | 6 |
| <b>Practicum:</b> <ol style="list-style-type: none"> <li>1. Computation and analysis of Wholesale Price Index, Consumer Price Index: components and trends.</li> <li>2. Group Discussions on India's trade policies and trade agreements</li> </ol>                                                                                                                                                                                                                                                        |   |
| <b>References</b> <ul style="list-style-type: none"> <li>• Bardhan, P.K. (9th Edition) (1999), The Political Economy of Development in India, Oxford University Press, New Delhi.</li> <li>• Bhaduri Amit, (2015), A Model of Development By Dispossession, Fourth Foundation</li> <li>• Byres Terence J. (ed.), (1998), The State, Development Planning and Liberalisation in India, Delhi, OUP</li> <li>• Dutt Ruddar and K. P. M Sundaram (2001): Indian Economy, S Chand &amp; Co. Ltd. New</li> </ul> |   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>Delhi.</p> <ul style="list-style-type: none"> <li>• Frankel Francine R., (2004), India's Political Economy, Delhi. OUP Jenkins Rob, 2000, Economic Reform in India, Cambridge, CUP</li> <li>• Jalan, B. (1996), India's Economic Policy- Preparing for the Twenty First Century, Viking, New Delhi.</li> <li>• Joshi Vijaya and L.M.D.Little,(1998),India's Economic Reform1991-2001,Delhi,OUP.</li> <li>• Kapila Uma: Indian Economy: Policies and Performances, Academic Foundation</li> <li>• Mishra S.K &amp; V.K Puri (2001) "Indian Economy and –Its development experience",Himalaya Publishing House.</li> <li>• Mukharji Rahul (ed.) (2007), India's Economic Transition: The Politics of Reforms, edited by Rahul Mukherji, Oxford University Press, New Delhi.</li> <li>• Stuart and John Harris,(2000),Re inventing India, Cambridge Polity</li> </ul> |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

### **Pedagogy**

| <b>Formative Assessment</b>          |                                |
|--------------------------------------|--------------------------------|
| <b>Assessment Occasion/<br/>type</b> | <b>Weight age in<br/>Marks</b> |
| Internal Test                        | 50%                            |
| Assignment                           | 25%                            |
| Presentation/Project                 | 25%                            |
| <b>Total</b>                         | <b>100</b>                     |

## Semester I

|                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| Course Title: <b>OEC1.5:Kautilya's Arthashastra (OEC)</b> |                               |
| Total Contact Hours:42                                    | Course Credits:3              |
| Formative Assessment Marks:40                             | Duration of ESA/Exam: 3 Hrs   |
| Model Syllabus Authors:                                   | Summative Assessment Marks:60 |

**Course Pre-requisite(s):** 12<sup>th</sup> Standard Pass

**Course Outcomes ( COs):**

At the end of the course the student should be able to:

1. This course will enlighten the students about the ancient fundamentals about political and economic constituents, which will frame out a basic land of understanding the modern trends. This will help them to understand the upcoming needs in the area of policy making for states at national and international level.
2. This treatise deals with the science of Governance, so it projects out all the dimensions needed to be understood by students about the present socio-economic and political rules and regulations of the state.

| Unit | Description                                                                                                                                                                                                                                                                                                                                                 | Hours |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | Chapter1: Introduction to the Arthashastra,                                                                                                                                                                                                                                                                                                                 | 2     |
|      | Chapter2: Various disciplines of Indian Education System,                                                                                                                                                                                                                                                                                                   | 2     |
|      | Chapter3: Place of Kautilya Arthashastra among them,                                                                                                                                                                                                                                                                                                        | 2     |
| II   | Chapter4: Importance of science dealing with governance-Introduction to Tantra yuktis –The methods of preparing a compendium ,tools and techniques of Writing a compendium.                                                                                                                                                                                 | 5     |
|      | Chapter5: Governance Procedure-Appointment of the ministers, duties of Government superintendents, treasury, spies, royal writ, punishment-Vakparushya And Dandaparushya;                                                                                                                                                                                   | 5     |
|      | Chapter6: Laws of Inheritance –Determination of forms of Agreements, Determination of legal disputes, Division of inheritance, Special shares in inheritance, Distinction between sons                                                                                                                                                                      | 5     |
| III  | Chapter7: Economic Dimension-Body of income of the state, collection of revenue, duties of a Chamberlin (koshadhyksha), forty ways of embezzlement of the revenue, punishment for the embezzlement of revenue, expenditure, Loss and Profit, Keeping up the Accounts, Recovery of Debts, Deposits of the state, Resumption of The gifts, Remission of Taxes | 9     |
|      | Chapter8: Political Dimension-Six-fold Policy-War, Combination of Powers, Agreement of Peace with or without definite terms, Double Policy, Circle of States, Conduct of Corporations, Secret means, Plan of treatise,                                                                                                                                      | 9     |
|      | Chapter9: Defence and Warfare: Planning of different Vyuhas in War                                                                                                                                                                                                                                                                                          | 3     |

**Suggested readings:**

1. Arthashastra of Kautilya by T.Ganapati Shastri, Chaukhambha Sur bharti Prakashana, Varanasi, India,2005.
2. Arthashastrav of Kautilya by Sri. Vacaspati Gairola, Chaukhambha Vidya bahavan,Varanasi,India,2013.
3. Kautilya, The Arthashastra by L.N.Rangarajan, Penguin Books Ltd, London. Kautilya's Arthashastra:The Way of Financial Management and Economic Governance, Jaico Publishing House

**Pedagogy**

| <b>Formative Assessment</b>     |                            |
|---------------------------------|----------------------------|
| <b>Assessment Occasion/type</b> | <b>Weight age in Marks</b> |
| Internal Test                   | 50%                        |
| Assignment                      | 25%                        |
| Presentation/Project            | 25%                        |
| <b>Total</b>                    | <b>100</b>                 |



## Semester1

|                                                            |                               |
|------------------------------------------------------------|-------------------------------|
| <b>CourseTitle:OEC1.5:Pre-Reforms Indian Economy (OEC)</b> |                               |
| Total Contact Hours:42                                     | CourseCredits:3               |
| Formative Assessment Marks:40                              | Duration of ESA/Exam: 3 Hrs   |
| Model Syllabus Authors:                                    | Summative Assessment Marks:60 |

**Course Pre-requisite(s):** 12<sup>th</sup> Standard Pass

**Course Out comes(COs):**

At the end of the course the student should be able to:

- i. Trace the evolution of Indian Economy
- ii. Identify the structural features and constraints of the Indian economy
- iii. Evaluate planning models and strategy adopted in India
- iv. Analyze the sector specific problems and contributions towards overall economic growth
- v. Review various economic policies adopted

| Unit      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                           | Hours     |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>I</b>  | <b>Features and problems of Indian Economy</b>                                                                                                                                                                                                                                                                                                                                                                                                        | <b>15</b> |
|           | <b>Chapter 1: Features of Indian Economy</b> <ul style="list-style-type: none"> <li>India as a developing economy,</li> <li>Demographic features</li> <li>Human Development (HDI),</li> <li>Problems of Poverty, Unemployment, Inflation, income inequality</li> </ul>                                                                                                                                                                                | 4         |
|           | <b>Chapter2: Issues in Agriculture sector in India</b> <ul style="list-style-type: none"> <li>Land reforms</li> <li>Green Revolution</li> <li>Agriculture marketing in India</li> <li>Agricultural price policy</li> </ul>                                                                                                                                                                                                                            | 6         |
|           | <b>Chapter3: Industrial and Service Sector</b> <ul style="list-style-type: none"> <li>Industrial development;</li> <li>Micro, Small and Medium Enterprises,</li> <li>Industrial Policy</li> <li>Performance of public sector in India,</li> <li>Service sector in India.</li> </ul> <b>Practicum:</b> 1. Identifying economic problems and their causes;<br>2. Mini-project on any aspect of Indian agriculture, industry, service and public sectors | 5         |
| <b>II</b> | <b>Economic Policies</b>                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>13</b> |
|           | <b>Chapter4: Planning</b> <ul style="list-style-type: none"> <li>Mixed Economy</li> <li>Bombay Plan</li> <li>Gandhian Model</li> <li>Nehru Mahalanobis Model</li> <li>Objectives and achievements of economic planning in India</li> </ul>                                                                                                                                                                                                            | 5         |
|           | <b>Chapter5: Monetary policy in India</b> <ul style="list-style-type: none"> <li>Instruments of Monetary Policy</li> </ul>                                                                                                                                                                                                                                                                                                                            | 2         |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Black money in India–Magnitude and Impact</li> </ul> <b>Chapter6:Fiscal Policy in India</b> <ul style="list-style-type: none"> <li>• Tax Revenue</li> <li>• Public expenditure</li> <li>• Budgetary deficits</li> <li>• Fiscal reforms</li> <li>• Public debt management and reforms</li> <li>• Centre state Finance Relations and Finance commissions in India.</li> </ul> <b>Practicum:</b> Assignment on successes and failures of India’s planning; Monetary and Fiscal Policy instruments                                                                                                                                                                                                                                                                                                           | 6                   |
| <b>III</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>External sector and Nature of Reforms in India</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>14</b>           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Chapter 7: India’s foreign trade</b> <ul style="list-style-type: none"> <li>• Salient features</li> <li>• Value, composition and direction of trade</li> <li>• Balance of payments</li> <li>• Goal of self-reliance based on import substitution and protection</li> <li>• Tariff policy</li> <li>• Exchange rate</li> </ul> <b>Chapter8:Post-1991strategies</b> <ul style="list-style-type: none"> <li>• Stabilization and structural adjustment packages</li> <li>• Liberalization Privatization Globalization ( LPG)Model</li> <li>• Impact of LPG Policies on Indian Economy</li> </ul> <b>Chapter9: NITI Ayog</b> <ul style="list-style-type: none"> <li>• Organization</li> <li>• Functions</li> </ul> <b>Practicum:</b> Calculation of BoP and evaluating trade policies; Assignment and group discussion on the impact of LPG Policies | 6<br><br>6<br><br>2 |
| <b>Suggested Readings:</b> <ol style="list-style-type: none"> <li>1. Dutt Ruddar and K.P.MSundaram(2001):Indian Economy, S Chand &amp; Co. Ltd. New Delhi.</li> <li>2. Mishra S.K &amp; V.K Puri (2001) “Indian Economy and –Its development experience”, Himalaya Publishing House.</li> <li>3. Kapila Uma:Indian Economy: Policies and Performances, Academic Foundation</li> <li>4. Bardhan, P.K. (9th Edition) (1999), The Political Economy of Development in India, Oxford University Press, New Delhi.</li> <li>5. Jalan, B. (1996), India’s Economic Policy- Preparing for the Twenty First Century, Viking, New Delhi.</li> </ol> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |

### Pedagogy

| Formative Assessment     |                     |
|--------------------------|---------------------|
| Assessment Occasion/type | Weight age in Marks |
| Internal Test            | 50%                 |
| Assignment               | 25%                 |
| Presentation/Project     | 25%                 |
| <b>Total</b>             | <b>100</b>          |

## Semester1

|                                                      |                               |
|------------------------------------------------------|-------------------------------|
| Course Title: <b>OEC1.5:Development Studies(OEC)</b> |                               |
| Total Contact Hours:42                               | Course Credits:3              |
| Formative Assessment Marks:40                        | Duration of ESA/Exam: 3 Hrs   |
| Model Syllabus Authors:                              | Summative Assessment Marks:60 |

**Course Pre-requisite(s):** 12<sup>th</sup> Standard Pass    Course Outcomes (COs):

At the end of the course the student should be able to:

- i. Graduates will be able to excel in higher studies and/or to succeed in profession.
- ii. Graduates will get a solid foundation of fundamentals required to solve socio economic problems and also to pursue higher studies.
- iii. Graduates will demonstrate knowledge to appreciate of the dimensions of contemporary development issues, to generate sensitivity to problems concerning ethics and human values to develop orientation towards effective communication and critical analysis, and to appreciate the interrelationships among disciplines as they relate to every day realities.
- iv. Graduates will cultivate professional and ethical attitude, effective Communication skills, teamwork skills, multidisciplinary approach, and to facilitate an advanced understanding and appreciation of the principles, methodologies, value systems, and thought processes employed in human inquiries.

| Unit | Description                                                                                                                                                                                                                                                   | Hrs       |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| I    | <b>Development :Meaning and Current Challenges</b>                                                                                                                                                                                                            | <b>9</b>  |
|      | <b>Chapter 1: Meaning of Development</b> <ul style="list-style-type: none"> <li>The concept of development,</li> <li>Growth and Development</li> <li>Transition from quantitative to qualitative indices</li> </ul>                                           | 3         |
|      | <b>Chapter 2: Modern economic growth</b> <ul style="list-style-type: none"> <li>Characteristics of modern economic growth</li> <li>Regional and global disparities</li> <li>Common characteristics and dissimilarities among developing countries.</li> </ul> | 3         |
|      | <b>Chapter3:CurrentDevelopmentChallenges</b> <ul style="list-style-type: none"> <li>Poverty</li> <li>Inequality</li> <li>Migration</li> <li>Conflict</li> </ul>                                                                                               | 3         |
| II   | <b>Approaches to Development</b>                                                                                                                                                                                                                              | <b>12</b> |
|      | <b>Chapter 4:Development and Ethics</b> <ul style="list-style-type: none"> <li>Concept and meaning</li> <li>Principles and importance of Development Ethics</li> </ul>                                                                                        | 2         |
|      | <b>Chapter 5:Measuring Development</b> <ul style="list-style-type: none"> <li>Per capita income and PPP</li> <li>PQLI</li> <li>Choice and Capabilities</li> <li>HDI</li> </ul>                                                                                | 4         |
|      | <b>Chapter6:Classical Approaches of Development</b> <ul style="list-style-type: none"> <li>Adam Smith</li> </ul>                                                                                                                                              | 6         |



## SEMESTER- I

|                                                                          |                                |
|--------------------------------------------------------------------------|--------------------------------|
| <b>Semester I</b> Course Title: <b>OEC 1.5: Business Economics (OEC)</b> |                                |
| Total Contact Hours: 42                                                  | Course Credits: 3              |
| Formative Assessment Marks: 40                                           | Duration of ESA/Exam: 3 Hrs    |
| Model Syllabus Authors:                                                  | Summative assessment marks :60 |

**Course Pre-requisite(s):** *12<sup>th</sup> Standard Pass*

### Course Outcomes (OCs)

**At the end of the course the student shall have:**

1. Acquired the concepts, tools and techniques of economics in analysing and interpreting the business decisions.
2. Developed the insight of the functioning of the economy

| Unit | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Hours                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| 1    | <b>Introduction to Business Economics</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 12 Hours                                     |
|      | <p><b>Chapter 1: Nature and scope of business economics</b></p> <ul style="list-style-type: none"> <li>• Nature of Business Economics</li> <li>• Meaning and definitions</li> <li>• Subject matter of business economics</li> <li>• Significance of business economics.</li> </ul> <p><b>Chapter 2: Economic laws and business environment</b></p> <ul style="list-style-type: none"> <li>• nature of economic laws</li> <li>• Factors determining business</li> <li>• Business objectives</li> </ul> <p><b>Chapter 3: Demand and supply analysis</b></p> <ul style="list-style-type: none"> <li>• Law of diminishing marginal utility</li> <li>• Law of demand</li> <li>• Determinants of demand</li> <li>• Price elasticity of demand</li> <li>• Law of supply</li> <li>• Elasticity of supply</li> </ul> <p><b>Practicum: 1.</b> Prepare a demand schedule based on selected product in the market.</p> <p>2. Group discussion on human and non- human factors of business</p> | <p>4 Hours</p> <p>4 Hours</p> <p>4 Hours</p> |



### **Suggested readings**

1. Sundharam K.P.M. & Sundharam E.N. – Business Economics, Sultanchand & Sons, New Delhi.
2. Ahuja H.L. – Business Economics, Sultanchand & Sons, New Delhi
3. Mehta P.L., Managerial Economics, Sultanchand & Sons, New Delhi.
4. Dwivedi D.N., Managerial Economics, Vikas Publishing House Pvt. Ltd., New Delhi.
5. Mithani D.M., Managerial Economics, Himalaya Publishing House, Mumbai.
6. Peterso H. Craig and W. Cris Lewis – Managerial Economics, Pearson Education, Singapore.
7. Salvatore Dominic – Managerial Economics, McGraw Hill, New York.
8. Fred David – Strategic Management

### **Pedagogy**

| <b>Formative Assessment</b>     |                            |
|---------------------------------|----------------------------|
| <b>Assessment Occasion/type</b> | <b>Weight age in Marks</b> |
| Internal Test                   | 50%                        |
| Assignment                      | 25%                        |
| Presentation/Project            | 25%                        |
| <b>Total</b>                    | <b>100</b>                 |

## Semester II

|                                                |                               |
|------------------------------------------------|-------------------------------|
| Course Title: <b>DSC2.2:Basic Economics II</b> |                               |
| Total Contact Hours: 42                        | Course Credits: 3             |
| Formative Assessment Marks:40                  | Duration of ESA/Exam: 3Hrs    |
| Model Syllabus Authors:                        | Summative Assessment Marks:60 |

**Course Pre-requisite(s):** *Basic Economics I*

### **Course Outcomes (COs):**

At the end of the course the student should be able to:

1. Understand the operation of the overall economic system;
2. Calculate national income and related aggregates
3. Explain the relationship between macro economic aggregates;
4. Analyse the nature of business cycles and policies towards controlling them;
5. Evaluate the macroeconomic policies for solving major problems like poverty and unemployment

| Unit      | Description                                                                                                                                                                                                                                                                                                       | Hrs       |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>I</b>  | <b>Macro economic variables and concepts</b>                                                                                                                                                                                                                                                                      | <b>12</b> |
|           | <b>Chapter1:Macro economic model</b> <ul style="list-style-type: none"> <li>• Introduction to National Income Accounting</li> <li>• Concepts of GDP, GNP and national income</li> <li>• Approaches to calculating GDP, personal income, Nominal and real GDP</li> <li>• Limitations of the GDP concept</li> </ul> | 5         |
|           | <b>Chapter2:Demand and supply of money</b> <ul style="list-style-type: none"> <li>• Meaning</li> <li>• The demand for money – determinants</li> <li>• The supply of money– sources</li> <li>• Credit creation</li> </ul>                                                                                          | 4         |
|           | <b>Chapter3:Inflation</b> <ul style="list-style-type: none"> <li>• Meaning and causes of inflation</li> <li>• Calculating inflation rate</li> <li>• Impact of inflation</li> </ul>                                                                                                                                | 3         |
|           | <b>Practicum:</b> 1. Understanding the relationships between various NI concepts used in India's NI accounting;<br>2. Estimating the components of money supply and interpreting the various price indices                                                                                                        |           |
| <b>II</b> | <b>Macro economic Challenges and Policies</b>                                                                                                                                                                                                                                                                     | <b>12</b> |
|           | <b>Chapter4:Macroeconomic challenges</b> <ul style="list-style-type: none"> <li>• Unemployment</li> <li>• Economic Growth</li> <li>• Business Cycles</li> </ul>                                                                                                                                                   | 3         |
|           | <b>Chapter5:Monetary Policy</b> <ul style="list-style-type: none"> <li>• Objectives</li> </ul>                                                                                                                                                                                                                    | 3         |



|  |                                                                                                                                                                                                                                                                                                                                 |   |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|  | <ul style="list-style-type: none"> <li>• Instruments</li> </ul> <b>Chapter6:Fiscal Policy</b> <ul style="list-style-type: none"> <li>• Public finance vs. Private finance</li> <li>• Fiscal functions and role of government: allocation, distribution and stabilization</li> <li>• Characteristics of public goods,</li> </ul> | 6 |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>Rationale of public provision of public goods</li> </ul> Practicum: 1. Reviewing the monetary policy of RBI;<br>2. A project to identify the nature and causes of poverty and the latest central budget                                                                                                                                                                                                                                                                                                 |    |
| III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Public Policy and Globalization</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 18 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Chapter 7: Poverty and public policy</b> <ul style="list-style-type: none"> <li>Meaning, measurement and types of poverty</li> <li>Poverty alleviation strategies in India</li> </ul> <b>Chapter 8: Concepts and Theories of international trade</b> <ul style="list-style-type: none"> <li>The economic basis for trade—absolute advantage and comparative advantage,</li> <li>Terms of trade</li> <li>Exchange rates</li> <li>Trade Barriers—tariffs, subsidies and quotas</li> </ul> Balance of Payments—The current and capital account | 6  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Chapter 9: Globalization</b> <ul style="list-style-type: none"> <li>Meaning</li> <li>Importance</li> <li>Pros and cons of Globalization</li> </ul> Practicum: Survey on identification of poor; Calculating the components of BoP of India                                                                                                                                                                                                                                                                                                  | 9  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3  |
| <b>References(indicative)</b> <ol style="list-style-type: none"> <li>Cohen, A.J.(2020) .<i>Macro economics for Life: Smart Choices for All?</i>+ <i>My Lab Economics with Pearson e Text</i> (updated 2<sup>nd</sup> ed.). Toronto, ON: Pearson Canada Inc. Type: Textbook: ISBN:9780136716532</li> <li>Cohen, A.J. (2015). <i>Micro economics for Life: Smart Choices for You + My Lab Economics with Pearson e Text</i>(2<sup>nd</sup> ed.). Toronto, ON: Pearson Canada Inc. Type: Text book :ISBN: 9780133899368</li> <li>Case Karl E. and Fair Ray C. Principles of Economics, Pearson Education Asia,2014.</li> <li>Mankiw N.Gregory.Principles of Economics,Thomson,2013.</li> <li>Stiglitz J.E. and Walsh C.E. Principles of Economics, W.W. Norton &amp; Co, New York, 2011.</li> </ol> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |

### Pedagogy

| Formative Assessment      |                     |
|---------------------------|---------------------|
| Assessment Occasion /type | Weight age in Marks |
| Internal Test             | 50%                 |
| Assignment                | 25%                 |
| Presentation/Project      | 25%                 |
| <b>Total</b>              | <b>100</b>          |

## Semester II

|                                                |                               |
|------------------------------------------------|-------------------------------|
| Course Title: <b>DSC 2.3:Karnataka Economy</b> |                               |
| Total Contact Hours:42                         | Course Credits:3              |
| Formative Assessment Marks:40                  | Duration of ESA/Exam: 3 Hrs   |
| Model Syllabus Authors:                        | Summative Assessment Marks:60 |

### Course Pre-requisite (s):

### Course Outcomes (COs):

At the end of the course the student should be able to:

1. Understand the nature of economic growth and problems of Karnataka state.
2. Explain the process of structural growth in Karnataka economy;
3. Evaluate the policies and programmes undertaken by the Govt. of Karnataka for bringing about socio-economic development

| Unit | Description                                                                                                                                                                                                                                                                                                                                       | Hours     |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| I    | <b>Characteristics of Karnataka Economy</b>                                                                                                                                                                                                                                                                                                       | <b>12</b> |
|      | <b>Chapter1: State Income</b> <ul style="list-style-type: none"> <li>• State Domestic Product and PCI</li> <li>• Measures to redress regional imbalances</li> </ul>                                                                                                                                                                               | 2         |
|      | <b>Chapter2:Human and Natural Resources</b> <ul style="list-style-type: none"> <li>• Population</li> <li>• Human Development Index</li> <li>• Poverty and Unemployment– Anti-Poverty and Employment generation Programmes</li> <li>• Functioning of Panchayat Raj Institutions</li> </ul>                                                         | 6         |
|      | <b>Chapter3:Natural Resources in Karnataka</b> <ul style="list-style-type: none"> <li>• Land, Water, Forest and mineral resources in Karnataka</li> <li>• Sustainable Development Goals</li> <li>• Karnataka environmental Policy</li> </ul> Practicum:                                                                                           | 4         |
| II   | <b>Agriculture and Industries in Karnataka</b>                                                                                                                                                                                                                                                                                                    | <b>18</b> |
|      | <b>Chapter4:Agriculture in Karnataka</b> <ul style="list-style-type: none"> <li>• Importance of Agriculture</li> <li>• Problems in Agriculture</li> <li>• Land Reforms</li> <li>• Cropping Pattern</li> <li>• Irrigation</li> <li>• Watershed Development</li> <li>• Dry Land Farming</li> <li>• Farmers Suicide –causes and solutions</li> </ul> | 9         |
|      | <b>Chapter5:Rural Development</b> <ul style="list-style-type: none"> <li>• Public Distribution System</li> <li>• Rural Development Programmes.</li> </ul>                                                                                                                                                                                         | 3         |
|      | <b>Chapter 6:Industries in Karnataka</b>                                                                                                                                                                                                                                                                                                          | 6         |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Major Industries in Karnataka-Problems and Prospects</li> <li>• MSMEs -Problems and Measures</li> <li>• IT Industries in Karnataka</li> <li>• Industrial Finance in Karnataka</li> <li>• Industrial Policy of Karnataka</li> </ul> Practicum:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
| III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Infrastructure and Finances</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 12          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Chapter7:InfrastructureinKarnataka</b> <ul style="list-style-type: none"> <li>• Transportation: Road, Rail, Water and Air Transport</li> <li>• InformationandCommunicationTechnologyfacilities;C</li> </ul> hapter8:SocialInfrastructure <ul style="list-style-type: none"> <li>• Drinking Water, Sanitation</li> <li>• Housing</li> <li>• Health and Education</li> <li>• Social Security in Karnataka</li> </ul> <b>Chapter9:StateFinance</b> <ul style="list-style-type: none"> <li>• Sources of Revenue: Direct and Indirect Taxes</li> <li>• GST–Impact and Collections</li> <li>• Sharing of Central Taxes and Grand-in-Aid</li> <li>• Expenditure Sources</li> <li>• States Indebtedness</li> <li>• State Finance Commission</li> <li>• State Budget</li> </ul> Practicum: | 3<br>4<br>5 |
| <b>References (indicative)</b> <ol style="list-style-type: none"> <li>1. Government of Karnataka, Economic Survey [Various Issues]</li> <li>2. Planning Department, Annual Publication, Government of Karnataka.</li> <li>3. Karnataka at Glance, Annual Publication Government of Karnataka.</li> <li>4. Madaiah M &amp; Ramapriya. Karnataka Economy Growth: Issues and Development, Himalaya Pub., House, New Delhi.</li> <li>5. Adul Aziz and K.G.Vasanti.(Eds) Karnataka Economy.</li> <li>6. Government District Development Reports</li> <li>7. Hanumantha Rao. Regional Disparities and Development in Karnataka.</li> <li>8. Krishnaiah Gowda H.R. Karnataka Economy, Spandana Publications, Bangalore</li> <li>9. Nanjundappa D.M.Some Aspects of Karnataka Economy.</li> <li>10. Puttaswamiah K. Karnataka Economy,Two Volumes</li> </ol> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |

### Pedagogy

| Formative Assessment     |                     |
|--------------------------|---------------------|
| Assessment Occasion/type | Weight age in Marks |
| Internal Test            | 50%                 |
| Assignment               | 25%                 |
| Presentation/Project     | 25%                 |
| <b>Total</b>             | <b>100</b>          |

## Semester II

|                                                          |                               |
|----------------------------------------------------------|-------------------------------|
| Course Title: <b>OEC 2.5:Contemporary Indian Economy</b> |                               |
| Total Contact Hours:42                                   | Course Credits:3              |
| Formative Assessment Marks:40                            | Duration of ESA/Exam: 3 Hrs   |
| Model Syllabus Authors:                                  | Summative Assessment Marks:60 |

### Course Pre-requisite(s):

### Course Outcomes (COs):

At the end of the course the student should be able to:

- vi. Understand the current problems of Indian Economy
- vii. Identify the factors contributing to the recent growth of the Indian economy
- viii. Evaluate impact of LPG policies on economic growth in India
- ix. Analyze the sector specific policies adopted for achieving the aspirational goals
- x. Review various economic policies adopted

| Content of Course 1                                                                                                                                                                                                                                                                                                                                 | 42 Hrs |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <b>Unit-1 ECONOMIC REFORMS AND AGRICULTURE</b>                                                                                                                                                                                                                                                                                                      | 14     |
| <b>Chapter No.1 Recent Issues</b> <ul style="list-style-type: none"> <li>Genesis and Impact of new Economic policy</li> <li>India's population policy</li> <li>Demographic Dividend</li> <li>India's human development in global perspective</li> </ul>                                                                                             | 4      |
| <b>Chapter No.2 Urbanization and governance</b> <ul style="list-style-type: none"> <li>Urbanization and Smart City Mission</li> <li>Urban Informal sector</li> <li>Urban Infrastructure</li> <li>Urban Environmental Problems</li> </ul>                                                                                                            | 4      |
| <b>ChapterNo.3EconomicReformsandAgriculture</b> <ul style="list-style-type: none"> <li>Agriculture and WTO</li> <li>Price policy and Subsidies</li> <li>Commercialization and Diversification</li> <li>Food security and PDS</li> <li>Impact of public investment on agricultural growth</li> <li>Agrarian Crisis, Farm Incomes, MGNREGS</li> </ul> | 6      |
| <b>Practicum</b> <ol style="list-style-type: none"> <li>Mini-project to ascertain the impact of pandemic on lives of different sections of population</li> <li>Field visits to understand the agrarian situation</li> </ol>                                                                                                                         |        |
| <b>Unit-2 NEW POLICY INITIATIVES</b>                                                                                                                                                                                                                                                                                                                | 14     |
| <b>ChapterNo.4. Industrial Policy</b> <ul style="list-style-type: none"> <li>New Industrial Policy and changes</li> <li>Public sector reform</li> <li>Privatization and Disinvestment</li> </ul>                                                                                                                                                    | 4      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <ul style="list-style-type: none"> <li>• Competition Policy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |
| <b>ChapterNo.5.Changing Economic Environment</b> <ul style="list-style-type: none"> <li>• Ease of Doing Business</li> <li>• Performance of MSMEs</li> <li>• Role of MNC's in Industrial Development</li> <li>• Make in India, development of economic and social infrastructure</li> <li>• National Monetization Pipeline</li> </ul> <p>(The teacher should include the latest policy of the government)</p> <b>Chapter No.6.Fiscal Policy</b> <ul style="list-style-type: none"> <li>• Tax, Expenditure, Budgetary deficits</li> <li>• Pension and Fiscal Reforms</li> <li>• Public debt management and reforms</li> <li>• Fiscal Responsibility and Budget Management (FRBM)Act</li> <li>• GST, Fiscal Federalism and Fiscal Consolidation</li> <li>• Recommendations of the Current Finance Commission</li> </ul> <b>Practicum:</b> Mini-projects to assess the business climate | 5  |
| <b>Unit-3 MONETARY POLICY, FOREIGN TRADE AND INVESTMENT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 14 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| <b>Chapter No.7 Money Market</b> <ul style="list-style-type: none"> <li>• Organization of India's money market</li> <li>• Financial sector reforms</li> <li>• Interest rate policy</li> <li>• Review of monetary policy of RBI</li> </ul>                                                                                                                                                                                                                                                                 | 3 |
| <b>Chapter No.8. Capital Markets</b> <ul style="list-style-type: none"> <li>• Working of SEBI in India</li> <li>• Changing roles of the Reserve Bank of India</li> <li>• Commercial banks,</li> <li>• Development Finance Institutions</li> <li>• Foreign banks and non-banking financial institutions</li> <li>• Analysis of price behaviour in India, Anti-inflationary measures</li> <li>• Demonetization and its impact</li> </ul>                                                                    | 5 |
| <b>Chapter No.9. Foreign Trade and Investment</b> <ul style="list-style-type: none"> <li>• India's foreign trade</li> <li>• India Balance of payment since 1991</li> <li>• New Exchange Rate Regime: Partial and full convertibility</li> <li>• Capital account convertibility</li> <li>• FDI– Trends and Patterns</li> <li>• New EXIM policy, WTO and India</li> <li>• Bilateral and Multilateral Trade Agreements and Associations</li> </ul>                                                           | 6 |
| <b>Practicum:</b> <ol style="list-style-type: none"> <li>3. Computation and analysis of Wholesale Price Index, Consumer Price Index: components and trends.</li> <li>4. Group Discussions on India's trade policies and trade agreements</li> </ol>                                                                                                                                                                                                                                                       |   |
| <b>References</b> <ul style="list-style-type: none"> <li>• Bardhan, P.K. (9th Edition) (1999), The Political Economy of Development in India, Oxford University Press, New Delhi.</li> <li>• Bhaduri Amit, (2015), A Model of Development By Dispossession, Fourth Foundation</li> <li>• Byres Terence J. (ed.), (1998), The State, Development Planning and Liberalisation 'in India, Delhi, OUP</li> <li>• Dutt Ruddar and K.P.M Sundaram (2001): Indian Economy, S Chand &amp; Co. Ltd. New</li> </ul> |   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>Delhi.</p> <ul style="list-style-type: none"> <li>• Frankel Francine R., (2004), India's Political Economy, Delhi. OUP Jenkins Rob, 2000, Economic Reform in India, Cambridge, CUP</li> <li>• Jalan, B. (1996), India's Economic Policy- Preparing for the Twenty First Century, Viking, New Delhi.</li> <li>• Joshi Vijaya and L.M.D. Little, (1998), India's Economic Reform 1991-2001, Delhi, OUP.</li> <li>• Kapila Uma: Indian Economy: Policies and Performances, Academic Foundation</li> <li>• Mishra S.K &amp; V.K Puri (2001) "Indian Economy and –Its development experience", Himalaya Publishing House.</li> <li>• Mukharji Rahul (ed.) (2007), India's Economic Transition: The Politics of Reforms, edited by Rahul Mukherji, Oxford University Press, New Delhi.</li> <li>• Stuart and John Harris, (2000), Reinventing India, Cambridge Polity</li> </ul> |  |
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### Pedagogy

| Formative Assessment     |                     |
|--------------------------|---------------------|
| Assessment Occasion/type | Weight age in Marks |
| Internal Test            | 50%                 |
| Assignment               | 25%                 |
| Presentation/Project     | 25%                 |
| <b>Total</b>             | <b>100</b>          |



## Semester II

|                                                      |                                |
|------------------------------------------------------|--------------------------------|
| <b>Course Title: OEC2.5: Sustainable Development</b> |                                |
| Total Contact Hours: 42                              | Course Credits: 3              |
| Formative Assessment Marks: 40                       | Duration of ESA/Exam: 3 Hrs    |
| Model Syllabus Authors:                              | Summative Assessment Marks: 60 |

### Course Pre-requisite (s):

### Course Outcomes (COs):

At the end of the course the student should be able to:

- i. Understand the basic concept of Sustainable Development (SD), the environmental, social and economic dimensions.
- ii. Know the history of the SD idea.
- iii. Be able to discuss the conflicts which are involved in the SD concept on the national as well as on the global scale.
- iv. Be able to discuss the (dis-) advantages of instruments for SD;
- v. Evaluate the sustainable development goals and their attainments

| Unit      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                | Hrs       |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>I</b>  | <b>Environment, Development and Pollution</b>                                                                                                                                                                                                                                                                                                                                                                                              | <b>15</b> |
|           | <b>Chapter 1: Meaning Characteristics of Environmental Goods and Services</b> <ul style="list-style-type: none"> <li>Relationship between Environment and Development</li> <li>Environmental Kuznets Curve–Meaning and Evidence</li> <li>Sustainable Development–Meaning and Indicators</li> </ul>                                                                                                                                         | 3         |
|           | <b>Chapter 2: Resource Use and Management</b> <ul style="list-style-type: none"> <li>Resource Taxonomy – Renewable and non renewable resources</li> <li>Economic Theory of Depletable Resources</li> <li>Optimal Use of Renewable Resources</li> <li>Resource Scarcity and Economic Growth–Limits to Growth Model</li> <li>Tragedy of Commons and common property Resources</li> <li>Resource Pricing and Resource Conservation</li> </ul> | 6         |
|           | <b>Chapter 3: Sustainable Development</b> <ul style="list-style-type: none"> <li>Definitions, Objectives and Principles</li> <li>Processes and Indicators of Sustainable Development</li> <li>Approaches and Strategies for Sustainable Development</li> <li>Environmental accounting Measures</li> </ul>                                                                                                                                  | 6         |
|           | <b>Practicum:</b> Minor project on impact of development on local environment                                                                                                                                                                                                                                                                                                                                                              |           |
| <b>II</b> | <b>Sustainable Development Goals</b>                                                                                                                                                                                                                                                                                                                                                                                                       | <b>10</b> |
|           | <b>Chapter 4: Introduction and History</b> <ul style="list-style-type: none"> <li>Brundtland Committee Recommendations</li> <li>Rio Summit and Agenda 21</li> <li>SDGs: Goals, Targets and Indicators</li> </ul>                                                                                                                                                                                                                           | 3         |
|           | <b>Chapter 5: Government and the SDGs</b> <ul style="list-style-type: none"> <li>Planning</li> <li>Localizing the SDGs</li> <li>SDG Policy Instruments</li> <li>Industrial Policies and the SDGs</li> </ul>                                                                                                                                                                                                                                | 4         |
|           | <b>Chapter 6: Financing the SDGs</b>                                                                                                                                                                                                                                                                                                                                                                                                       | 3         |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Types of financing</li> <li>New financing mechanisms and global funds</li> </ul> <p><b>Practicum:</b> Assignments on Progress in attainment of various SDGs in India and her states</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |
| <b>III</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Issues in Implementing SDGs</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 17                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p><b>Chapter7:Meansto Realizing the SDGs</b></p> <ul style="list-style-type: none"> <li>De growth and circular economy</li> <li>Sustainable production and consumption</li> <li>Sustainable cities and transportation</li> <li>Sustainable designs, technology, digital revolution and innovation</li> <li>Renewable energy</li> </ul> <p><b>Chapter8: Implementing SDGs</b></p> <ul style="list-style-type: none"> <li>Governance and policy tools</li> <li>Openness ,participation and accountability,</li> <li>Effectiveness and coherence;</li> <li>India's framework for sustainable development</li> </ul> <p><b>Chapter9:OtherIssues</b></p> <ul style="list-style-type: none"> <li>Social business, CSOs, and operations</li> <li>Development Assistance</li> <li>Cross-Border Cooperation</li> </ul> <p><b>Practicum:</b> Group Discussion on case studies on sustainable practices and Processes</p> | <p>8</p> <p>5</p> <p>4</p> |
| <p><b>Suggested Readings:</b></p> <ul style="list-style-type: none"> <li>Baumol,W.J.andW.E.Oates(1988):<i>TheTheory of Environmental Policy</i> ( 2e),CUP, Cambridge.</li> <li>Bhattacharya,R.N.(Ed): <i>Environmental Economics: An Indian Perspective</i>, OUP, NewDelhi.</li> <li>Dalby, Simon, et al. <i>Achieving the Sustainable Development Goals: Global Governance Challenges</i>. Routledge, 2019.</li> <li>Day, G.S., and P.J.H. Schoemaker (2011), <i>Innovating in uncertain markets: 10 lessons for green technologies</i>, MIT Sloan ManagementReview,52.4:37-45.</li> <li>Elliott, Jennifer. <i>An introduction to sustainable development</i>.Routledge,2012.</li> <li>Gagnon, B., Leduc, R., and Savard, L., <i>Sustainable development in engineering: a review of principles and definition of a conceptual framework</i>.WorkingPaper08-18,2008.</li> <li>Hanley, Shogren and White(1997):<i>Environmental Economics in Theory and Practice</i>, Macmillan.</li> <li>Kolstad, C.D.(1999): <i>Environmental Economics</i>, OUP,ND.</li> <li>Pearce,D.W.andR. Turner(1991): <i>Economics of Natural Resource Use and Environment</i>, John Hopkins Press, Baltimore.</li> <li>Sachs, Jeffrey D .<i>The age of sustainable development</i>. Columbia University Press,2015</li> <li>Tietenberg,T.(1994): <i>Environmental Economics and Policy</i>, Harper Collins, NY.</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |

## Pedagogy

| Formative Assessment     |                     |
|--------------------------|---------------------|
| Assessment Occasion/type | Weight age in Marks |
| Internal Test            | 50%                 |
| Assignment               | 25%                 |
| Presentation/Project     | 25%                 |
| Total                    | 100                 |

## Semester II

|                                                      |                             |
|------------------------------------------------------|-----------------------------|
| CourseTitle:OEC2.5:Economics of Business Environment |                             |
| TotalContactHours:42                                 | CourseCredits:3             |
| FormativeAssessmentMarks:40                          | Duration of ESA/Exam: 3 Hrs |
| Model Syllabus Authors:                              | SummativeAssessmentMarks:60 |

**Course Pre-requisite(s):**

**Course Outcomes (COs):**

At the end of the course the student should be able to:

- i. Explain the elements of Business environment.
- ii. Identify the environmental constraints in the growth of a business firm.
- iii. Analyze the ways to utilize the current environmental conditions to achieve higher business growth.

| <b>Unit</b> | <b>Content of Course</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>42Hrs</b>                                        |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>I</b>    | <b>Introduction to Business Environment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 12                                                  |
|             | <b>Chapter1:Introduction</b> <ul style="list-style-type: none"> <li>• Meaning and definition, objectives, importance and uses of study of business environment. Environmental analysis</li> <li>• Meaning,processofenvironmentalanalysis,limitationsofenvironmentalanalysis,environmentalfactors</li> <li>• The Micro environment of business and the macro environment of business.</li> </ul> <b>Chapter2:EconomicEnvironment</b> <ul style="list-style-type: none"> <li>• Meaning of Economic Environment</li> <li>• Characteristics of Indian economy</li> <li>• Impact of Liberalization Privatization &amp; Globalization of Indian Business.</li> <li>• Monetary policy–Meaning, objectives</li> <li>• Fiscal policy–Meaning, objectives, budget and importance</li> <li>• EXIM policy –meaning and objectives</li> <li>• Industrial policy–meaning, objectives (Latest Policy Measures).</li> </ul> <b>Chapter3:Global Business Environment</b> <ul style="list-style-type: none"> <li>• Meaning</li> <li>• Globalization: Nature and Impact of globalization</li> <li>• Challenges of international business</li> <li>• GATT and WTO and its implications on Indian economy.</li> </ul> <b>Practicum</b> <ol style="list-style-type: none"> <li>1. Identification of the impact of business environment through surveys</li> <li>2. Group discussion on WTO and its impact on Indian business</li> </ol> | 3<br><br><br><br><br><br>6<br><br><br><br><br><br>3 |
| <b>II</b>   | <b>Non-Economic Environment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10                                                  |
|             | <b>Chapter4:Social and Cultural Environment</b> <ul style="list-style-type: none"> <li>• Business and Society</li> <li>• Social Objectives of Business</li> <li>• Corporate Social Responsibility</li> <li>• Consumer Rights&amp; Corporate Governance</li> <li>• Business Ethics</li> </ul> <b>Chapter5:TechnologicalEnvironment:</b> <ul style="list-style-type: none"> <li>• Meaning</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4<br><br><br><br><br><br>2                          |



## SEMESTER- II

| <b>Semester II</b> Course Title: <b>OEC 2.5: Monetary Economics</b> |                                |
|---------------------------------------------------------------------|--------------------------------|
| Total Contact Hours: 42                                             | Course Credits: 3              |
| Formative Assessment Marks: 40                                      | Duration of ESA/Exam: 3 Hrs    |
| Model Syllabus Authors:                                             | Summative assessment marks :60 |

**Course Pre-requisite(s):** *12<sup>th</sup> Standard Pass*

### **Course Outcomes (OCs)**

**At the end of the course the student should be able to:**

1. Understand the current monetary policy and problems
2. Identify and analyse monetary instruments
3. Review the various trends and functions of monetary and financial institutions

| <b>Unit</b> | <b>Description</b>                                                                                                                                                                                                                                                           | <b>Hours</b> |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>1</b>    | <b>Introduction to Monetary Economics</b>                                                                                                                                                                                                                                    | 12 Hours     |
|             | <b>Chapter 1: Nature and functions of money</b> <ul style="list-style-type: none"> <li>• Difficulties of barter exchange system</li> <li>• Evolution of money</li> <li>• Definitions of money</li> <li>• Functions of money</li> <li>• Demand and supply of money</li> </ul> | 4 Hours      |
|             | <b>Chapter 2: Theories of Value of Money</b> <ul style="list-style-type: none"> <li>• Meaning</li> <li>• Cash transaction approach</li> <li>• Cash Balance Approach</li> <li>• Milton Friedman's Restatement of Quantity theory</li> </ul>                                   | 4 Hours      |
|             | <b>Chapter 3: Inflation</b> <ul style="list-style-type: none"> <li>• Meaning and types of inflation</li> <li>• Causes and effects of inflation</li> <li>• Measures to control inflation</li> </ul>                                                                           | 4 Hours      |
|             | <b>Practicum:</b> 1. Discussion on the various forms of money<br>2. Gather information on near money assets                                                                                                                                                                  |              |



**Suggested readings**

1. An Outline of Money – Geoffrey Crowther (Read Books Publications, Canada, 15 March 2017)
2. R. S. Sayers; ‘Modern Banking’ - Oxford University Press- Seventh Edition- 30th Nov 1967
3. M L Jhingan ; ‘Money, Banking’, Inter National Trade and Public Finance – (Vrinda Publications, Delhi– 1 Jan 2013)
4. Dr. D. M. Mithani ; ‘Money, Banking, Inter National Trade and Public Finance’- (Himalayan Publishing House, New Delhi- 1 Jan 2014)
5. Nader E.N; ‘ Money and Banking’ – (Prentice Hall India Learning Pvt. Ltd – 1 Jan 2013)
6. Dr. M.L. Seth; ‘Money, Banking’, Inter National Trade and Public Finance- (Laxmi Narian Agarwal Educational Publishers, Agra, India– 1 Jan 2017)
7. R.R. Paul; ‘Money, Banking and Inter National Trade’ –. Kalyani Publishers – 1 Jan 2015)
8. Indian Institute of Banking – International Banking Operations

**Pedagogy**

| <b>Formative Assessment</b>     |                            |
|---------------------------------|----------------------------|
| <b>Assessment Occasion/type</b> | <b>Weight age in Marks</b> |
| Internal Test                   | 50%                        |
| Assignment                      | 25%                        |
| Presentation/Project            | 25%                        |
| <b>Total</b>                    | <b>100</b>                 |

Sd/-  
Sri. Dinakara Rao  
Member

Sd/-  
Dr. Vasantha Kumar  
Member

Sd/-  
Dr. Vedamani Basil Hans  
Member

Sd/-  
Mr. Channa Poojary  
Member(Special Invitee)

Sd/-  
Dr. Radhakrishna  
Member(Special Invitee)

Sd/-  
Dr. Roopa K.  
Member(Special Invitee)

Sd/-  
Prof. Vishwanatha  
Chairman





**चार वर्ष के बहु विषयक स्नातक कार्यक्रम  
हिन्दी भाषा का अध्ययन दो वर्ष (चार सेमिस्टर)  
BA,BSW,BHRD के लिए प्रस्तावित पाठ्यक्रम**

**Programme Structure for UG Programme  
BA,BSW,BHRD. Ability Enhancement Compulsory Course**

| Semester | AECC/Credits-3 (L-4+T-0+P-0)<br>Total teaching hours – 4 Hrs./Week | Marks     |
|----------|--------------------------------------------------------------------|-----------|
| I        | हिन्दी कहानी साहित्य + हिन्दी व्याकरण                              | 60+40=100 |
| II       | हिन्दी उपन्यास साहित्य + प्रयोजनमूलक हिन्दी                        | 60+40=100 |
| III      | निबंध संग्रह + आत्मकथा, अनुवाद कला                                 | 60+40=100 |
| IV       | खण्ड काव्य + पत्र लेखन, आलेखन                                      | 60+40=100 |

**चार वर्ष के बहु विषयक स्नातक कार्यक्रम  
हिन्दी भाषा का अध्ययन दो वर्ष (चार सेमिस्टर)**

**B.SC { B.SC(FND), B.SC(FD,GD,LD), B.SC(FT) B.SC(IDGD),) B.SC(AVE)  
B.SC(C), B.SC(CS), BHM }**

**के लिए प्रस्तावित पाठ्यक्रम**

**Programme Structure for UG Programme**

**B.SC { B.SC(FND), B.SC(FD,GD,LD), B.SC(FT) B.SC(IDGD),) B.SC(AVE)  
B.SC(C), B.SC(CS), BHM }**

**Ability Enhancement Compulsory Course**

| Semester | AECC/Credits-3 (L-4+T-0+P-0)<br>Total teaching hours – 4 Hrs./Week | Marks     |
|----------|--------------------------------------------------------------------|-----------|
| I        | हिन्दी कहानी साहित्य                                               | 60+40=100 |
| II       | आधुनिक हिन्दी काव्य + हिन्दी व्याकरण                               | 60+40=100 |
| III      | नाटक साहित्य + संचार माध्य और हिन्दी                               | 60+40=100 |
| IV       | लघु उपन्यास + भाषा के विविध रूप                                    | 60+40=100 |

चार वर्ष के बहु विषयक स्नातक कार्यक्रम  
हिन्दी भाषा का अध्ययन दो वर्ष (चार सेमिस्टर)  
B.Com के लिए प्रस्तावित पाठ्यक्रम

**Programme Structure for UG Programme**  
**B.Com. Ability Enhancement Compulsory Course**

| Semester | AECC/Credits-3 (L-4+T-0+P-0)<br>Total teaching hours – 4 Hrs./Week | Marks     |
|----------|--------------------------------------------------------------------|-----------|
| I        | गद्य विधाएँ + व्याकरण                                              | 60+40=100 |
| II       | कविता संग्रह + पत्र लेखन + शब्दावली                                | 60+40=100 |
| III      | कहानी संग्रह + मीडिया लेखन                                         | 60+40=100 |
| IV       | नाटक + कम्प्यूटर और हिन्दी                                         | 60+40=100 |

**चार वर्ष के बहु विषयक स्नातक कार्यक्रम  
हिन्दी भाषा का अध्ययन दो वर्ष (चार सेमिस्टर)  
B.C.A के लिए प्रस्तावित पाठ्यक्रम**

**Programme Structure for UG Programme  
B.C.A Ability Enhancement Compulsory Course**

| Semester | AECC/Credits-3 (L-4+T-0+P-0)<br>Total teaching hours – 4 Hrs./Week | Marks     |
|----------|--------------------------------------------------------------------|-----------|
| I        | निबंध + व्याकरण                                                    | 60+40=100 |
| II       | कहानी + व्याकरण + प्रयोजनमूलक हिन्दी                               | 60+40=100 |
| III      | कविता + कम्प्यूटर अनुप्रयोग                                        | 60+40=100 |
| IV       | नाटक + अन्तर्जाल पर पत्रिकाएँ+चिट्ठा लेखन                          | 60+40=100 |

**चार वर्ष के बहु विषयक स्नातक कार्यक्रम  
हिन्दी भाषा का अध्ययन दो वर्ष (चार सेमिस्टर)  
B.B.A के लिए प्रस्तावित पाठ्यक्रम**

**Programme Structure for UG Programme  
B.B.A Ability Enhancement Compulsory Course**

| Semester | AECC/Credits-3 (L-4+T-0+P-0)<br>Total teaching hours – 4 Hrs./Week | Marks     |
|----------|--------------------------------------------------------------------|-----------|
| I        | कहानी + व्याकरण                                                    | 60+40=100 |
| II       | गद्य + कार्यालयी हिन्दी                                            | 60+40=100 |
| III      | कविता + समाचार लेखन + रिपोर्टाज                                    | 60+40=100 |
| IV       | नाटक + पत्र लेखन                                                   | 60+40=100 |

**Open Elective Syllabus**  
**हिन्दी भाषा और साहित्य का परिचयात्मक अध्ययन**  
**Introduction of Hindi Language and Literature**

| Semester | AECC/Credits-3 (L-4+T-0+P-0)<br>Total teaching hours – 4 Hrs./Week | Marks     |
|----------|--------------------------------------------------------------------|-----------|
| I        | संभाषण कला                                                         | 60+40=100 |
| II       | हिन्दी भाषा और हिन्दी साहित्य का परिचय                             | 60+40=100 |
| III      | अनुवाद कौशल्य                                                      | 60+40=100 |
| IV       | चरित्र निर्माण एवं व्यक्ति विकास                                   | 60+40=100 |

**Skill Based Hindi Syllabus**  
**कौशलाधारित हिन्दी पाठ्यक्रम**  
(All Course)

| Semester | AECC/Credits-3 (L-4+T-0+P-0)<br>Total teaching hours – 4 Hrs./Week | Marks     |
|----------|--------------------------------------------------------------------|-----------|
| I        | अनुवाद कौशल                                                        | 60+40=100 |
| III      | समाचार संकलन और विज्ञापन लेखन                                      | 60+40=100 |
| V        | सृजनात्मक लेखन                                                     | 60+40=100 |
| VI       | पटकथा और संवाद लेखन                                                | 60+40=100 |

**MANGALORE UNIVERSITY MANGALORE**  
**Department of Hindi**  
**Implementation of National Education Policy 2020**  
**Effect from 2021-2022 onwards**

Program Structures for UnderGraduate BA,BA(HRD),BSW/B.Sc/B.Com/BBA/ BCA & B.SC(FND), B.SC(FD,GD,LD), B.SC(FT) B.SC(IDGD),) B.SC(AVE) B.SC(C), B.SC(CS), BHM without practical. The syllabi comprises of the following courses-Discipline Specific Core Course (DSCC) Discipline Specific Elective Course (DSEC) Open Elective Course (OEC) Skills Enhancement Course (SEC) & Ability Enhancement Compulsory Courses (AECC) Vocational, Internship.

**B.A. program Annexure 1 B**  
**Discipline Specific Core (DSC)**

**I Semester**

| Semesters   | Title of the paper                                                                                                                                                                   | Credits | Marks         |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|
| A-1/B - 1   | कथा साहित्य<br>Collection of Hindi<br>Stories<br>प्रचलित हिन्दी कहानियाँ -सं.डॉ.सुमा.टी.आर<br>डॉ.नागरत्ना एन राव<br>'वतन' उपन्यास<br>Novel: vatan<br>हिन्दी व्याकरण<br>Hindi Grammar | 3       | 60 + 40 = 100 |
| A – 2/B – 2 | हिन्दी व्याकरण - कामताप्रसाद गुरू                                                                                                                                                    | 3       | 60 + 40 = 100 |

**II Semester**

|       |                                                                                                                               |   |              |
|-------|-------------------------------------------------------------------------------------------------------------------------------|---|--------------|
| A - 3 | आधुनिक हिन्दी काव्य<br>Modern Hindi poetry<br>आधुनिक हिन्दी कविता<br>सं.<br>खण्डकाव्य<br>Fragment<br>गोपा गौतम – जगदीश गुप्ता | 3 | 60 +40 = 100 |
| A - 4 | प्रयोजनमूलक हिन्दी<br>Functional Hindi                                                                                        | 3 | 60 +40 = 100 |

**Exit Option with Certificate Course**



### III Semester

| Semesters | Title of the paper                                                                                                                                                                                | Credits | Marks        |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------|
| A - 5     | <b>हिन्दी साहित्य का इतिहास</b><br><b>History of Hindi literature</b><br>(आदिकाल, भक्तिकाल, रीतिकाल)<br>हिन्दी साहित्य का इतिहास -- डॉ. नगेन्द्र<br>हिन्दी साहित्य का इतिहास – डॉ. शिवकुमार शर्मा | 3       | 60 +40 = 100 |
| A - 6     | <b>नाटक और रंगमंच</b><br>रंग और व्यंग्य – सुशिला टागबोरे<br>श्रेष्ठ एकांकी – सं. डॉ. सुमा. टी. आर<br>डॉ. श्रीधर हेगडे<br><b>Drama And one act play</b>                                            | 3       | 60 +40 = 100 |

### IV Semester

|       |                                                                                                                                                                                                                                   |   |              |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------------|
| A - 7 | <b>हिन्दी साहित्य का इतिहास</b><br><b>( आधुनिक काल )</b><br>हिन्दी साहित्य का इतिहास -- डॉ. नगेन्द्र<br>हिन्दी साहित्य का इतिहास – डॉ. शिवकुमार शर्मा<br><b>History of Hindi literature</b><br><b>( modern Hindi literature )</b> | 3 | 60 +40 = 100 |
| A - 8 | हिन्दी साहित्यिक निबंध<br><b>निबंधमणि –</b><br>सं. डॉ. सुमा. टी. आर<br>डॉ. गुरुदत्ता<br><b>Hindi Literary Essay</b>                                                                                                               | 3 | 60 +40 = 100 |

**Exit Option with Diploma**

### V Semester

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|--|--|--|--|

| Semesters              | Title of the paper                                                                                                                      | Credits | Marks        |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------|--------------|
| A - 9                  | <b>हिन्दी भाषा का इतिहास</b><br>हिन्दी भाषा का इतिहास – डॉ. धीरेन्द्र वर्मा<br>हिन्दी भाषा का इतिहास – डॉ. भोलानाथ तिवारी               | 4       | 60 +40 = 100 |
| A-10                   | <b>History of Hindi Language</b><br><b>छायावादोत्तर हिन्दी काव्य</b><br>काव्य तरंग – सं. डॉ. निरंजन<br><b>Chayavadottar Hindi Kavya</b> | 4       | 60 +40 = 100 |
| Discipline Core<br>B-9 | <b>अनुवाद सिद्धान्त</b><br>अनुवाद सिद्धान्त और प्रयोग- डॉ. भोलानाथ तिवारी<br><b>Theory of Translation</b>                               | 4       | 60 +40 = 100 |
| DSE A – 1              | <b>कर्नाटक साहित्य और संस्कृति</b><br><b>Literature and culture of Karnataka</b>                                                        |         |              |
| VOCATIONAL – 1         | <b>पठकथा और संवाद लेखन</b><br><b>Screenplay and Dialogue Writing</b>                                                                    | 3       | 60 +40 = 100 |
|                        |                                                                                                                                         | 3       | 60 +40 = 100 |

### VI Semester

|                              |                                                                                                                                                               |   |              |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------------|
| A -11                        | <b>साहित्यशास्त्र छंद और अलंकार</b><br>काव्यशास्त्र के विविध सोपान – डॉ. बट्टीनाथ तिवारी<br><b>Sahitya shastra Chand Aur Alankar</b>                          | 4 | 60 +40 = 100 |
| A- 12                        | <b>राष्ट्रीय चेतना और हिन्दी साहित्य</b><br>आजादी की अग्निशिखाएँ – चयन एवं संयोजन : डॉ. शिव कुमार मिश्र<br><b>National Consciousness and Hindi Literature</b> | 4 | 60 +40 = 100 |
| Discipline<br>(Core)<br>B-10 | <b>संपादन कला और व्यवस्थापन</b><br>Sampadankala aur vyavasthapan                                                                                              | 4 | 60 +40 = 100 |
| DSE A – 2                    | <b>चर्चित रचनाकार ( कवि और लेखक )</b><br>Famous writers<br>(poets and writers)                                                                                | 3 | 60 +40 = 100 |
| VOCATIONA – 2                | <b>मीडिया लेखन</b><br>Media writing                                                                                                                           | 3 | 60 +40 = 100 |

**Exit Option with Basic Degree**

## **VII Semester**

| <b>Semesters</b> | <b>Title of the paper</b>                                                                                               | <b>Credits</b> | <b>Marks</b>    |
|------------------|-------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|
| A-13             | हिन्दी पत्रकारिता<br>हिन्दी पत्रकारिता - सं.प्रो.प्रतिभा मुदलियार<br><b>Hindi Journalism</b>                            | 4              | 60 +40 = 100    |
| A- 14            | हिन्दी आलोचना और आलोचक<br><b>hindi criticism and critic writers</b><br>साहित्यशास्त्र और हिन्दी आलोचना -डॉ.सभापति मिश्र | 4              | 60 +40 = 100    |
| A- 15            | भारतीय काव्यशास्त्र<br>काव्यशास्त्र के विविध सोपान - डॉ.बद्रीनाथ तिवारी                                                 |                |                 |
|                  | शोध प्रविधि<br><b>Research methodology</b><br>शोध प्रविधि<br>-- विनय मोहन शर्मा                                         | 4              | 60 +40 = 100    |
| DSE A – 3        | शोध प्रविधि - डॉ.दीपमाला                                                                                                | 4              | 60<br>+40 = 100 |
|                  | अनुवाद सिद्धान्त और प्रयोग<br><b>Anuvad sidhant aur prayog</b><br>अनुवाद सिद्धान्त और प्रयोग - डॉ.भोलानाथ तिवारी        | 3              | 60 +40 = 100    |
| DSE A – 4        | प्रवासी साहित्य<br><b>Pravasi sahitya</b>                                                                               | 3              | 60 + 40 = 100   |

## **VIII Semester**

|           |                                                                                                                                                          |          |              |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|
| A-16      | <b>भारतीय साहित्य</b><br><b>INDIAN LITERATURE</b>                                                                                                        | <b>4</b> | 60 +40 = 100 |
| A - 17    | <b>साहित्य आलोचना की दृष्टि</b><br><b>Sahitya Alochana ki drushti</b>                                                                                    | <b>4</b> | 60 +40 = 100 |
| A. 18     | <b>भाषा विज्ञान</b><br><b>Linguistics</b><br>भाषा विज्ञान की भूमिका<br><b>डॉ - आ.देवेन्द्रनाथ शर्मा/दीप्ति शर्मा</b><br>भाषा विज्ञान - डॉ.भोलानाथ तिवारी | <b>4</b> | 60 +40 = 100 |
| DSE A - 5 | <b>स्त्री लेखन</b><br><b>Female writing</b><br><br><b>Research project</b>                                                                               | <b>3</b> | 60 +40 = 100 |
| DSE A - 6 | <b>सिनेमा और साहित्य</b><br><b>Film and literature</b><br><br><b>दक्षिण का हिन्दी साहित्य</b><br><b>Dakshin ka Hindi Sahitya</b>                         | <b>6</b> | 60 +40 = 100 |
| DSE A - 7 |                                                                                                                                                          |          |              |

**Exit Option with Award of Bachelor of Arts Honours**

**I Semester BA,BSW,BHRD Syllabus**  
**प्रथम सेमिस्टर बी.ए.बी.एस.डब्ल्यू.बी.हेच.आर.डी पाठ्यक्रम**

Teaching Hours : 4 Hrs. Per Week

Credits : 3

Exam Duration : 3 Hrs.

Total Marks : 100

Theory : 60

IA : 40

**Syllabus पाठ्यक्रम**

| UNIT | SUBJECT                                                                                                                                                                                                                                                                                                                                                | Marks |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | <b>हिन्दी कहानी साहित्य</b><br>1. सुभद्रा कुमारी चौहान – राही<br>2. प्रेमचंद – सुभागी<br>3. जैनेन्द्र – पाजेब<br>4. अज्ञेय – रोज़                                                                                                                                                                                                                      | 20    |
| II   | <b>हिन्दी कहानी साहित्य</b><br>1. अमरकांत – दोपहर का भोजन<br>2. ज्ञानरंजन – पिता<br>3. सुशील टाकभौरे – सिलिया<br>4. मुक्ता – काठलूम अपने-अपने                                                                                                                                                                                                          | 20    |
| III  | <b>हिन्दी व्याकरण</b> – 1.वर्ण विचार-भाषा का स्वरूप, स्वर,व्यंजन,वर्तनी, संधि और उसके भेद                                                                                                                                                                                                                                                              | 10    |
| IV   | <b>हिन्दी व्याकरण</b> – शब्द विचार-परिभाषा, शब्द के विविध प्रकार<br>1. उत्पत्ति के आधार पर – तत्सम शब्द, तद्भव शब्द, देशज शब्द, विदेश शब्द,संकर शब्द<br>2. व्युत्पत्ति के आधार पर – रूढ़ शब्द, यौगिक शब्द, योगरूढ़ शब्द<br>3. अर्थ के आधार पर – सार्थक शब्द, निरर्थक शब्द<br>4. विकार के आधार पर – विकारी और अविकारी (सामान्य परिचय)<br>5. शब्द शुद्धि | 10    |

**Prescribed Books :**

1. कहानी विविधा – संपादक : प्रो. नागभूषण एच.जी
2. व्याकरण – संक्षिप्त हिन्दी व्याकरण – कामता प्रसाद गुरु
3. समग्र हिन्दी व्याकरण – डॉ. बालमुकुंद सुखवाल

**Pedagogy : शिक्षा पद्धति :** 1. कक्षा व्याख्यान, कहानी का पठन, गतिविधि आधारित शिक्षण, सामूहिक चर्चा

**Expected Out-come : अपेक्षित परिणाम :**

1. कहानी के पठन-पाठन में रुचि उत्पन्न होगी
2. कहानी के माध्यम से जीवन की वास्तविक और आदर्श की पहचान
3. भाषा कौशल का निर्माण
4. भाषा शुद्धता के प्रति सजगता उत्पन्न होगी

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                                                             | Division of Marks | Marks  |
|--------------|------------------------------------------------------------------------------|-------------------|--------|
| I            | One word or One Sentence Answer (Unit I&II)                                  | 1X10              | 10     |
| II           | Annotations (Unit I & II) Internal Choice                                    | 5X2               | 10     |
| III          | Essay Type Questions (Unit I 1 out of 2)                                     | 10X1              | 10     |
| IV           | Essay Type Questions (Unit II 1 out of 2 )                                   | 10X1              | 10     |
| V            | Theoretical Grammar – (Unit III & IV - 2 out of 4 )                          | 5X2               | 10     |
| VI           | Practical Grammar(Unit IV)<br>1. Tatsam & Tadbhav<br>2. Correction of words. | 1X5<br>1X5        | 5<br>5 |
|              | TOTAL                                                                        |                   | 60     |

**II Semester BA,BSW,BHRD Syllabus**  
**द्वितीय सेमिस्टर बी.ए.बी.एस.डब्ल्यू.बी.हेच.आर.डी पाठ्यक्रम**

**Teaching Hours : 4 Hrs. Per Week**

**Credits : 3**

**Exam Duration : 3 Hrs.**

**Total Marks : 100**

**Theory : 60**

**IA : 40**

**Syllabus पाठ्यक्रम**

| UNIT | SUBJECT                                                          | Marks |
|------|------------------------------------------------------------------|-------|
| I    | हिन्दी उपन्यास साहित्य<br>भगवान दास मोरवाल का उपन्यास – शकुंतिका | 20    |
| II   | हिन्दी उपन्यास साहित्य<br>भगवान दास मोरवाल का उपन्यास – शकुंतिका | 20    |
| III  | प्रयोजन मूलक हिन्दी के विविध रूप                                 | 10    |
| IV   | प्रयोजन मूलक हिन्दी की शब्दावली                                  | 10    |

Prescribed Books : 1. शकुंतिका (उपन्यास) – लेखक: भगवानदास मोरवाल

2. प्रयोजन मूलक हिन्दी के विविध रूप – डॉ. कल्पना प्रभु

Pedagogy : शिक्षा पद्धति : 1. कक्षा व्याख्यान, उपन्यास का पठन, गतिविधि आधारित शिक्षण, सामूहिक चर्चा

Expected Out-come : अपेक्षित परिणाम :

1. उपन्यास के पठन-पाठन में रुचि उत्पन्न होगी
2. उपन्यास के माध्यम से जीवन की वास्तविक और आदर्श की पहचान
3. भाषा कौशल का निर्माण
4. भाषा शुद्धता के प्रति सजगता उत्पन्न होगी

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                                                                               | Division of Marks | Total Marks |
|--------------|------------------------------------------------------------------------------------------------|-------------------|-------------|
| I            | One word or One Sentence Answer (Unit I&II)                                                    | 1X10              | 10          |
| II           | Short Notes (Unit I&II) (2 out of 4)                                                           | 5X2               | 10          |
| III          | Essay Type Questions (Unit I&II 2 out of 4 Internal Choice)                                    | 10X2              | 20          |
| IV           | Short Notes From Prayojanmoolak Hindi (Unit III) (2 out of 4)                                  | 5X2               | 10          |
| V            | Practical Grammar (Unit IV)<br>1.Convert from Hindi To English<br>2. Convert from Eng To Hindi | 1X5<br>1X5        | 05<br>05    |
|              | <b>TOTAL</b>                                                                                   |                   | <b>60</b>   |

**I Semester B.A./B.S.W/B.A.(HRD) Degree Examination, April 2022**  
**Choice Based Credit System(2021-22 Batch onwards)**  
**Ability Enhancement Compulsory Course**  
**Language 2 : HINDI**  
**(Group - III) (Paper - I)**

Time : 3 Hrs.

Max. Marks :60

**Question Paper Pattern      प्रश्न पत्र का नमूना**

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**I      एक शब्द या वाक्य में उत्तर लिखिए :-**

**1X10 = 10**

1. तुलसी महतो के कितने बच्चे थे ?
2. सजनसिंह ने सुभागी को अपनी पुत्रवधू के रूप में क्यों चुना ?
3. राही – कहानी की लेखिका का नाम लिखिए ।
4. सुभागी – कहानी के लेखक का नाम लिखिए ।
5. राही को किस अपराध के कारण सज़ा हुई थी ?
6. पाजेब – कहानी के लेखक का नाम लिखिए ।
7. मुन्नी के लिए पाजेब कौन ले आया ?
8. दोपहर का भोजन कहानी के लेखक का नाम लिखिए ।
9. सिद्धेश्वरी के मझले बेटे का नाम क्या है ?
10. पिता कहानी के लेखक का नाम लिखिए ।

**II      किन्हीं दो पर ससंदर्भ व्याख्या कीजिए :-**

**5X2=10**

1. “आज तो सचमुच नहीं रोया । वह बड़ा ही होशियार हो गया है । कहता था, बडका भय्या के यहाँ जाऊँगा । ऐसा लडका . . .”
2. ‘भाभी, मैंने तुम्हारा आसरा कभी नहीं किया और भगवान ने चाहा तो कभी करूँगी भी नहीं। तुम अपनी देखो, मेरी चिंता न करो ।’
3. हाँ, हमें मजदूरी नहीं मिलती सरकार । हमारी जाति माँगरोरी है । हम केवल मांगते-खाते हैं ।
4. मालती एक बिलकुल अनैच्छिक, अनुभूतिहीन, नीरस, यन्त्रवत – वह भी थके हुए यन्त्र के से स्वर में कह रही है, “चार बज गये” ।

**III      “ सुभागी” कहानी का सार लिखकर विशेषताओं पर प्रकाश डालिए ।**

**अथवा**

**10**

“ रोज़” कहानी की मालती का चरित्र चित्रण कीजिए ।

IV “दोपहर का भोजन” कहानी का सार लिखकर विशेषताओं पर प्रकाश डालिए ।

अथवा

10

“पिता” का चरित्र चित्रण कीजिए ।

V किन्हीं दो प्रश्नों का उत्तर लिखिए :-

5X2=10

1. भाषा के स्वरूप का वर्णन कीजिए ।
2. शब्द विचार की परिभाषा और अर्थ के भेदों को उदाहरण सहित लिखिए ।
3. उत्पत्ति के आधार पर शब्द के प्रकारों को उदाहरण सहित लिखिए ।
4. विकारी और अविकारी शब्दों का अंतर समझाइए ।

VI निम्न लिखित तत्सम शब्दों का तद्धव रूप लिखिए ।

1X5=5

- |         |           |          |        |         |
|---------|-----------|----------|--------|---------|
| 1. चक्र | 2. रात्रि | 3. अक्षि | 4. वधू | 5. कर्म |
|---------|-----------|----------|--------|---------|

VII निम्न लिखित शब्दों का शुद्ध रूप लिखिए ।

1X5=5

- |         |           |         |           |          |
|---------|-----------|---------|-----------|----------|
| 1. बिली | 2. धरवाजा | 3. भाशा | 4. अतियंत | 5. मंदीर |
|---------|-----------|---------|-----------|----------|

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**II Semester B.A./B.S.W/B.A(HRD) Degree Examination, April 2022**  
**Choice Based Credit System(2021-22 Batch onwards)**  
**Ability Enhancement Compulsory Course**  
**Language 2 : HINDI**  
**(Group - III) (Paper - II)**

Time : 3 Hrs.

Max. Marks :60

**Question Paper Pattern      प्रश्न पत्र का नमूना**

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- I एक शब्द या वाक्य में उत्तर लिखिए :-** **1X10 = 10**
1. शकुंतिका उपन्यास के लेखक का नाम लिखिए ।
  2. दुर्गा किसको पुत्र जन्म का आश्वासन देती है ?
  3. भगवती क्यों चिंतित थी ?
  4. दुर्गा के छोटे लडके का नाम लिखिए ।
  5. दादा का नाम क्या है ?
  6. “हे राम ! ये सारे कौरव इसी घर में पैदा हो गए ? – यह किसका कथन है ?
  7. भगवती की पोतियों में से किसी एक का नाम लिखिए ।
  8. उग्रसेन कौन है ?
  9. भगवती की बहू कौन है ?
  10. सिया कौन-सी शिक्षा पा रही थी ?
- II किन्हीं दो विषयों पर टिप्पणी लिखिए :-** **5X2=10**
1. सिया    2. मार्गी    3. उग्रसेन    4. दशरथ
- III किन्हीं दो प्रश्नों के उत्तर लिखिए :-** **10X2=20**
1. “शकुंतिका” उपन्यास का सार लिखकर विशेषताओं पर प्रकाश डालिए ।
  2. भारतीय पितृ सत्तात्मक परिवार में वर्तमान पुत्र-पुत्री भेद भाव पर लेखक ने कैसे कटाक्ष किया है ? समझाइए ।
  3. दुर्गा का चरित्र चित्रण कीजिए ।
  4. भगवती का चरित्र चित्रण कीजिए ।
- IV किन्हीं दो प्रश्नों का उत्तर लिखिए :-** **5X2=10**
1. प्रयोजन मूलक हिन्दी किसे कहते हैं ? समझाइए ।
  2. प्रयोजन मूलक हिन्दी के किन्हीं दो रूपों का परिचय दीजिए ।
  3. राजभाषा अधिनियम माने क्या है ? पूर्ण परिचय दीजिए ।
- V निम्नलिखित पारिभाषिक शब्दों को हिन्दी से अंग्रेज़ी में परिवर्तित कीजिए :-** **1X5=5**
1. वार्षिक    2. खाता    3. अक्षि    4. पूँजी    5. बंधपत्र
- VI निम्नलिखित पारिभाषिक शब्दों को अंग्रेज़ी से हिन्दी में परिवर्तित कीजिए :-** **1X5=5**
1. Graduate    2. Fundamental    3. Acknowledgement    4. Document    5. Tax

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**{ B.SC(FND), B.SC(FD,GD,LD), B.SC(FT) B.SC(IDGD), B.SC(AVE) B.SC(C), B.SC(CS), BHM }**

**बी.एस.सी प्रथम सेमिस्टर पाठ्यक्रम**

**Teaching Hours : 4 Hrs. Per Week**

**Credits : 3**

**Exam Duration : 3 Hrs.**

**Syllabus पाठ्यक्रम**

**Total Marks : 100**

**Theory : 60**

**IA : 40**

| UNIT | SUBJECT                                                                                                                                                                                                      | Marks |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | <b>हिन्दी कहानी साहित्य</b><br>1. चंद्राधर शर्मा गुलेरी – उसने कहा था<br>2. प्रेमचंद – माँ<br>3. जयशंकर प्रसाद – आकाश दीप<br>4. विश्वभरनाथ कौशिक – ताई                                                       | 20    |
| II   | <b>हिन्दी कहानी साहित्य</b><br>1. फणिश्वरनाथ रेणु – मारे गए गुलफाम<br>2. जैनेन्द्र कुमार – इनाम<br>3. शिवानी – मित्र<br>4. कमलेश्वर – तलाश                                                                   | 20    |
| III  | <b>हिन्दी व्याकरण</b><br>1. संज्ञा – उसके भेद                      2. सर्वनाम – सर्वनाम के भेद<br>3. विशेषण – विशेषण के भेद        4. क्रिया – क्रिया के भेद (कर्म के अनुसार)                                | 10    |
| IV   | <b>हिन्दी पत्र व्यवहार : शब्द विचार : अविकारी शब्द</b><br>1. क्रिया विशेषण – उसके भेद    2. समुच्चय बोधक अव्यय – उसके भेद<br>3. सम्बन्ध बोधक – उसके भेद    4. विस्मयादिबोधक अव्यय – उसके भेद    5. 'ने' नियम | 10    |

**Prescribed Books :**

1. कहानी पीयूष – संपादक : डॉ. कल्पना जे प्रभु
2. समग्र हिन्दी व्याकरण – डॉ. बालमुकुंद सुखवाल

**Pedagogy : शिक्षा पद्धति :** 1. कक्षा व्यवस्थान 2. सामूहिक चर्चा 3. कक्षाओं में पठन पाठन की पद्धति 4. कहानी पाठ

**Expected Out-come : अपेक्षित परिणाम :**

1. छात्रों को हिन्दी साहित्य के प्रति रुची उत्पन्न होगी
2. रचनात्मकता में अभिरुचि का निर्माण
3. भाषायी सौंदर्य की समझ निर्माण होगी
4. कहानी लेखन के प्रति प्रेरित होंगे
5. कहानी रचने की क्षमता प्राप्त करेंगे।

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                                                                              | Division of Marks | Marks     |
|--------------|-----------------------------------------------------------------------------------------------|-------------------|-----------|
| I            | One word or One Sentence Answer (Unit I&II)                                                   | 1X10              | 10        |
| II           | Annotations (Unit I & II 2 out of 4) Internal Choice                                          | 5X2               | 10        |
| III          | Essay Type Questions (Unit I 1 out of 2)                                                      | 10X1              | 10        |
| IV           | Essay Type Questions (Unit II 1 out of 2 )                                                    | 10X1              | 10        |
| V            | Theoretical Grammar – (Unit III & IV - 2 out of 4 )                                           | 5X2               | 10        |
| VI           | Practical Grammar(Unit IV)<br>1. Recognition of type of the word<br>2. Correction of sentence | 1X5<br>1X5        | 5<br>5    |
|              | <b>TOTAL</b>                                                                                  |                   | <b>60</b> |

**II Semester B.Sc Syllabus**  
**{ B.SC(FND), B.SC(FD,GD,LD), B.SC(FT) B.SC(IDGD), B.SC(AVE) B.SC(C), B.SC(CS), BHM }**  
**बी.एस.सी. द्वितीय सेमिस्टर पाठ्यक्रम**

Teaching Hours : 4 Hrs. Per Week

Credits : 3

Exam Duration : 3 Hrs.

Total Marks : 100

Theory : 60

IA : 40

Syllabus पाठ्यक्रम

| UNIT | SUBJECT                                                                                                                                                                                | Marks |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | आधुनिक हिन्दी कविताएँ<br>1. मैथिलीशरण गुप्त – कुब्जा<br>2. बालकृष्ण भट्ट – धरती पर स्वर्ग<br>3. सुमित्रानंदन पंत – नौका विहार<br>4. नागार्जुन – हम भी साझीदार थे                       | 20    |
| II   | आधुनिक हिन्दी कविताएँ<br>1. केदारनाथ अग्रवाल – कहाँ नहीं पड़ती है किस पर<br>2. डॉ. नीरज जैन – धोखेबाज़ों की दुनिया<br>3. सुशीला टाकभौरे – विद्रोहिणी<br>4. भगवत रावत – यह तो अच्छा हुआ | 20    |
| III  | हिन्दी व्याकरण<br>1. लिंग- उसके भेद (पहचान के नियम) 2. वचन – उसके भेद (पहचान के नियम)<br>3. कारक – उसके भेद                                                                            | 10    |
| IV   | हिन्दी पत्र व्यवहार : शब्द विचार : अविकारी शब्द<br>1. काल – उसके भेद 2. वाच्य – उसके भेद 3. पद परिचय                                                                                   | 10    |

**Prescribed Books :**

1. कविता कुसुम – संपादक : डॉ. कल्पना जे प्रभु
2. समग्र हिन्दी व्याकरण – डॉ. बालमुकुंद सुखवाल

**Pedagogy : शिक्षा पद्धति :** 1. कक्षा व्याख्यान 2. सामूहिक चर्चा 3. कक्षाओं में पठन पाठन की पद्धति 4. कहानी पाठ

**Expected Out-come : अपेक्षित परिणाम :**

2. छात्रों को हिन्दी साहित्य के प्रति रुची उत्पन्न होगी
2. रचनात्मकता में अभिरुचि का निर्माण
3. भाषायी सौंदर्य की समझ निर्माण होगी
4. कविता लेखन के प्रति प्रेरित होंगे
5. कविता रचने की क्षमता प्राप्त करेंगे।

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                                                                          | Division of Marks | Marks  |
|--------------|-------------------------------------------------------------------------------------------|-------------------|--------|
| I            | One word or One Sentence Answer (Unit I&II)                                               | 1X10              | 10     |
| II           | Annotations (Unit I & II 2 out of 4) Internal Choice                                      | 5X2               | 10     |
| III          | Essay Type Questions (Unit I 1 out of 2)                                                  | 10X1              | 10     |
| IV           | Essay Type Questions (Unit II 1 out of 2 )                                                | 10X1              | 10     |
| V            | Theoretical Grammar – (Unit III & IV - 2 out of 4 )                                       | 5X2               | 10     |
| VI           | Practical Grammar(Unit IV)<br>1. Pad Parichay<br>2. Change of sentence ( Vachya Badaliye) | 5X1<br>1X5        | 5<br>5 |
|              | TOTAL                                                                                     |                   | 60     |

**I Semester B.Sc. { B.SC(FND), B.SC(FD,GD,LD), B.SC(FT) B.SC(IDGD), B.SC(AVE) B.SC(C), B.SC(CS), BHM } Degree Examination, April 2022**

Choice Based Credit System(2021-22 Batch onwards)

Ability Enhancement Compulsory Course

Language 2 : HINDI (Group - III) (Paper - I)

Time : 3 Hrs.

**Question Paper Pattern** प्रश्न पत्र का नमूना

Max. Marks :60

**I एक शब्द या वाक्य में उत्तर लिखिए :-**

**1X10 = 10**

1. करुणा के पति का नाम क्या है ?
2. चंपा अतल जल में क्या डुबा देती है ?
3. लहना सिंह किसे पानी पिलाने को कहता है ?
4. लाजवन्ती किस जमात तक पढ़ी थी ?
5. “ईनाम” कहानी के लेखक कौन है ?
6. कामेश्वर के कितने बच्चे थे ?
7. सुमी अपनी माँ के लिए कौनसा फूल लेकर आयी थी ?
8. मंजीरा किसके लिए जीना चाहती थी ?
9. धनंजय ने प्रमीला से क्या ईनाम माँगा?
10. फणीश्वरनाथ रेणुजी की कहानी का नाम लिखिए ?

**II किसी एक अवतरण की सप्रसंग व्याख्या कीजिए :-**

**5X1=5**

- अ) 1. यह न पूछों करुणा बड़ी करुण कथा है । बस, यही गनीमत समझो कि जीता लौट आया ।  
2. “तो चम्पा ! अब उससे भी अच्छे ढंग से हम लोग विचार सकते हैं । तुम मेरी प्राणधायी हो, मेरे सर्वस्व हो ।”

**आ) किसी एक अवतरण की सप्रसंग व्याख्या कीजिए :-**

**5X1=5**

1. “अच्छा जब आपको इतना सौक है तो सुनिए नहवा घटवारिन का गीत । इसमें गीत भी है, कथा भी है ।”
2. “मैं दिल्ली छोड़ दूँगा । इस सबके बाद मुझसे यहाँ रहा भी नहीं जाएगा । तुम शायद यहीं लौटकर आना पसंद करोगी । इस घर को अपने नाम ही रहने दो ।”

**III किसी एक प्रश्न का उत्तर लिखिए**

(अ) “माँ” कहानी का सार अपने शब्दों में लिखिए ।

**अथवा**

**10X1=10**

“उसने कहा था” कहानी का सार लिखकर विशेषताओं पर प्रकाश डालिए ।

(आ) “ईनाम” कहानी का सार अपने शब्दों में लिखिए ।

**अथवा**

**10X1=10**

“मित्र” कहानी का सार अपने शब्दों में लिखिए ।

IV किन्हीं दो प्रश्नों का उत्तर लिखिए :-

5X2=10

1. व्यंजन किसे कहते हैं ? उसकी परिभाषा लिखकर उसके भेदों को उदाहरण सहित लिखिए ।
2. संज्ञा की परिभाषा लिखकर उसके भेदों को उदाहरण सहित लिखिए ।
3. “ने” प्रत्यय प्रयोग के नियमों को अपवाद सहित लिखिए ?
4. समुच्चय बोधक अव्यय की परिभाषा लिखकर उसके भेदों को उदाहरण सहित लिखिए ?

V नीचे दिए गए शब्दों को पहचानिए :-

1X5=5

1. गणेश
2. तुमको
3. सुशील
4. तेज़
5. ऊपर

VI नीचे दिए गए वाक्यों को शुद्ध कीजिए :-

1X5=5

1. गीता फल खाया ।
2. राधा किताब पढ़ी होगी ।
3. वह ने खाना खाया ।
4. मैंने शहर जाना है ।
5. लड़की साड़ी पहनली है ।

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**II Semester B.Sc. { B.SC(FND), B.SC(FD,GD,LD), B.SC(FT) B.SC(IDGD), B.SC(AVE) B.SC(C), B.SC(CS), BHM } Degree Examination, April 2022**

Choice Based Credit System(2021-22 Batch onwards)

Ability Enhancement Compulsory Course

Language 2 : HINDI (Group - III) (Paper - II)

Time : 3 Hrs.

**Question Paper Pattern** प्रश्न पत्र का नमूना

Max. Marks :60

**I एक शब्द या वाक्य में उत्तर लिखिए :-**

**1X10 = 10**

1. किसका नंदनवन भूतल में छाया था ?
2. श्री बालकृष्ण शर्मा नवीन हमें किसकी बखानी सुनने को कहते हैं ?
3. कवि को कौन मधु यौवन आकर्षण पिलाती है ?
4. माँ के उर पर शिशु सा कौन धारा में सोया हुआ था ?
5. “यदि मैं होता घन सावन का” कविता के कवि कौन है ?
6. किसके कारण मन में संकल्प नहीं जमता ?
7. विस्फारित मन क्या कहकर हूँकारता है ?
8. क्या कुंठित कृपाण बन जाती है ?
9. गली का नाम किस में नहीं था ?
10. “वह तो अच्छा हुआ” कविता के कवी का नाम लिखिए ?

**II किसी एक संदर्भ की व्याख्या कीजिए :-**

**5X1=5**

- अ) 1. सत्य हुआ मैं देख रही थी अनदेखे सपने को;  
आत्मा-ग्लानि छोड़कर मैंने देखा तब अपने को ।  
“अब फिर कभी मिलूंगा” कहकर हँसता चला गया वह;  
ज्यों-ज्यों दूर गया मानस में धँसता चला गया वह ॥
2. साडी की सिकुडन-सी जिस पर, शशि को रेशमी विभा से भर  
सिमटी है वर्तुल मृदुल, लहार !  
चांदनी रात का प्रथम प्रहर!  
हम चले नाव लेकर सत्वर !

**आ) किसी एक संदर्भ की व्याख्या कीजिए :-**

**5X1=5**

1. सागर हो जाया करता है उद्विग्न  
खोलने लगा करता है उसका गुरु गम्भीर अस्तित्व  
और वह उडने लगा करता है भाप बनकर ऊपर  
बदल-बदल जाया करता है क्षण-पर क्षण उसका स्वरूप
2. बच्चे का रोना पैदा करता है दिल में दया  
इसलिए इस तरफ लोगों का ध्यान जाना भी जरूरी था  
कुछ लोग फुरसत में यह दृश्य दूर से देख रहे थे  
और उनके ऐन सामने देश के भविष्य का सवाल था ॥

III (अ) “कुब्जा” इस कविता का सार अपने शब्दों में लिखिए ।

अथवा

10

“नौका विहार कविता का सार लिखकर विशेषताओं पर प्रकाश डालिए ।

(आ) “विद्रोहिणी” कविता का सार अपने शब्दों में लिखिए ।

अथवा

10

“धोखेबाज़ों की दुनिया” कविता का सार अपने शब्दों में लिखिए ।

IV किन्हीं दो प्रश्नों का उत्तर लिखिए :-

5X2=10

1. लिंग किसे कहते हैं ? उसकी परिभाषा लिखकर उसे पहचानने के नियमों को उदाहरण सहित लिखिए ।
2. कारक की परिभाषा लिखकर उसके चार भेदों को उदाहरण सहित लिखिए ।
3. वाच्य किसे कहते हैं उसके भेदों के साथ बदलने के नियमों को लिखिए ।
4. वर्तमान काल की परिभाषा लिखकर उसके भेदों को उदाहरण सहित लिखिए ?

V वाच्य बदलिए :-

1X5=5

1. बच्चा रो रहा है
2. लंगड़ा दौड़ेगा ।
3. राधा गा नहीं सकती ।
4. नेता भाषण दे रहा है ।
5. श्याम पुस्तक पढ़ता है ।

VI पद परिचय दीजिए :-

5X1=5

मोहन प्रथम श्रेणी में उत्तीर्ण हुआ ।

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**I Semester B.Com Syllabus**  
**प्रथम सेमिस्टर बी.काम पाठ्यक्रम**

Teaching Hours : 4 Hrs. Per Week

Credits : 3

Exam Duration : 3 Hrs.

Total Marks : 100

Theory : 60

IA : 40

**Syllabus पाठ्यक्रम**

| UNIT | SUBJECT                                                                                                                                                                                                    | Marks |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | <b>हिन्दी गद्य साहित्य</b><br>1. बालकृष्ण भट्ट – बातचीत<br>2. आचार्य रामचन्द्र शुक्ल – भय<br>3. महादेवी वर्मा – गौरा<br>4. आचार्य हजारीप्रसाद द्विवेदी – कुटज                                              | 20    |
| II   | <b>हिन्दी गद्य साहित्य</b><br>1. जैनेन्द्रकुमार – बाज़ार दर्शन<br>2. अज्ञेय – मौत की घाटी में<br>3. वासुदेव शरण अग्रवाल – मातृभूमि<br>4. नरेन्द्र कोहली – त्रासदी एक कामना की                              | 20    |
| III  | <b>हिन्दी व्याकरण</b><br>1. वर्ण विचार – वर्ण के भेद    2. शब्द विचार – शब्द के भेद (रूपांतर के अनुसार)<br>3. संज्ञा – संज्ञा के भेद    4. कारक – कारक भेद<br>5. लिंग – लिंग के भेद    6. वचन – वचन के भेद | 10    |
| IV   | <b>हिन्दी पत्र व्यवहार :</b><br>1. पूछताछ पत्र, आदेश पत्र, शिकायती पत्र, आवेदन पत्र (नौकरी संबंधी) स्ववृत्त लेखन, प्रतिवेदन (रिपोर्ट लेखन)<br>2. पारिभाषिक शब्दावली                                        | 10    |

**Prescribed Books :**

1. गद्य मंगला – संपादक : डॉ. एस.ए. मंजुनाथ
2. व्याकरण – नवीन हिन्दी व्याकरण और रचना – संपादक : डॉ. एस.ए. मंजुनाथ
3. समग्र हिन्दी व्याकरण – डॉ. बालमुकुंद सुखवाल

**Pedagogy : शिक्षा पद्धति :** 1. एकांकी का पठन , गतिविधि आधारित शिक्षण, सामूहिक चर्चा

**Expected Out-come : अपेक्षित परिणाम :**

1. हिन्दी भाषा में एकांकी विधाओं का परिचय
2. गद्य के पठन-पाठन में रुचि उत्पन्न होगी
3. गद्य के माध्यम से जीवन की वास्तविक और आदर्श की पहचान
4. गद्य के माध्यम से भाषा कौशल का निर्माण और भाषा शुद्धता के प्रति सजगता उत्पन्न होगी

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                                                                              | Division of Marks | Marks  |
|--------------|-----------------------------------------------------------------------------------------------|-------------------|--------|
| I            | One word or One Sentence Answer (Unit I&II)                                                   | 1X10              | 10     |
| II           | Annotations (Unit I & II) Internal Choice                                                     | 5X2               | 10     |
| III          | Essay Type Questions (Unit I 1 out of 2)                                                      | 10X1              | 10     |
| IV           | Essay Type Questions (Unit II 1 out of 2 )                                                    | 10X1              | 10     |
| V            | Theoretical Grammar – (Unit III & IV - 2 out of 4 )                                           | 5X2               | 10     |
| VI           | Practical Grammar(Unit IV)<br>1. Change the Gender OR Change the Number<br>2. Technical Terms | 1X5<br>1X5        | 5<br>5 |
|              | TOTAL                                                                                         |                   | 60     |



**II Semester B.Com Syllabus**  
**द्वितीय सेमिस्टर बी.काम पाठ्यक्रम**

**Teaching Hours : 4 Hrs. Per Week**

**Credits : 3**

**Exam Duration : 3 Hrs.**

**Total Marks : 100**

**Theory : 60**

**IA : 40**

**Syllabus पाठ्यक्रम**

| UNIT | SUBJECT                                                                                                                                                                                      | Marks |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | <b>मध्यकालीन हिन्दी काव्य</b><br>1. कबीरदास – दोहे<br>2. तुलसीदास – दोहे<br>3. सूरदास – पद<br>4. मीराबाई – पद                                                                                | 20    |
| II   | <b>आधुनिक हिन्दी काव्य</b><br>1. मैथिलीशरण गुप्त – मनुष्यता<br>2. सूर्यकांत त्रिपाठी निराला – जूही की कली<br>3. अरुण कमल – पुतली में संसार<br>4. अनामिका – बेजगह                             | 20    |
| III  | <b>हिन्दी व्याकरण और रचना :</b><br>1. सर्वनाम – सर्वनाम के भेद 2. विशेषण – विशेषण के भेद<br>3. क्रिया – क्रिया के भेद 4. अव्यय – अव्यय के भेद<br>5. काल – काल के भेद 6. वाच्य – वाच्य के भेद | 10    |
| IV   | <b>हिन्दी व्यावहारिक व्याकरण</b><br>1. शब्द शुद्धीकरण 2. वाक्य शुद्धीकरण 3. विलोम शब्द<br>4. पद परिचय 5. प्रशासनिक शब्दावली                                                                  | 10    |

1. Prescribed Books : 1. काव्य मंगला – संपादक : डॉ. एस.ए. मंजुनाथ  
 2. व्याकरण – नवीन हिन्दी व्याकरण और रचना – संपादक : डॉ. एस.ए. मंजुनाथ

Pedagogy : शिक्षा पद्धति : 1. कक्षा व्याख्यान, गतिविधि आधारित शिक्षण, सामूहिक चर्चा

**Expected Out-come : अपेक्षित परिणाम :**

- हिन्दी भाषा के मध्यकालीन और आधुनिक हिन्दी कविता का परिचय
- काव्य पठन-पाठन में रुचि उत्पन्न होगी
- मध्यकालीन और आधुनिक काव्य के अंतर की पहचान प्राप्त होगी
- कविता के अध्ययन के द्वारा काव्य सृजन के लिए प्रेरणा मिलेगी
- आधुनिक हिन्दी काव्य के संबंध सोचने की क्षमता मिलेगी।

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                                                              | Division of Marks | Total Marks |
|--------------|-------------------------------------------------------------------------------|-------------------|-------------|
| I            | One word or One Sentence Answer (Unit I&II)                                   | 1X10              | 10          |
| II           | Annotations (Unit I & II) Internal Choice                                     | 5X2               | 10          |
| III          | Essay Type Questions (Unit I&II 2 out of 4 Internal Choice)                   | 10X2              | 20          |
| IV           | Theoretical Grammar – (Unit III & IV - 2 out of 4 )                           | 5X2               | 10          |
| V            | Practical Grammar (Unit IV)<br>1.Change the Tence OR Voice<br>2. Pad Parichay | 1X5<br>5X1        | 05<br>05    |
|              | TOTAL                                                                         |                   | 60          |

**I Semester B.Com. Degree Examination,**  
**Ability Enhancement Compulsory Course-Hindi Language**  
**Choice Based Credit system (2021-21 Batch onwards)**  
**November 2021 Language -1: HINDI**  
**(Group-III) (Paper- I)**

**Time : 3 Hrs.      Question Paper Pattern      प्रश्न पत्र का नमूना      Max. Marks : 60**

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- 1) Amendment
- 2) Capital
- 3) Detail
- 4) Document
- 5) Excise Duty

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**II Semester B.Com. Degree Examination,  
Ability Enhancement Compulsory Course-Hindi Language  
Choice Based Credit system (2021-21 Batch onwards)  
November 2021 Language -1: HINDI**

**Time : 3 Hrs.**

**(Group-III) (Paper- II)**

**Max. Marks : 60**

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| 1) Absence of duty | 2) Accountant | 3) Bank account |
| 4) Daily allowance | 5) Employee   |                 |

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**I Semester B.B.A Syllabus**  
**प्रथम सेमिस्टर बी.बी.ए पाठ्यक्रम**

**Teaching Hours : 4 Hrs. Per Week**

**Credits : 3**

**Exam Duration : 3 Hrs.**

**Total Marks : 100**

**Theory : 60**

**IA : 40**

| UNIT | SUBJECT                                                                                                                                                                                                                                                             | Marks |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | <b>हिन्दी कहानी साहित्य</b><br>1. प्रेमचंद – मंत्र<br>2. सुदर्शन – प्रेम-तरु<br>3. जैनेन्द्र – अपना पराया<br>4. यशपाल – कर्मफल                                                                                                                                      | 20    |
| II   | <b>हिन्दी कहानी साहित्य</b><br>1. भीष्म साहनी – माता-विमाता<br>2. मेहरुनीसा परवेज़ – पितृशोक<br>3. जयप्रकाश कर्दम – मज़दूर खाता<br>4. डॉ. सुरेश मूले – माँ मुझे भी स्कूल जाना है                                                                                    | 20    |
| III  | <b>हिन्दी सैद्धांतिक व्याकरण</b><br>1. वर्ण विचार-भाषा का स्वरूप, स्वर, व्यंजन, वर्तनी<br>2. शब्द विचार-परिभाषा, अर्थ के आधार पर सार्थक और निरर्थक शब्द                                                                                                             | 10    |
| IV   | <b>हिन्दी सैद्धांतिक व्याकरण</b><br>1. शब्द के विविध प्रकार<br>2. उत्पत्ति के आधार पर – तत्सम शब्द, तद्धव शब्द, देशज शब्द, विदेश शब्द<br>3. व्युत्पत्ति के आधार पर – रूढ़ शब्द, यौगिक शब्द, योगरूढ़ शब्द<br>4. विकार के आधार पर – विकारी और अविकारी (सामान्य परिचय) | 10    |

Prescribed Books : 1. हिन्दी की मधुर कहानियाँ – संपादक : डॉ. राजीव. सी  
2. व्याकरण – समग्र हिन्दी व्याकरण – डॉ. बालमुकुंद सुखवाल

Pedagogy : शिक्षा पद्धति : 1. कक्षा व्याख्यान, सामूहिक चर्चा

Expected Out-come : अपेक्षित परिणाम :

1. कहानी के विविध रूप का परिचय
2. कहानी के माध्यम से जीवन की वास्तविकता और सामाजिक आदर्श का चिंतन
3. भाषा कौशल तथा भाषा के प्रति सजगता उत्पन्न होगी

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                            | Division of Marks | Marks |
|--------------|---------------------------------------------|-------------------|-------|
| I            | One word or One Sentence Answer (Unit I&II) | 1X10              | 10    |
| II           | Annotations (Unit I&II) (2 out of 4)        | 5X2               | 10    |
| III          | Essay Type Questions (Unit I 1 out of 2)    | 10X1              | 10    |
| IV           | Essay Type Questions (Unit II 1 out of 2)   | 10X1              | 10    |

|    |                                                                                             |     |    |
|----|---------------------------------------------------------------------------------------------|-----|----|
| V  | Theoretical Grammar – (Unit III & IV - 2 out of 4 )                                         | 5X2 | 10 |
| VI | Practical Grammar(Unit IV)                                                                  |     |    |
|    | 1. Change the Tatsam To Tadbhav and Tadbhav To Tatsam word OR Correction of Spelling.       | 1X5 | 5  |
|    | 2. Bifurcation of Deshaj and Videshi Shabdh OR Identification of Roodh our Yogaroodh Shabdh | 1X5 | 5  |
|    | Total                                                                                       |     | 60 |

## II Semester B.B.A Syllabus

### द्वितीय सेमेस्टर बी.बी.ए पाठ्यक्रम

Teaching Hours : 4 Hrs. Per Week

Credits : 3

Exam Duration : 3 Hrs.

Total Marks : 100

Theory : 60

IA : 40

| UNIT | SUBJECT                                                                                                                                                                                                                                                          | Marks |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | <b>हिन्दी गद्य साहित्य</b><br>1. श्री राहुल सांकृत्यायन – घुमक्कड़ जिज्ञासा (यात्रा संस्मरण)<br>2. हरिजोशी – ऐनक है तो रौनक है (व्यंग्य लेख)<br>3. रामधारी सिंह दिनकर – ईर्ष्या तू न गई मेरे मन से (ललित निबंध)<br>4. धर्मवीर भारती – अपनी ही मौत पर (रम्य रचना) | 20    |
| II   | <b>हिन्दी गद्य साहित्य</b><br>1. शरद जोशी – अफसर (हास्यात्मक निबंध)<br>2. शिवपूजन सहाय – त्यागमूर्ति निराला (संस्मरण)<br>3. हरिशंकर परसाई – विधायकों की बिक्री (व्यंग्य)<br>4. डॉ.एन.ई.विश्वनाथ अय्यर – होली और ओणम (निबंध)                                      | 20    |
| III  | <b>कार्यलयी हिन्दी</b><br>1. संघ की राजभाषा (राजभाषा, राष्ट्रभाषा और संपर्क भाषा)<br>2. राजभाषा अधिनियम<br>3. राज्यों की राजभाषाएँ<br>4. संसद में प्रयोग होनेवाली भाषा                                                                                           | 10    |
| IV   | <b>कार्यलयी हिन्दी</b><br>1. हिन्दी का सामाजिक संस्कृति- रूप<br>2. बैंकिंग शब्दावली<br>3. अनुवाद                                                                                                                                                                 | 10    |

Prescribed Books :

1. गद्य पारिजात – संपादक : डॉ. राजीव. सी
2. प्रयोजनमूलक हिन्दी के विविध रूप- डॉ. कल्पना जे प्रभु

Pedagogy : शिक्षा पद्धति :

1. कक्षा व्याख्यान, सामूहिक चर्चा, रंगमंच कौशल

Expected Out-come : अपेक्षित परिणाम :

1. गद्य के विविध रूप का परिचय
2. गद्य के माध्यम से जीवन की वास्तविकता और सामाजिक आदर्श की चिंतन
3. भाषा कौशल तथा भाषा के प्रति सजगता उत्पन्न होगी

### Question Paper Pattern प्रश्न पत्र का नमूना

| Question No. | Type of Question                            | Division of Marks | Total Marks |
|--------------|---------------------------------------------|-------------------|-------------|
| I            | One word or One Sentence Answer (Unit I&II) | 1X10              | 10          |
| II           | Essay Type Questions (Unit I 1 out of 2)    | 10X1              | 10          |

|     |                                                                                            |            |          |
|-----|--------------------------------------------------------------------------------------------|------------|----------|
| III | Essay Type Questions (Unit II 1 out of 2 )                                                 | 10X1       | 10       |
| IV  | Short Notes (Unit I&II 2 out of 4 Internal Choice)                                         | 5X2        | 10       |
| V   | Theoretical Grammar – (Unit III & IV - 2 out of 4 )                                        | 5X2        | 10       |
| VI  | Practical Grammar (Unit IV)<br>1. Banking Shabdhalali<br>2. Translation (Kan/Eng To Hindi) | 1X5<br>5X1 | 05<br>05 |
|     | Total                                                                                      |            | 60       |

**I Semester B.B.A. Degree Examination, April 2022**

Choice Based Credit System(2021-22 Batch onwards)

Ability Enhancement Compulsory Course

Language 2 : HINDI

(Group - III) (Paper - I)

Time : 3 Hrs.

**Question Paper Pattern**

**प्रश्न पत्र का नमूना**

Max. Marks :60

- I एक शब्द या वाक्य में उत्तर लिखिए :-** **1X10 = 10**
- मंत्र कहानी में साँप किसको काट लेता है ?
  - प्रेम-तरु कहानी में श्री सुदर्शन जी ने किसके वात्सल्य को साकार कर दिया है ।
  - अपना-पराया कहानी के रचनाकार का नाम लिखिए ।
  - ‘कर्मफल’ कहानी किसकी निरीह अवस्था का बड़ा करुणाजनक चित्र है ?
  - ‘तमस’ उपन्यास के रचनाकार का नाम लिखिए ।
  - पितृशोक कहानी में पिता के कर्मों से बचने के लिए बेटा कहाँ भाग जाता है ?
  - ‘मजदूर खाता’ कहानी के रचनाकार का नाम लिखिए ।
  - किसको स्कूल जाना है ?
  - कर्मफल किसकी रचना है ?
  - डेढ़ सौ साल बीत चुके हैं परन्तु किसकी नाम आज भी उसी तरह ज़िन्दा है ।
- II किन्हीं दो प्रश्नों के लिए सप्रसंग व्याख्या कीजिए :-** **5X2=10**
- भाई ! यह बात तो तुमने मेरे मुँह से छीन ली । मैं भी यही कहने जा रहा था । हाँ, बेटा तो है ही । इसे खूब प्यार करोगी न ?
  - “उससे कहो, बच्चे को चुप करे, नहीं तो हमारी नींद में खलल पड़ता है । चले जाओ ।”
  - ‘क्या बात है ? क्या हल्ला मचा रही हो ?’ उसने दबे-दबे के साथ कहा ।
  - “इमरजेंसी ही है साहब ! मेरा बेटा सख्त बीमार है साहब । उसके इलाज के लिए पैसों की ज़रूरत है । उसी के लिए गाँव पैसे भिजवाने हैं ।”
- III निःस्वार्थ सेवा-भाव ही सबसे श्रेष्ठ है “मंत्र” कहानी के आधार स्पष्ट कीजिए ।**
- अथवा** **10**
- ‘कर्मफल’ कहानी का सारांश अपने शब्दों में लिखिए ।
- IV ‘पितृशोक’ कहानी का सारांश लिखिए ।**
- अथवा** **10**
- ‘माँ मुझे स्कूल जाना’ कहानी के माध्यम से आगामी पीढ़ी को शिक्षा की महत्ता को कहानिकार कैसे अवगत कराते हैं ?
- V किन्हीं दो प्रश्नों का उत्तर लिखिए :-** **5X2=10**
- भाषा के स्वरूप का वर्णन कीजिए ।
  - शब्द विचार की परिभाषा और अर्थ के भेदों को उदाहरण सहित लिखिए ।
  - उत्पत्ति के आधार पर शब्द के प्रकारों को उदाहरण सहित लिखिए ।



4. विकार के आधार पर शब्द के भेदों को उदाहरण सहित लिखिए ।
- VI अ) इन शब्दों का तद्धव रूप लिखिए :- 1X5=5
1. अंगुली 2. अगणित 3. दंत 4. अर्ध 5. कर्ण
- आ) रूढ, यौगिक और योगरूढ शब्दों को चुनकर लिखिए :- 1X5=5
1. शिक्षा 2. रात 3. गोमुख 4. हिमालय 5. एकदंत

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**II Semester B.B.A. Degree Examination, April 2022**

Choice Based Credit System(2021-22 Batch onwards)

Ability Enhancement Compulsory Course

Language 2 : HINDI

(Group - III) (Paper - II)

Time : 3 Hrs.

**Question Paper Pattern प्रश्न पत्र का नमूना**

Max. Marks :60

- I एक शब्द या वाक्य में उत्तर लिखिए :- 1X10 = 10
1. 'ईर्ष्या: तू न गयी मेरे मन से' किस प्रकार के निबंध है ?
  2. 'ईर्ष्या: तू न गयी मेरे मन से' निबंधकार कौन है ?
  3. 'अपनी ही मौत पर' निबंध के रचनाकार का नाम क्या है ?
  4. नाव में किसके साथ बैठकर जाने से डूबकर मरना बेहतर समझते हैं ?
  5. आजकल किसकी बिक्री हो रही है ?
  6. होली और ओणम के पीछे किस तरह की कथा छिपी हुई है ?
  7. हिन्दी संसार में महान त्यागवृत्ति साहित्यसेवी महाकवि कौन है ?
  8. किस पुस्तक में राहुल जी ने घुमक्कड़ी का शास्त्रीय विवेचन किया है ?
  9. 'ऐनक है तो रौनक है' जोशी जी के किस व्यंग्य गद्य संग्रह से लिया गया है ?
  10. देश में किसके उद्योग का विस्तार हो रहा है ?
- II श्री राहुल सांकृत्यायन के अनुसार 'घुमक्कड़ जिज्ञासा' माने क्या है ? निबंध के आधार पर विस्तार से लिखिए ।
- अथवा 10
- 'अपनी ही मौत पर' निबंध का सार लिखिए ।
- III 'त्यागमूर्ती निराला' जी का चरित्र-चित्रण कीजिए ।
- अथवा 10
- 'होली और ओणम' निबंध में चर्चित कथाओं के बारे में विस्तार से लिखिए ।
- IV किन्हीं दो पर टिप्पणी लिखिए :- 5X2=10
1. ईर्ष्या 2. ऐनक 3. अफसर 4. दलबदल विरोध कानून
- V किन्हीं दो प्रश्नों का उत्तर लिखिए :- 5X2=10
1. संघ की राजभाषा का परिचय दीजिए ।
  2. राजभाषा अधिनियम माने क्या है ? पूर्ण परिचय दीजिए ।
  3. हमारे संविधान में राज्यों की राजभाषाओं के बारे में क्या कहा गया है ?
  4. हिन्दी का सामाजिक संस्कृति-रूप क्या है ?
- VI अ) इन बैंकिंग शब्दों का हिन्दी रूप लिखिए :- 1X5=5
1. Check 2. Cash 3. Debit 4. Account 5. Balance
- आ) हिन्दी में अनुवाद कीजिए :- 5

Lal bahadura Shastri was born and brought up in poverty. He rose to high office of Prime Minister. Even as Prime Minister, he was very simple in his dress and food. He worked for long hours even at the cost of his health. For his great services, he was honored with the 'Bharat Rathna' after his death.

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ಲಾಲ್ ಬಹದ್ದೂರ್ ಶಾಸ್ತ್ರಿ ಅವರು ಬಡತನದಲ್ಲಿ ಹುಟ್ಟಿ ಬೆಳೆದವರಾಗಿದ್ದು ನಂತರ ಅತ್ಯುನ್ನತ ಪ್ರಧಾನಮಂತ್ರಿ ಹುದ್ದೆಗೆ ಏರಿತರು. ಪ್ರಧಾನಮಂತ್ರಿಯಾದ ಬಳಿಕವೂ ಅವರ ಉಡುಪು, ಆಹಾರ ಅತ್ಯಂತ ಸರಳವಾಗಿದ್ದವು. ತನ್ನ ಆರೋಗ್ಯವನ್ನು ಲೆಕ್ಕಿಸದೆ ಗಂಟೆಗಟ್ಟಲೆ ಅವರು ಕೆಲಸ ಮಾಡುತ್ತಿದ್ದರು. ಅವರ ಶ್ರೇಷ್ಠವಾದ ಸೇವೆಯನ್ನು ಗುರುತಿಸಿ ಮರಣೋತ್ತರವಾಗಿ “ಭಾರತ ರತ್ನ” ಪ್ರಶಸ್ತಿ ನೀಡಿ ಅವರನ್ನು ಗೌರವಿಸಲಾಯಿತು.

## I Semester B.C.A Syllabus प्रथम सेमिस्टर बी.सी.ए पाठ्यक्रम

**Teaching Hours : 4 Hrs. Per Week**

**Total Marks : 100**

**Credits : 3**

**Theory : 60**

**Exam Duration : 3 Hrs.**

**Syllabus पाठ्यक्रम**

**IA : 40**

| UNIT | SUBJECT                                                                                                                                                                                                 | Marks |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | 1. आत्मनिर्भरता – बालकृष्ण भट्ट<br>2. नई संस्कृति की ओर – रामवृक्ष बेनीपुरी<br>3. मित्रता – रामचन्द्र शुक्ल<br>4. मैं धोबी हूँ – शिवपूजन सहाय                                                           | 20    |
| II   | 1. जब मैं फेल हुआ – डॉ. ए.पी.जे. अब्दुल कलाम<br>2. पानी है अनमोल – श्रीराम परिहार<br>3. ताज – रघुवीर सिंह<br>4. वैश्वीकरण का भारतीय संस्कृति पर प्रभाव – डॉ.नामदेव                                      | 20    |
| III  | सैद्धांतिक व्याकरण<br>1. वर्ण विचार-भाषा का स्वरूप, स्वर, व्यंजन, वर्तनी<br>2. शब्द विचार-परिभाषा, अर्थ के आधार पर सार्थक और निरर्थक शब्द<br>3. रचना के आधार पर वाक्य भेद – सरल, संयुक्त और मिश्र वाक्य | 10    |
| IV   | व्यावहारिक व्याकरण<br>1. पल्लवन 2. संक्षिप्तिकरण 3. विज्ञापन                                                                                                                                            | 10    |

Prescribed Books : 1. निबंध सौरभ – संपादक : डॉ. सुमा टी रोडनवर  
2. व्याकरण – समग्र हिन्दी व्याकरण – डॉ. बालमुकुंद सुखवाल

Pedagogy : शिक्षा पद्धति : 1. गतिविधि आधारित शिक्षण 2. रचनात्मक अभिव्यक्ति

**Expected Out-come : अपेक्षित परिणाम :**

1. गद्य के तत्वों के आधार पर निबन्ध रचने की क्षमता प्राप्त होगी ।
2. छात्रों में पढ़ने की आदत का विकास होगा ।
3. वाचनकौशल तथा लेखन कौशल में बढोत्तरी ।

### Question Paper Pattern प्रश्न पत्र का नमूना

| Question No. | Type of Question                            | Division of Marks | Marks |
|--------------|---------------------------------------------|-------------------|-------|
| I            | One word or One Sentence Answer (Unit I&II) | 1X10              | 10    |
| II           | Annotations (Unit I&II) (2 out of 4)        | 5X2               | 10    |
| III          | Essay Type Questions (Unit I 1 out of 2)    | 10X1              | 10    |
| IV           | Essay Type Questions (Unit II 1 out of 2)   | 10X1              | 10    |

|    |                                                                               |            |        |
|----|-------------------------------------------------------------------------------|------------|--------|
| V  | Theoretical Grammar – (Unit III & IV - 2 out of 4 )                           | 5X2        | 10     |
| VI | Practical Grammar(Unit IV)<br>1. Pallavana OR Sankshithikarana<br>2. Vignapan | 5X1<br>5X1 | 5<br>5 |
|    | Total                                                                         |            | 60     |

**II Semester B.C.A Syllabus**  
**द्वितीय सेमिस्टर बी.सी.ए पाठ्यक्रम**

**Teaching Hours : 4 Hrs. Per Week**

**Total Marks : 100**

**Credits : 3**

**Theory : 60**

**Exam Duration : 3 Hrs.**

**Syllabus पाठ्यक्रम**

**IA : 40**

| UNIT | SUBJECT                                                                                                                                            | Marks |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I    | हिन्दी कहानी साहित्य<br>1. प्रेमचंद – सद्गति<br>2. जयशंकर प्रसाद – गुण्डा<br>3. यशपाल – कर्मफल<br>4. सुदर्शन – हार की जीत                          | 20    |
| II   | हिन्दी कहानी साहित्य<br>1. जैनेन्द्र – पत्नी<br>2. सियारामशरण गुप्त – बैल की बिक्री<br>3. रत्नकुमार सांभरिया – फुलवा<br>4. मृदुला गर्ग – मीरा नाची | 20    |
| III  | प्रयोजनमूलक हिन्दी – 1<br>1. हिन्दी की सांविधानिक स्थिति<br>2. राजभाषा अधिनियम<br>3. राजभाषा तथा सम्पर्क भाषा के रूप में हिन्दी                    | 10    |
| IV   | प्रयोजनमूलक हिन्दी – 2<br>1. प्रयोजनमूलक हिन्दी की अवधारणा, स्वरूप और क्षेत्र का महत्व<br>2. टिप्पणी लेखन, प्रतिवेदन<br>3. अनुवाद                  | 10    |

Prescribed Books :

1. कथा सरगम – संपादक – डॉ. नागरत्ना राव. एन
2. प्रयोजनमूलक हिन्दी के विविध रूप- डॉ. कल्पना जे प्रभु

Pedagogy : शिक्षा पद्धति : 1. गतिविधि आधारित शिक्षण 2. परिवेश सृजन और रचनात्मक अभिव्यक्ति 3. व्याख्यान, संवाद एवं बहस

Expected Out-come : अपेक्षित परिणाम :

1. गद्य के तत्व के आधार पर कहानी रचने की क्षमता 2. वाचन कौशल तथा लेखन कौशल बढ़ेगा 3. हिन्दी कथा के बारे में जानकारी प्राप्त होगी 4. प्रयोजन मूलक हिन्दी के अन्तर्गत राष्ट्रभाषा, राजभाषा और सम्पर्क भाषा की जानकारी प्राप्त होगी।

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                                            | Division of Marks | Total Marks |
|--------------|-------------------------------------------------------------|-------------------|-------------|
| I            | One word or One Sentence Answer (Unit I&II)                 | 1X10              | 10          |
| II           | Annotations (Unit I&II) (2 out of 4)                        | 5X2               | 10          |
| III          | Essay Type Questions (Unit I&II 2 out of 4 Internal Choice) | 10X2              | 20          |
| IV           | Theoretical Grammar – (Unit III & IV - 2 out of 4 )         | 5X2               | 10          |

|   |                                   |     |    |
|---|-----------------------------------|-----|----|
| V | Practical Grammar (Unit IV)       |     |    |
|   | 1. Tippani Lekhan OR Prativedan   | 5X1 | 05 |
|   | 2. Translation (Kan/Eng To Hindi) | 5X1 | 05 |
|   | Total                             |     | 60 |

BCA – I SEM Choice Based Credit System(2021-22 Batch onwards)

Ability Enhancement Compulsory Course

Language 2 : HINDI, (Group - III) (Paper - I)

Time : 3 Hrs.

Max. Marks :60

### Question Paper Pattern प्रश्न पत्र का नमूना

I एक शब्द या वाक्य में उत्तर लिखिए :- 1X10 = 10

1. आत्मनिर्भरता की तरह देश के कल्याण का प्रधान अंग कौन-सा है ?
2. हमारे यहाँ नई तालीम ने कौन-सा रंग दिखलाया है ?
3. लेखक किस दिन गंगा मैया से साक्षात्कार लेने गए ?
4. 'आदमी सर्प से भी अधिक ज़हरीला हो गया' – यह वाक्य किसने कहा ?
5. 'नई संस्कृति की ओर' निबन्ध के निबन्धकार कौन हैं ?
6. अब्दुल कलाम ने रात-दिन मेहनत करके किस तरह का विज्ञान डिज़ाइन तैयार किया ?
7. 'ताज' निबन्ध किसके द्वारा लिखित है ?
8. सरोवर तट पर किसका झुण्ड आ पहुँचा था ?
9. भूमण्डलीकरण का समानार्थी शब्द क्या है ?
10. "बहु अंतर राष्ट्रीय सार्वभौमिकता को दर्शाने के लिए कौन-सा शब्द का प्रयोग होता है ?

II किसी एक संदर्भ की व्याख्या कीजिए :- 5X1=5

- अ) 1. जो संकल्पों को दृढ़ करने में सहायक होता है। वही सच्चा मित्र है। जिसके संकल्प शक्ति क्षीण होती है, वह मित्र नहीं है।
2. मैं धोबी हूँ, भगवान भी धोबी हैं। मैं कपड़े धोता हूँ, वे पाप धोते हैं।

आ) किसी एक संदर्भ की व्याख्या कीजिए :- 5X1=5

1. कैसा जमाना आया कि जिस देश में दूध नहीं बिकता था, वहाँ अब पानी बिक रहा है।
2. वैश्विक आत्मकेन्द्रित और उपभोक्तावादी संस्कृति का प्रभाव भारतीय संस्कृति पर भी पड़ा है।

III अ) 'आत्मनिर्भरता' निबन्ध के माध्यम से निबन्धकार क्या कहना चाहते हैं। – स्पष्ट कीजिए।

अथवा

10

'ताज' निबन्ध का सार लिखकर उसकी विशेषताओं पर प्रकाश डालिए।

आ) 'पानी है अनमोल' निबन्ध के माध्यम से निबन्धकार का आशय समझाइए।

अथवा

10

'जब मैं फेल हुआ' पठित निबन्ध के आधार पर अब्दुल कलाम के उद्देश्य को व्यक्त कीजिए।

IV किन्हीं दो प्रश्नों का उत्तर लिखिए :- 5X2=10

1. 'भाषा' की परिभाषा लिखकर उसके स्वरूप का वर्णन कीजिए।
2. वर्ण किसे कहते हैं ? उसके भेदों को उदाहरणसहित समझाइए।

3. शब्द कैसे बनते हैं ? अर्थ के आधार पर भेदों को परिभाषा के साथ स्पष्ट कीजिए ।
4. वाक्य कैसे बनते हैं ? उसके भेदों को उदाहरणसहित समझाइए ।

**V पल्लवन लिखिए :-** 'नर और नारी जनमते और मरते हैं, परन्तु राष्ट्र सदा अमर रहता है । **5X1=5**  
**अथवा**

**संक्षिप्तीकरण कीजिए :-**

हमारे देश के त्योहार चाहे धार्मिक दृष्टी से मनाए जा रहे हों या नए वर्ष के आगमन के रूप में. फसल की कटाई या खलिहानों के भरने की खुशी में हों या महापुरुषों की याद में; सभी अपनी-अपनी विशेषताओं एवं क्षेत्रीय प्रभाव से युक्त होने के साथ ही राष्ट्रीय एवं सांस्कृतिक एकता और अखंडता को मज़बूती प्रदान करते हैं । ये त्योहार जहाँ जन-मानस में उल्लास, उमंग और खुशहाली भर देते हैं, वहीं हमारे अंदर देशप्रेम और गौरव की भावना के साथ-साथ विश्व-बंधुत्व की भावना भी बढ़ाते हैं ।

**VI टी.वी के संबंध एक विज्ञापन तैयार कीजिए :-** **5X1=5**

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**II Semester B.C.A Degree Examination, April 2022**  
**Choice Based Credit System(2021-22 Batch onwards)**  
**Ability Enhancement Compulsory Course**  
**Language 2 : HINDI (Group - III) (Paper - II)**

Time : 3 Hrs.

Max. Marks :60

**Question Paper Pattern      प्रश्न पत्र का नमूना**

- 
- I      एक शब्द या वाक्य में उत्तर लिखिए :- 1X10 = 10
1. सुरिया किस कहानी का पात्र है ?
  2. राजमाता का नाम क्या है ?
  3. सेठानी क्यों दुःखी थी ?
  4. आनंद बाबा भारती अपने घोड़े को किस नाम से पुकारते थे ?
  5. कालीचरण किस कहानी का पात्र है ?
  6. बैल की बिक्री कहानी में किसकी समस्याओं को दिखाया गया है?
  7. 'मीरा नाची' कहानी किसके द्वारा लिखित है ?
  8. फुलवा के बेटे का नाम क्या था ?
  9. दुखिया गोंड की लडकी को लेकर साह की दूकान क्यों जाती है ?
  10. यशपाल द्वारा लिखित कहानी कौन-सी है ?
- II      किसी एक संदर्भ की व्याख्या कीजिए :- 5X1=5
- अ)      1. 'ऐसा चलता है जैसे मोर घटा को देखकर नाच रहा हो' ।  
2. बिन्दी न डाक्टर थी न वैद्य, लेकिन बच्चे के दरद को माँ का हृदय अनुभव न करेगा, तो कौन करेगा ।
- आ)      किसी एक संदर्भ की व्याख्या कीजिए :- 5X1=5
1. नहीं सोचती कहा है ? असल भाव से वह तो वहा बैठी ही है, पत्नी सोचने को है तो यही कि कोयले न बुझ जाए ।
  2. 'रामेश्वर जी, सुबह कोठी पर आ जाना । इतने तुम्हारे दाढ का दर्द भी ठीक हो जाएगा । देशी घी का हलवा बनाऊँगी, कुंवर से ।'
- III अ) 'सद्गति' कहानी लिखकर उसकी विशेषताओं को स्पष्ट कीजिए ।
- अथवा 10
- 'हार की जीत' कहानी के आधार पर उसकी चारित्रिक विशेषताओं पर प्रकाश डालिए ।
- आ) 'बैल की बिक्री' कहानी के महत्व को प्रतिपादित कीजिए ।
- अथवा 10
- फुलवा कहानी में व्यक्त समस्याओं को रेखांकित कीजिए
- IV      किन्हीं दो प्रश्नों का उत्तर लिखिए :- 5X2=10

1. प्रयोजन मूलक हिन्दी की सबसे बड़ी विशेषता क्या है ?
2. राजभाषा और राष्ट्रभाषा के अन्तर को स्पष्ट कीजिए ।
3. प्रयोजन मूलक हिन्दी की उपयोगिता को स्पष्ट कीजिए ?
4. टिप्पणी लेखन क्या है ?

V निम्न में से किसी एक विषय पर लेख लिखिए :-

5X1=5

1. प्रतिवेदन
2. सम्पर्क भाषा

VI हिन्दी में अनुवाद कीजिए :-

5

**Lal bahadura Shaastrī was born and brought up in poverty. He rose to high office of Prime Minister. Even as Prime Minister, he was very simple in his dress and food. He worked for long hours even at the cost of his health. For his great services, he was honored with the 'Bharat Rathna' after his death.**

लाल बहादुर शास्त्रीयवतु बडतनदल्लु कुल्लु बललदवरागलदु नततर अतुनूत प्रुधानमंत्तु हुदुदुगुदुदु. प्रुधानमंत्तुयाद बलकवु अवत लुडुपु, अहार अतुनूत सरलवगलदुदुवु. तनु अरुुगुवनु लुकुसदु गंलुगलुलु अवतु कलस माडुतुदुदु. अवत तुुरुवुवदु सुरुवुनु गुरुतुसु मरुनुुतुतुवगु "भारत रतु" प्रुशुसु नुडु अवतनुु गुरुवुसलुयुतु.

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**I Semester Open Elective Syllabus**  
**BA,B.Sc,B.Com,BBA,BCA (Open Elective Course)**  
**प्रस्तावित पाठ्यक्रम**

**Teaching Hours : 4 Hrs. Per Week**

**Credits : 3**

**Exam Duration : 3 Hrs.**

**Syllabus पाठ्यक्रम**

**Total Marks : 100**

**Theory : 60**

**IA : 40**

| UNIT | SUBJECT                                                                                                     | Marks |
|------|-------------------------------------------------------------------------------------------------------------|-------|
| I    | 1. सरल व्याकरण :- वर्णमाला:-स्वर – उसके भेद, व्यंजन-उसके भेद, वर्तनी का मानकीकरण, बोलचाल में प्रायुक्त शब्द | 20    |
| II   | 1. वाक्य विचार : अर्थ और परिभाषा, आवश्यक तत्त्व, भेद, सरल वाक्य रचना                                        | 20    |
| III  | 1. संवाद कला : संवाद की परिभाषा, अर्थ, प्रकार, संवाद लेखन अभ्यास                                            | 10    |
| IV   | 1. संभाषण कला : अर्थ एवं स्वरूप, विविध रूप, आवश्यकता, अभ्यास                                                | 10    |

**Prescribed Books :**

1. समग्र हिन्दी व्याकरण – डॉ. बालमुकुंद सुखवाल

2. संभाषण कला अर्थ एवं विविध रूप :- सागरिका

**Pedagogy : शिक्षा पद्धति :**

1. कक्षा व्याख्यान 2. सामूहिक चर्चा 3. परिवेश निर्माण 4. आई.सी.टी तथा यू ट्यूब का प्रयोग

5. भिन्न भिन्न स्थानों पर वार्तालाप का अभ्यास

**Expected Out-come : अपेक्षित परिणाम :**

- छात्रों में अंतर्निहित सम्प्रेषण एवं बोलने का विकास होगा ।
- लिखने की कला में निपुणता हासिल होगी ।
- सम्भाषण कला के आधार पर व्यक्तित्व के निरूपण में विकास होगा ।

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                              | Division of Marks | Marks |
|--------------|-----------------------------------------------|-------------------|-------|
| I            | One word or One Sentence Answer (Unit I&II)   | 1X12              | 12    |
| II           | Theoretical Grammar – (All Units 4 out of 5 ) | 5X4               | 20    |
| III          | Correction of Sentences                       | 1X5               | 5     |
| IV           | Change of Sentences                           | 1X5               | 5     |
| V            | Samvaada Lekhan                               | 6X2               | 12    |
| VI           | Sambhashan Lekhan                             | 1X6               | 6     |



|  |       |  |    |
|--|-------|--|----|
|  |       |  |    |
|  | Total |  | 60 |

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## II Semester Hindi Open Elective Syllabus BA,B.Sc,B.Com,BBA,BCA (Open Elective Course)

**Teaching Hours : 4 Hrs. Per Week**

**Credits : 3**

**Exam Duration : 3 Hrs.**

**Syllabus पाठ्यक्रम**

**Total Marks : 100**

**Theory : 60**

**IA : 40**

| UNIT | SUBJECT                                                                                                   | Marks |
|------|-----------------------------------------------------------------------------------------------------------|-------|
| I    | 1. हिन्दी भाषा – हिन्दी भाषा व्युत्पत्ति, हिन्दी भाषा का अर्थ, परिभाषा, हिन्दी भाषा के विविध रूप          | 20    |
| II   | 1. तत्सम, तद्भव, देशी, विदेशी, हिन्दी बोलिया, हिन्दी के शब्द भण्डार                                       | 20    |
| III  | 1. हिन्दी साहित्य के प्रमुख काल, कहानी का अर्थ, प्रमुख कहानीकार, उपन्यास का अर्थ, प्रमुख उपन्यासकार, नाटक | 10    |
| IV   | 1. स्त्रीवादी साहित्यकार, दलित साहित्यकार                                                                 | 10    |

Prescribed Books : 1. हिन्दी भाषा एवं हिन्दी साहित्य का इतिहास – डॉ. पी.एम.वाघमारे  
2. हिन्दी साहित्य का इतिहास – बाबू गुलाबराय

Pedagogy : शिक्षा पद्धति : 1. कक्षा व्याख्यान, समूह चर्चा 2. स्थानों पर वार्तालाप का अभ्यास

Expected Out-come : अपेक्षित परिणाम :

1. हिन्दी कथा के बारे में जानकारी प्राप्त होगी
2. छात्रों में अंतर्निहित सम्प्रेषण एवं बोलने की कला का विकास होगा
3. इतिहास की जानकारी मिलेगी
4. इतिहास में रुचि बढ़ेगी।

### Question Paper Pattern प्रश्न पत्र का नमूना

| Question No. | Type of Question                                    | Division of Marks | Total Marks |
|--------------|-----------------------------------------------------|-------------------|-------------|
| I            | One word or One Sentence Answer (Unit I&II)         | 1X10              | 10          |
| II           | Essay Type Questions (Unit I To IV) Internal Choice | 10X4              | 40          |
| III          | Short Notes (2 out of 4 )                           | 5X2               | 10          |
|              | Total                                               |                   | 60          |

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**I Semester Hindi Open Elective Syllabus**  
**BA,B.Sc,B.Com,BBA,BCA (Open Elective Course)**

Time : 3 Hrs.

Max. Marks :60

**Question Paper Pattern      प्रश्न पत्र का नमूना**

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- I) एक शब्द या एक वाक्य में उत्तर लिखिए। (12 X1=12)
- १) स्वर के कितने प्रकार हैं ?
  - २) व्यंजन के लिए एक उदाहरण दीजिए ?
  - ३) वाक्य के कितने अंग माने गए हैं?
  - ४) अनुनासिक का एक उदाहरण लिखिए?
  - ५) प्लुत स्वर किसे कहते हैं ?
  - ६) वाक्य किसे कहते हैं ?
  - ७) संवाद लेखन कितने प्रकार का होता है ?
  - ८) संवाद की पहली शर्त क्या है ?
  - ९) संवाद किस भाषा में होनी चाहिए?
  - १०) सम्भाषण के लिए व्यक्ति का क्या होना आवश्यक है ?
  - ११) सम्भाषण का एक अनिवार्य तत्व क्या है ?
  - १२) एकालाप किसे कहते हैं ?
- II) किन्हीं चार प्रश्नों का उत्तर लिखिए। (5 x 4 =20)
- १) वर्ण किसे कहते हैं ? उसके भेदों को उदाहरण सहित समझाइए ?
  - २) वाक्य के आवश्यक तत्वों को स्पष्ट लिखिए ?
  - ३) वार्तालाप या संवाद किसे कहते हैं ? स्पष्ट कीजिए ?
  - ४) संभाषण के विविध रूपों का संक्षिप्त परिचय दीजिए ?
  - ५) संभाषण की आवश्यकता पर प्रकाश डालिए ?
- III) नीचे दिए गए वाक्यों का रूपांतरण कीजिए। (1 x 5 =5)
- १) कमाने वाला खायेगा। ( मिश्र वाक्य में बदलिए )
  - २) सूर्य के उगते ही अँधेरा भागा। (संयुक्त वाक्य में बदलिए )
  - ३) उसने मुझे देखा और खिसक गया। ( मिश्र वाक्य में बदलिए )
  - ४) संकट आ जाये ,तो घबराना उचित नहीं। ( सरल वाक्य में बदलिए )
  - ५) मैं अपना शेष जीवन अमेरिका में बिताऊँगी। ( संयुक्त वाक्य में बदलिए )
- IV) नीचे दिए गए वाक्य को शुद्ध कीजिए :- (1x5=5)
- १) दृष्टी बदल जाता है। २) मकान की दोनों तरफ दीवार है। ३) गरमी के मारे बुरी हाल है।

- ४) पंकज ने एक पुस्तक खरीदा। ५) वह पुस्तक पढ़ते हैं।  
 V) नीचे दिए प्रश्नों का उत्तर लिखिए :- (6 x 2 =12)  
 १) दो मित्रों के बीच अपने कॉलेज में बिताए पहले दिन के बारे संवाद लिखिए।  
 २) यातायात पुलिसकर्मी और हेलमेट न पहने हुए वाहन चालक के बीच संवाद प्रस्तुत कीजिए।  
 VI) परीक्षा की तैयारी को लेकर रौनक और भैरवी के बीच संभाषण लिखिए। (6 x 1 =6)

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## II Semester Open Elective Syllabus BA,B.Sc,B.Com,BBA,BCA (Open Elective Course)

Time : 3 Hrs.

Max. Marks :60

### Question Paper Pattern      प्रश्न पत्र का नमूना

|     |                                                           |           |
|-----|-----------------------------------------------------------|-----------|
| I   | एक शब्द या वाक्य में उत्तर लिखिए :-                       | 1X10 = 10 |
|     | 1. भाषा के लिए हिन्दी का प्रयोग कहा से आरंभ होता है ?     |           |
|     | 2. प्राकृत भाषा का जन्म किस भाषा से हुआ ?                 |           |
|     | 3. ब्रज भाषा किस क्षेत्र में बोली जाती है ?               |           |
|     | 4. तद्भव शब्द के दो उदाहरण दीजिए ?                        |           |
|     | 5. हिन्दी किस लिपि में लिखी जाती है ?                     |           |
|     | 6. हिन्दी साहित्य के इतिहास को कितने भागों में बांटा है ? |           |
|     | 7. कबीरदास किस युग के कवि है ?                            |           |
|     | 8. किस उपन्यासकार को उपन्यास सम्राट कहा जाता है?          |           |
|     | 9. किसी एक महिला साहित्यकार का नाम लिखिए ?                |           |
|     | 10. 'जूठन' किस साहित्यकार की आत्मकथा है ?                 |           |
| II  | निम्नलिखित प्रश्नों का उत्तर लिखिए :-                     |           |
|     | अ) हिन्दी की प्रमुख बोलियों पर प्रकाश डालिए।              |           |
|     | अथवा                                                      | 10        |
|     | हिन्दी के शब्द भण्डार पर लेख लिखिए।                       |           |
|     | आ) हिन्दी भाषा का अर्थ और उसके स्वरूप पर प्रकाश डालिए।    |           |
|     | अथवा                                                      | 10        |
|     | हिन्दी के विविध रूप पर प्रकाश डालिए।                      |           |
|     | इ) आदिकाल के प्रमुख दो कवियों का परिचय दीजिए।             |           |
|     | अथवा                                                      | 10        |
|     | तुलसीदास का जीवन परिचय पर लेख लिखिए।                      |           |
|     | ई) प्रेमचन्द की साहित्य को रेखांकित कीजिए।                |           |
|     | अथवा                                                      | 10        |
|     | महिला उपन्यासकारों के किसी एक उपन्यास की चर्चा कीजिए।     |           |
| III | किन्हीं दो प्रश्नों का टिप्पणी लिखिए :-                   | 5X2=10    |

1. खडीबोली    2. विदेशी भाषा    3. सूरदास    4. सूर्यकान्त त्रिपाठी निराला

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**I Semester Hindi Skill Based Enhancement  
BA,B.Sc,B.Com,BBA,BCA (All Course)**

**Teaching Hours : 4 Hrs. Per Week**

**Total Marks : 100**

**Credits : 3**

**Theory : 60**

**Exam Duration : 3 Hrs.**

**Syllabus पाठ्यक्रम**

**IA : 40**

| UNIT | SUBJECT                                     | Marks |
|------|---------------------------------------------|-------|
| I    | अनुवाद भेद और प्रभेद/अनुवाद के कार्यक्षेत्र | 20    |
| II   | अनुवाद की सीमाएँ                            | 10    |
| III  | अनुवाद के प्रकार                            | 10    |
| IV   | अनुवाद अभ्यास                               | 20    |

Prescribed Books : 1. अनुवाद उसके विविध रूप – प्रो.अनुराग कुमार

2. अनुवाद कुछ नमूने कुछ पैमाने – डॉ.अर्जु

Pedagogy : शिक्षा पद्धति : 1. कक्षा व्याख्यान 2. सामूहिक चर्चा 3. कक्षाओं में पठन पाठन की पद्धति

4. अनुवाद का व्यावहारिक प्रयोग 5. भाषायी कौशल का विकास

Expected Out-come : अपेक्षित परिणाम :

1. भाषायी कौशल का निर्माण होगा । 2. भाषायी शुद्धता के प्रति सजगता निर्माण होगी ।

3. अनुवाद के व्यावहारिक ज्ञान में वृद्धि होगी । 4. अनुवाद करने में सक्षम होंगे ।

5. अनुवाद के द्वारा अपने रोजगार को प्राप्त कर सकेंगे ।

**Question Paper Pattern प्रश्न पत्र का नमूना**

| Question No. | Type of Question                                    | Division of Marks | Total Marks |
|--------------|-----------------------------------------------------|-------------------|-------------|
| I            | One word or One Sentence Answer (Unit I&II)         | 1X10              | 10          |
| II           | Essay Type Questions (Unit I To IV) Internal Choice | 10X3              | 30          |
| III          | Short Notes (2 out of 4 )                           | 5X2               | 20          |
|              | Total                                               |                   | 60          |

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**I Semester Hindi Skill Based Enhancement**  
**BA,B.Sc,B.Com,BBA,BCA (All Course)**

Time : 3 Hrs.

Max. Marks :60

**Question Paper Pattern      प्रश्न पत्र का नमूना**

- 
- I      एक शब्द या वाक्य में उत्तर लिखिए :- 1X10 = 10
1. अनुवाद करनेवाले व्यक्ति को क्या कहते हैं ?
  2. अनुवाद के लिए कितनी भाषाएँ होनी हैं ?
  3. अनुवाद किस भाषा का शब्द है ?
  4. 'सेवा में' शब्द का अंग्रेज़ी रूप लिखिए ?
  5. शब्दानुवाद का अर्थ लिखिए ?
  6. किस अनुवाद के कारण दुनिया में नयी क्रांति आ गयी है ?
  7. तकनीकी अनुवाद के लिए क्या बहुत उपयोगी है ?
  8. 'Manager' का हिन्दी रूप लिखिए ।
  9. अनुवाद की एक प्रक्रिया का नाम लिखिए ।
  10. जिस भाषा से अनुवाद किया जाता है उसे क्या कहते हैं?
- II      किन्हीं तीन प्रश्नों के लिए उत्तर लिखिए :- 10X3=30
1. अनुवाद क्या है परिभाषा देते हुए उसके प्रकारों को लिखिए ।
  2. अच्छे अनुवाद की विशेषता बताइए ।
  3. अनुवाद की प्रक्रिया को अपने शब्दों में स्पष्ट लिखिए ।
  4. अनुवाद की भाषापरक सीमाओं पर प्रकाश डालिए ?
- III      हिन्दी में अनुवाद कीजिए :- 1X5=5
1. We are citizens of India.      -      ನಾವು ಭಾರತ ದೇಶದ ಪ್ರಜೆಗಳು.
  2. If we get up early, we can see sun rise.      -      ನಾವು ಒಗ್ಗಟ್ಟಾಗಿ ಬಾಳಬೇಕು.
  3. We should live unitedly.      -      ನಾವು ಬೇಗ ಎದ್ದರೆ, ಸೂರ್ಯೋದಯವನ್ನು ನೋಡಬಹುದು.
  4. I will answer these questions tomorrow.      -      ನಾನು ಈ ಪ್ರಶ್ನೆಗಳಿಗೆ ನಾಳೆ ಉತ್ತರಿಸುವೆ.
  5. Have you ever travelled by air ?      -      ನೀವು ಎಂದಾದರೂ ವಿಮಾನದಲ್ಲಿ ಪ್ರಯಾಣ ಮಾಡಿದ್ದೀರಾ ?

**IV अंग्रेज़ी में अनुवाद कीजिए :-**

**1X5=5**

1. ताजमहल को किसने बनवाया ।
2. हम भार देश की प्रजा है ।
3. युवा वर्ग देश की अमूल्य संपत्ति हैं ।
4. हमें एकता से जीना है ।
5. हर एक राज्य की अपनी ही राजभाषा है ।

**VI हिन्दी में अनुवाद कीजिए :-**

**1X5=5**

Raja Dushyanta in the course of his deer-hunt reached very near Kanwashram. There he saw a damsel of incomparable, watering the plants along with her maids. Seeing him, the girls showed all hospitality on him. As he was enjoying their hospitality, he heard that Sakintala's mother was the divine damsel Menaka of immortal beauty and her father was Viswamitra.

बेटीयाडुत्ता राज दुष्यन्तनु कण्वाश्रमद सभिएषकै बन्दनु. अत तन्न सखियरौडने गडगङ्गे निएरैरैयुत्तिरुव अनुषम सुन्दरियोब्बुल्लन्नु कण्डनु. अवनु अवल एदुरु बन्दनु. अतिथ्य स्वीकरोसुवाग शकुंतलय तायियु अमर सुन्दरियोद मैनके मत्तु तन्दे विश्वामित्ररैन्दु तिलिदुकैण्डनु.

**VII अंग्रेज़ी में अनुवाद कीजिए :-**

**1X5=5**

In ancient times Srirangapattanam was a city of historic fame. In those days it was the capital of Mysore State. The City is at a distance of nine miles by road of rail from Mysore. Now it has a railway station also. At present this city is almost in ruins. It is a small island in the Kaveri river. There is an ancient temple of Sri Ranganatha near the railway station.

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# BA

## Semester 1

|                                                                      |                             |
|----------------------------------------------------------------------|-----------------------------|
| Course Title: Political history of Karnataka (BCE-3 to 10 CE) Part-1 |                             |
| Total Contact Hours: 39 to 42                                        | Course Credits: 3           |
| Formative Assessment Marks: 40                                       | Duration of ESA/Exam: 60    |
| Model Syllabus Authors:                                              | Summative Assessment Marks: |

**Course Pre-requisite(s):** Political history of Karnataka (BCE-3 to 10 CE) Part-1

### Course Outcomes (COs):

At the end of the course the student should be able to:

*(Write 3-7 course outcomes. Course outcomes are statements of observable student actions that serve as evidence of knowledge, skills and values acquired in this course)*

- ☐ Understand the continuity of Political developments and strategies.
- ☐ Analysis the importance of causes for the rise of regional political dynasties.
- ☐ Understand contextual necessities which influenced the era of political supremacy.
- ☐ Understand and describe the contemporary political history.
- ☐ Appreciate the confluence of diverse political elements.

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1- 12)

| Course Outcomes (COs) / Program Outcomes (POs) | DSC1 | DSC2 | DSC3 | DSC4 | DSC5 | DSC6 | OE1 | OE2 | SEC1 | SEC2 |
|------------------------------------------------|------|------|------|------|------|------|-----|-----|------|------|
| Disciplinary Knowledge                         | X    | x    | X    | x    | x    | x    | x   | x   |      |      |
| Communication Skills                           | X    | x    | X    | x    | x    | x    | x   | x   |      |      |
| Critical Thinking                              | X    | x    | X    | x    | x    | x    | x   | x   | x    | x    |
| Problem Solving                                |      |      | X    | x    | x    | x    | x   | x   | x    | x    |
| Analytical Reasoning                           | X    | x    | X    | x    | x    | x    | x   | x   |      |      |
| Cooperation and Team Work                      |      | x    | X    | x    |      | x    | x   | x   |      | x    |
| Reflective Thinking                            |      | x    | X    | x    | x    | x    | x   | x   | x    | x    |
| Self-motivated Learning                        |      |      | X    | x    | x    | x    | x   | x   | x    | x    |
| Diversity Management and Inclusive Approach    | X    | x    | X    | x    |      | x    | x   | x   |      |      |



|                                       |   |   |   |   |   |   |   |   |  |   |
|---------------------------------------|---|---|---|---|---|---|---|---|--|---|
| Moral and Ethical Awareness Reasoning | X | x | X | x | x | x | x | x |  | x |
| Lifelong Learning                     |   | x |   | x | x | x | x | x |  | x |

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark „X in the intersection cell if a course outcome addresses a particular program outcome.

**BA**  
**BA Semester 1**

**Title of the Course:** Political History of Karnataka (BCE-3 to 10 CE) Part-1

| Course 1                 |                                  | Course 2                 |                                  |
|--------------------------|----------------------------------|--------------------------|----------------------------------|
| Number of Theory Credits | Number of lecture hours/semester | Number of Theory Credits | Number of lecture hours/semester |
| 3                        | 39 or 42                         | 3                        | 39 or 42                         |

| Content of Course 1                                                                                                                                            | 39/42 Hrs |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Unit – 1 Introduction</b>                                                                                                                                   | 13/14     |
| <b>Chapter No. 1</b> Survey of sources- Pre historic culture                                                                                                   | 04        |
| <b>Chapter No. 2</b> The Early Alupas- The Satavahanas – Kadambas of Banavasi                                                                                  | 06        |
| <b>Chapter No. 3</b> The Gangas of Talakad - Durvineetha                                                                                                       | 04        |
| <b>Unit – 2 The Age of Empires</b>                                                                                                                             | 13/14     |
| <b>Chapter No. 4.</b> Chalukyas of Badami – Pulikesin – II                                                                                                     | 04        |
| <b>Chapter No. 5.</b> The Rastrakutas – Amoghavarsha                                                                                                           | 04        |
| <b>Chapter No. 6.</b> The Chalukyas of Kalyani - Vikramaditya VI-Kalachuries of Kalyani– Bijalla-II                                                            | 06        |
| <b>Unit – 3 Formation of State</b>                                                                                                                             | 13/14     |
| <b>Chapter No. 7</b> Central And Provincial Administration.                                                                                                    | 12        |
| <b>Chapter No. 8.</b> Map- The Chalukya Empire under Pulikesin - II<br>Places – Badami, Aihole, Pattadakal, Banavasi, Kanchipuram, Mahakuta, Alampur, Talakadu | 02        |

**Books for Reference:**

- |                                                 |   |                                                  |
|-------------------------------------------------|---|--------------------------------------------------|
| 1. K.R Basavaraja                               | - | “History and Culture of Karnataka”               |
| 2. R.S Mugali                                   | - | “Glimpses of Karnataka”                          |
| 3. P.B. Desai                                   | - | “A History of Karnataka”                         |
| 4. H.V Shrinivasa Murthy<br>and R. Ramakrishnan | - | “ A Concise History of Karnataka”                |
| 5. A. Sundara (Ed)                              | - | “Karnataka Charitre” Volume I                    |
| 6. B. Surendra Rao (Ed.)                        | - | “Karnataka Charitre” Volume II                   |
| 7. R.R Diwakar                                  | - | “ Karnataka Through the Ages”                    |
| 8. M. Chidananda Murthy                         | - | “Karnataka Shasanagala Samskrutika<br>Adhyayana” |

9. S. Settar - “Halagannada – Lipi, Lipikara, Lipi Vyavasaya”
10. A.C. Nagesh - “Pracheena Karnataka Charithre”
11. Dr. Suryanatha U Kamath - History of Karnataka

## Pedagogy

- ☐ Lecture Method – Class Room Teaching
- ☐ Learning Through Project work
- ☐ Collaborative learning strategies
- ☐ Use of Learning Recourses like  
as Audio – Visual aids  
Films  
Documentaries  
Visit to historical sites

## Assessment:

### Weightage for assessments (in percentage)

| Formative Assessment                                     |                     |                                         |
|----------------------------------------------------------|---------------------|-----------------------------------------|
|                                                          | Internal Assessment | Theory Part<br>Semester End Examination |
| Internal Test                                            | 15                  | 60                                      |
| Assignments/<br>Seminar/<br>Field visit/<br>Lab practice | 15                  |                                         |
| Viva Voice                                               | 10                  |                                         |
| <b>Total</b>                                             | <b>40</b>           |                                         |
| <b>Grand Total</b>                                       |                     | <b>100</b>                              |

Date:13.09.2021

Course Co-ordinator

Subject Committee Chairperson

**Prof. R Rajanna**

# BA

## Semester 1

|                                          |                             |
|------------------------------------------|-----------------------------|
| Course Title: Cultural Heritage of India |                             |
| Total Contact Hours: 39 to 42            | Course Credits: 3           |
| Formative Assessment Marks: 40           | Duration of ESA/Exam: 60    |
| Model Syllabus Authors:                  | Summative Assessment Marks: |

**Course Pre-requisite(s):** Cultural Heritage of India

### Course Outcomes (COs):

At the end of the course the student should be able to:

- ☐ Provide an insight about an extensive survey of heritage of India
- ☐ Familiarize Indian history and culture
- ☐ Expertize to analyse further development of culture of India
- ☐ Analyse the factor responsible for origin and decline of culture
- ☐ Provide the opportunity to understand the process of cultural development

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)

| Course Outcomes (COs) / Program Outcomes (POs) | DSC1 | DSC2 | DSC3 | DSC4 | DSC5 | DSC6 | OE1 | OE2 | SEC1 | SEC2 |
|------------------------------------------------|------|------|------|------|------|------|-----|-----|------|------|
| Disciplinary Knowledge                         | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Communication Skills                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Critical Thinking                              | x    | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Problem Solving                                |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Analytical Reasoning                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Cooperation and Team Work                      |      | x    | x    | x    |      | x    | x   | x   |      | x    |
| Reflective Thinking                            |      | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Self-motivated Learning                        |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Diversity Management and Inclusive Approach    | x    | x    | x    | x    |      | x    | x   | x   |      |      |
| Moral and Ethical Awareness Reasoning          | x    | x    | x    | x    | x    | x    | x   | x   |      | x    |
| Lifelong Learning                              |      | x    |      | x    | x    | x    | x   | x   |      | x    |

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark „X’ in the intersection cell if a course outcome addresses a particular program outcome.

**BA**  
**BA Semester 1**

**Title of the Course:** Cultural Heritage of India

| Course 1                 |                                  | Course 2                 |                                  |
|--------------------------|----------------------------------|--------------------------|----------------------------------|
| Number of Theory Credits | Number of lecture hours/semester | Number of Theory Credits | Number of lecture hours/semester |
| 3                        | 39 or 42                         | 3                        | 39 or 42                         |

| Content of Course 1                                                                                                                                                                                                                                                                                                                     | 39/42 Hrs |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Unit – 1 Introduction</b>                                                                                                                                                                                                                                                                                                            | 13/14     |
| <b>Chapter No. 1</b> Meaning, Definition Historical Cultural Heritage-Concepts, Characteristics-types of Indian Cultural Heritage: Oral and Written traditions.                                                                                                                                                                         | 10        |
| <b>Chapter No. 2</b> Significance of fairs and festivals.                                                                                                                                                                                                                                                                               | 04        |
| <b>Unit – 2 Legends, Narratives and Cultural Ethos</b>                                                                                                                                                                                                                                                                                  | 13/14     |
| <b>Chapter No.3.</b> Meaning, significance, forms and tradition of legends. Ramayana and Mahabharata: Tradition of Cultural Heritage; Panchatantra, Jataka.                                                                                                                                                                             | 06        |
| <b>Chapter No. 4.</b> Traditional Performing Art, Folk dances and theatre: Bharata Natya Shastra: The Source of Performing Indian Classical Arts and other Indian classical dances as cultural Heritage                                                                                                                                 | 08        |
| <b>Unit – 3 Architecture and Built Heritage</b>                                                                                                                                                                                                                                                                                         | 13/14     |
| <b>Chapter No. 5.</b> Important Monuments of India-Caves<br>Shore Temple (Mahabalipuram), Aihole. Badami, Pattadakal. Ajanta, Ellora                                                                                                                                                                                                    | 08        |
| <b>Chapter No. 6.</b> Important Monumental Centers of India Sarnath, Sanchi, Konark, Khajuraho, Hampi, Vijayanagar, Taj Mahal, Red fort.<br><i>Places of Historical importance :</i> Delhi, Agra, Nalanda, Saranatha, Sanchi, Hampi, Badami, Mahabalipuram, Ajantha, Ellora, Prayaga, Varanasi, Rameshwaram, Dwaraka, Konark, Khajuraho | 06        |

## Books for Reference

- |                          |   |                                                                         |
|--------------------------|---|-------------------------------------------------------------------------|
| 1. S. Radhakrishnan      | - | “Culture of India”                                                      |
| 2. K.T Achaya            | - | Indian food: A Historical Companion,                                    |
| 3. Banga, I. (Ed)        | - | The City in Indian History : Urban Demography,<br>Society and Politics. |
| 4. A.L Basham            | - | The Wonder that was India.                                              |
| 5. Sachin Shekhar Biswas | - | Protecting the Cultural Heritage                                        |
| 6. N.K Bose              | - | “Culture Zones of India” in culture and Society in India.               |
| 7. S.Narayan             | - | Indian Classical Dances.                                                |
| 8. Gokulsing, K. Moti    | - | Popular Culture in a Globalized India,                                  |
| 9. Bhanu Shankar Mehta   | - | Ramlila Varied Respective                                               |
| 10. Rangacharya          | - | The Natya shastra, English translation with critical<br>Notes.          |

## Pedagogy

**Knowledge:** The student should acquire knowledge of terms, concepts, facts, events, symbols, ideas, conventions, problems, trends, personalities, chronology and generalizations, etc., related to the study of history. The student should be able to: recall, recognize, show and read.

**Understanding:** The student should develop understanding of terms, facts, principal events, trends, etc., related to the study of history. The student should be able to: classify facts, illustrate events, compare and contrast events, explain events, discriminate, identify, arrange facts, detect errors, interpret and extract.

**Critical Thinking:** The subject should enable the students to develop critical thinking. The student should be able to: identify, analyse, collect, select, draw and verify.

**Practical Skills:** The subject enables the students to develop practical skills helpful in the study and understanding of historical facts. The student should be able to: draw maps, charts, diagrams and prepare models, etc.,

**Interests:** The subject should enable the students to develop interest in the study of history. The student, on his own, should be able to: collect coins and other historical materials, participate in historical dramas and mock sessions of historical events, visits places of historical interest, archaeological sites, museums and archives, read historical documents, maps and charts, write articles on historical and other related topics.

### Learning Outcome:

This course enables students to explore various aspects of cultural heritage and cultural diversity in historical perspective that discusses numerous cultural practices that have evolved over centuries. They will acquire knowledge of changing socio-cultural scenarios of India.

As well as they can gather knowledge about the cultural heritage, cultural forms and cultural expressions performing arts, fairs and festivals.

**Assessment:**

**Weightage for assessments (in percentage)**

| <b>Formative Assessment</b>              |                            |                                                 |
|------------------------------------------|----------------------------|-------------------------------------------------|
|                                          | <b>Internal Assessment</b> | <b>Theory Part<br/>Semester End Examination</b> |
| Internal Test                            | 15                         | 60                                              |
| Assignments/<br>Field study/<br>Seminar/ | 15                         |                                                 |
| Viva Voice                               | 10                         |                                                 |
| <b>Total</b>                             | <b>40</b>                  |                                                 |
| <b>Grand Total</b>                       |                            | <b>100</b>                                      |

Date:13.09.2021

Course Co-ordinator

Subject Committee Chairperson

**Prof. R Rajanna**



# BA

## Semester 1

|                                                                  |                             |
|------------------------------------------------------------------|-----------------------------|
| Course Title: Cultural History of Karnataka (CE 3-CE 10 ) Part-I |                             |
| Total Contact Hours: 39 to 42                                    | Course Credits: 3           |
| Formative Assessment Marks: 40                                   | Duration of ESA/Exam: 60    |
| Model Syllabus Authors:                                          | Summative Assessment Marks: |

**Course Pre-requisite(s):** Cultural History of Karnataka (CE 3-CE 10 ) Part-I

### Course Outcomes (COs):

At the end of the course the student should be able to:

- ☐ Provide an insight about the cultural development of Karnataka.
- ☐ Familiarize Karnataka history and culture.
- ☐ Expertize to analyze further development of culture of Karnataka.
- ☐ Analyze the factors responsible for origin and decline of dynasties.
- ☐ Provide the opportunity to understand the process of cultural diversities.

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)

| Course Outcomes (COs) / Program Outcomes (POs) | DSC1 | DSC2 | DSC3 | DSC4 | DSC5 | DSC6 | OE1 | OE2 | SEC1 | SEC2 |
|------------------------------------------------|------|------|------|------|------|------|-----|-----|------|------|
| Disciplinary Knowledge                         | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Communication Skills                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Critical Thinking                              | x    | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Problem Solving                                |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Analytical Reasoning                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Cooperation and Team Work                      |      | x    | x    | x    |      | x    | x   | x   |      | x    |
| Reflective Thinking                            |      | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Self-motivated Learning                        |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Diversity Management and Inclusive Approach    | x    | x    | x    | x    |      | x    | x   | x   |      |      |
| Moral and Ethical Awareness Reasoning          | x    | x    | x    | x    | x    | x    | x   | x   |      | x    |
| Lifelong Learning                              |      | x    |      | x    | x    | x    | x   | x   |      | x    |

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark „X” in the intersection cell if a course outcome addresses a particular program outcome.

**BA**  
**BA Semester 1**

**Title of the Course:** Cultural History of Karnataka (CE 3-CE 10 ) Part-I

| <b>Course 1</b>                 |                                         | <b>Course 2</b>                 |                                         |
|---------------------------------|-----------------------------------------|---------------------------------|-----------------------------------------|
| <b>Number of Theory Credits</b> | <b>Number of lecture hours/semester</b> | <b>Number of Theory Credits</b> | <b>Number of lecture hours/semester</b> |
| <b>3</b>                        | <b>39 or 42</b>                         | <b>3</b>                        | <b>39 or 42</b>                         |

| <b>Content of Course 1</b>                                                | <b>39/42 Hrs</b> |
|---------------------------------------------------------------------------|------------------|
| <b>Unit – 1 Introduction</b>                                              | 13/14            |
| <b>Chapter No. 1</b> Language and culture of Coastal Karnataka and Kodagu | 03               |
| <b>Chapter No. 2</b> Alupa Land Grants                                    | 05               |
| <b>Chapter No. 3</b> Agriculture and Emergence of Agraharas – Education   | 06               |
| <b>Unit – 2 Social Conditions</b>                                         | 13/14            |
| <b>Chapter No. 4.</b> Caste Structure                                     | 06               |
| <b>Chapter No. 5.</b> Conditions of Women                                 | 08               |
| <b>Unit – 3 Religion and Art</b>                                          | 13/14            |
| <b>Chapter No. 6</b> Jainism and Buddhism in Karnataka.                   | 04               |
| <b>Chapter No. 7.</b> Saivism and Vaishnavism.                            | 05               |
| <b>Chapter No. 9</b> Art and Architecture of Coastal Karnataka.           | 05               |

**Books for Reference**

- |                            |   |                                                         |
|----------------------------|---|---------------------------------------------------------|
| 1. S. Settar               | - | “Halagannada – Lipi, Lipikara, Lipi Vyavasaya”          |
| 2. K.R Basavaraja          | - | “History and Culture of Karnataka”                      |
| 3. R. Rajanna & A.C Nagesh | - | “Karnatakada Charithre” Volume I                        |
| 4. P.B. Desai              | - | “A History of Karnataka”                                |
| 5. A. Sundara (Ed)         | - | “Karnataka Charitre” Volume I                           |
| 6. B. Surendra Rao (Ed.)   | - | “Karnataka Charitre” Volume II                          |
| 7. S. Settar               | - | “ Halagannada; Bhashe, Bhasha Vikasa, Bhasha Bandhavya” |
| 8. M. Chidananda Murthy    | - | “Karnataka Shasanagala Samskrutika Adhyayana”           |
| 9. S. Rajashekara          | - | “ Karnataka Architecture”                               |
| 10. K.A. Nilakanta Sastri  | - | “A History of South India”                              |

## Pedagogy

- ☐ Lecture Method – Class Room Teaching
- ☐ Learning Through Project work
- ☐ Collaborative learning strategies
- ☐ Use of Learning Recourses like  
as Audio – Visual aids  
Films  
Documentaries  
Visit to historical sites

### Assessment:

#### Weightage for assessments (in percentage)

| Formative Assessment                                      |                     |                                         |
|-----------------------------------------------------------|---------------------|-----------------------------------------|
|                                                           | Internal Assessment | Theory Part<br>Semester End Examination |
| Internal Test                                             | 15                  | 60                                      |
| Assignments/<br>Seminar/<br>Project study/<br>Labpractice | 15                  |                                         |
| Viva Voice                                                | 10                  |                                         |
| <b>Total</b>                                              | <b>40</b>           |                                         |
| <b>Grand Total</b>                                        |                     | <b>100</b>                              |

Date:13.09.2021

Course Co-ordinator

Subject Committee Chairperson

**Prof. R Rajann**

## BA Semester 1

|                                           |                             |
|-------------------------------------------|-----------------------------|
| Course Title: Introduction to Archaeology |                             |
| Total Contact Hours: 39 to 42             | Course Credits: 3           |
| Formative Assessment Marks: 40            | Duration of ESA/Exam: 60    |
| Model Syllabus Authors:                   | Summative Assessment Marks: |

**Course Pre-requisite(s):** Introduction to Archaeology

### Course Outcomes (COs):

At the end of the course the student should be able to:

- ☐ Understand the concept of Archaeology as an ancillary for study of history
- ☐ Help to study features of Archaeology in understanding history
- ☐ Familiarize the students to know about scope of Archaeology.
- ☐ Understand the various tools and techniques imbibed in Archaeology
- ☐ Study various schools of disciplines of Archaeology.

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)

| Course Outcomes (COs) / Program Outcomes (POs) | DSC1 | DSC2 | DSC3 | DSC4 | DSC5 | DSC6 | OE1 | OE2 | SEC1 | SEC2 |
|------------------------------------------------|------|------|------|------|------|------|-----|-----|------|------|
| Disciplinary Knowledge                         | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Communication Skills                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Critical Thinking                              | x    | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Problem Solving                                |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Analytical Reasoning                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Cooperation and Team Work                      |      | x    | x    | x    |      | x    | x   | x   |      | x    |
| Reflective Thinking                            |      | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Self-motivated Learning                        |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Diversity Management and Inclusive Approach    | x    | x    | x    | x    |      | x    | x   | x   |      |      |
| Moral and Ethical Awareness Reasoning          | x    | x    | x    | x    | x    | x    | x   | x   |      | x    |
| Lifelong Learning                              |      | x    |      | x    | x    | x    | x   | x   |      | x    |

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark „X” in the intersection cell if a course outcome addresses a particular program outcome.

**BA**  
**BA Semester 1**

**Title of the Course:** Introduction to Archaeology

| Course 1                 |                                  | Course 2                 |                                  |
|--------------------------|----------------------------------|--------------------------|----------------------------------|
| Number of Theory Credits | Number of lecture hours/semester | Number of Theory Credits | Number of lecture hours/semester |
| 3                        | 39 or 42                         | 3                        | 39 or 42                         |

| Content of Course 1                                                                                                                                                                  | 39/42 Hrs |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Unit – 1 Introduction</b>                                                                                                                                                         | 13/14     |
| <b>Chapter No. 1</b> Definition – Scope – Nature                                                                                                                                     | 03        |
| <b>Chapter No. 2</b> Concepts – Artifacts – Assemblage – Industry – Culture -Layer                                                                                                   | 05        |
| <b>Chapter No. 3</b> Kinds of Archaeology – Ethno, Marine and Salvage                                                                                                                | 06        |
| <b>Unit – 2 Archaeology by Period</b>                                                                                                                                                | 13/14     |
| <b>Chapter No. 4.</b> Lower Paleolithic – Middle Paleolithic – Upper Paleolithic- Mesolithic – Chalcolithic – Bronze age – Iron Age                                                  | 05        |
| <b>Chapter No. 5.</b> Development in the Global Context – From Antiquarians to Scientific Archaeology – Finders Petrie- Pitt Riveres – Leonard Wooly.                                | 05        |
| <b>Chapter No. 6.</b> Archaeology in India – William Jones to Wheeler – The Allchins – S.R. Rao – Archaeological Survey of India – Department of Archaeology Government of Karnataka | 04        |
| <b>Unit – 3 Exploration, Excavation and Analysis</b>                                                                                                                                 | 13/14     |
| <b>Chapter No. 7</b> Identification of a site – field survey – sampling techniques – Application of scientific methods.                                                              | 05        |
| <b>Chapter No. 8.</b> Methods of Excavation – vertical and horizontal – Trenching – Gridding                                                                                         | 05        |
| <b>Chapter No. 9</b> Excavation of burial mounds – Open Stripping – Quadrant method – Excavation of pits – Excavation of a typical site                                              | 04        |

**Books for Reference**

- |                                           |   |                                                            |
|-------------------------------------------|---|------------------------------------------------------------|
| 1. Agrawal D.P                            | - | Archaeology in India                                       |
| 2. Aiken M.J                              | - | Science based dating in archaeology                        |
| 3. Allchin Bridget<br>And Raymond Allchin | - | Rise of Civilisation in India and Pakistan                 |
| 4. Atkinson RJC                           | - | Field Archaeology                                          |
| 5. Basker .P                              | - | Techniques of Archaeological Excavation                    |
| 6. Chakrabarthi D.K                       | - | A History of Indian Archaeology from the beginning to 1947 |
| 7. Chakrabarthi D.K                       | - | Theoreftical Perspectives in Indian Archaeology            |
| 8. Gosha .A                               | - | Encyclopaedia of Indian Archaeology                        |

- |                           |   |                                       |
|---------------------------|---|---------------------------------------|
| 9. Rajan .K               | - | Archaeology, Principles and Methods   |
| 10. Raman K.V             | - | Principles and Methods in Archaeology |
| 11. Dr.Srinivas V Padigar | - | Principles of Archaeology.            |
| 12. Dr Srinivas V Padigar | - | Puratattva Parichaya-(Kan)            |

## Pedagogy

- ☐ Lecture Method – Class Room Teaching
- ☐ Visit to Archaeological sites
- ☐ Learn techniques of excavations
- ☐ Collaborative learning strategies
- ☐ Learning about digging, Trenching and Exploration
- ☐ Collection and Preservation of Artifacts

## Assessment:

Weightage for assessments (in percentage)

| Formative Assessment                                                |                     |                                         |
|---------------------------------------------------------------------|---------------------|-----------------------------------------|
|                                                                     | Internal Assessment | Theory Part<br>Semester End Examination |
| Internal Test                                                       | 15                  | 60                                      |
| Assignments/<br>Seminar/<br>Project/Field<br>study<br>/Lab Practice | 15                  |                                         |
| Viva Voice                                                          | 10                  |                                         |
| <b>Total</b>                                                        | <b>40</b>           |                                         |
| <b>Grand Total</b>                                                  |                     | <b>100</b>                              |

Date:13.09.2021

Course Co-ordinator

Subject Committee Chairperson-

**Prof. R Rajanna**

# BA

## Semester 2

|                                                              |                             |
|--------------------------------------------------------------|-----------------------------|
| Course Title: Political History of Karnataka (CE11- 1750 AD) |                             |
| Total Contact Hours: 39 to 42                                | Course Credits: 3           |
| Formative Assessment Marks: 40                               | Duration of ESA/Exam: 60    |
| Model Syllabus Authors:                                      | Summative Assessment Marks: |

**Course Pre-requisite(s):** Political History of Karnataka (C11- 1799 AD)

### Course Outcomes (COs):

At the end of the course the student should be able to:

- ☐ Understand the rise and fall of Political dynasties in Karnataka.
- ☐ Familiarize with the patterns of administration.
- ☐ Analyze the traditional values and ethos of political development.
- ☐ Understand the rise and fall of regional variations.
- ☐ Study the complexities involved in polity of the time.

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)

| Course Outcomes (COs) / Program Outcomes (POs) | DSC1 | DSC2 | DSC3 | DSC4 | DSC5 | DSC6 | OE1 | OE2 | SEC1 | SEC2 |
|------------------------------------------------|------|------|------|------|------|------|-----|-----|------|------|
| Disciplinary Knowledge                         | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Communication Skills                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Critical Thinking                              | x    | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Problem Solving                                |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Analytical Reasoning                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Cooperation and Team Work                      |      | x    | x    | x    |      | x    | x   | x   |      | x    |
| Reflective Thinking                            |      | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Self-motivated Learning                        |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Diversity Management and Inclusive Approach    | x    | x    | x    | x    |      | x    | x   | x   |      |      |
| Moral and Ethical Awareness Reasoning          | x    | x    | x    | x    | x    | x    | x   | x   |      | x    |
| Lifelong Learning                              |      | x    |      | x    | x    | x    | x   | x   |      | x    |

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark „X’ in the intersection cell if a course outcome addresses a particular program outcome.



**BA**  
**BA Semester 2**

**Title of the Course:** Political History of Karnataka (CE11- 1799 AD)

| Course 1                 |                                  | Course 2                 |                                  |
|--------------------------|----------------------------------|--------------------------|----------------------------------|
| Number of Theory Credits | Number of lecture hours/semester | Number of Theory Credits | Number of lecture hours/semester |
| 3                        | 39 or 42                         | 3                        | 39 or 42                         |

| Content of Course 1                                                                                                 | 39/42 Hrs |
|---------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Unit – 1 Introduction</b>                                                                                        | 13/14     |
| <b>Chapter No. 1</b> The Hoysalas - Vishnuvardhana                                                                  | 07        |
| <b>Chapter No. 2</b> Medieval Alupas                                                                                | 07        |
| <b>Unit – 2 Medieval Karnataka</b>                                                                                  | 13/14     |
| <b>Chapter No. 3.</b> Vijayanagar – Dynasties                                                                       | 06        |
| <b>Chapter No. 4.</b> The Bahamani States                                                                           | 05        |
| <b>Chapter No. 5.</b> Regional Kingdoms during Vijayanagar.                                                         | 03        |
| <b>Unit – 3 Post Vijayanagar</b>                                                                                    | 13/14     |
| <b>Chapter No. 6</b> Wodeyars of Mysore – Nayakas of Chithradurga – Nayakas of Keladi                               | 05        |
| <b>Chapter No. 7.</b> Minor Chieftains-Local Chieftains - Chowtas                                                   | 03        |
| <b>Chapter No.8.</b> Hyder Ali and Tippu Sulthan.                                                                   | 05        |
| <b>Chapter No.9.Map:</b> The Vijayanagar empire.<br>Places- Hampi, Tanjavur, Mangalore, Barkur, Penukonda, Tirupati | 01        |

**Books for Reference**

- |                       |   |                                                      |
|-----------------------|---|------------------------------------------------------|
| 1. K.R Basavaraja     | - | “History and Culture of Karnataka”                   |
| 2. P.B. Desai         | - | “A History of Karnataka”                             |
| 3. Burton Stein       | - | “ Vijayanagara”                                      |
| 4. B. Sheik Ali(Ed.)  | - | “Karnataka Samagra Charitre” Volume IV.              |
| 5. B. Vivek Rai (Ed.) | - | “Pravasi Kanda Vijayanagara”                         |
| 6. G. Yazdani         | - | “History of the Deccan”                              |
| 7. K. Satyanarayana   | - | “History of the Wodeyars of Mysore”                  |
| 8. Mohibul Hasan      | - | “History of Tipu Sulthan”                            |
| 9. T.V Mahalingam     | - | “ Administration and Social Life Under Vijayanagara” |
| 10. K.V Ramesh        | - | “History of South Kenara ”                           |

## Pedagogy

- ☐ Lecture Method – Class Room Teaching
- ☐ Visit to Archaeological sites
- ☐ Learn techniques of excavations
- ☐ Collaborative learning strategies
- ☐ Learning about digging, Trenching and Exploration
- ☐ Collection and Preservation of Artifacts

## Assessment:

### Weightage for assessments (in percentage)

| Formative Assessment                         |                     |                                         |
|----------------------------------------------|---------------------|-----------------------------------------|
|                                              | Internal Assessment | Theory Part<br>Semester End Examination |
| Internal Test                                | 15                  | 60                                      |
| Assignments/Seminar/Field study/Lab Practice | 15                  |                                         |
| Viva Voice                                   | 10                  |                                         |
| <b>Total</b>                                 | <b>40</b>           |                                         |
| <b>Grand Total</b>                           |                     | <b>100</b>                              |

Date:13.09.2021

Course Co-ordinator

Subject Committee Chairperson

**Prof. R Rajanna**

# BA

## Semester 2

|                                              |                             |
|----------------------------------------------|-----------------------------|
| Course Title: Cultural Heritage of Karnataka |                             |
| Total Contact Hours: 39 to 42                | Course Credits: 3           |
| Formative Assessment Marks: 40               | Duration of ESA/Exam: 60    |
| Model Syllabus Authors:                      | Summative Assessment Marks: |

**Course Pre-requisite(s):** Cultural Heritage of Karnataka

### Course Outcomes (COs):

At the end of the course the student should be able to:

- ☐ Understand the concept of cultural heritage of Karnataka
- ☐ Study various cultural factors which influence the flow of culture
- ☐ Familiarize the factors which influenced in influencing culture and society
- ☐ Analyze the factors responsible for formation of pluralistic society
- ☐ Understand the concept “Unity in diversity”.

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)

| Course Outcomes (COs) / Program Outcomes (POs) | DSC1 | DSC2 | DSC3 | DSC4 | DSC5 | DSC6 | OE1 | OE2 | SEC1 | SEC2 |
|------------------------------------------------|------|------|------|------|------|------|-----|-----|------|------|
| Disciplinary Knowledge                         | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Communication Skills                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Critical Thinking                              | x    | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Problem Solving                                |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Analytical Reasoning                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Cooperation and Team Work                      |      | x    | x    | x    |      | x    | x   | x   |      | x    |
| Reflective Thinking                            |      | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Self-motivated Learning                        |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Diversity Management and Inclusive Approach    | x    | x    | x    | x    |      | x    | x   | x   |      |      |
| Moral and Ethical Awareness Reasoning          | x    | x    | x    | x    | x    | x    | x   | x   |      | x    |
| Lifelong Learning                              |      | x    |      | x    | x    | x    | x   | x   |      | x    |

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark „X’ in the intersection cell if a course outcome addresses a particular program outcome.

**BA**  
**BA Semester 2**

**Title of the Course:** Cultural Heritage of Karnataka

| Course 1                 |                                  | Course 2                 |                                  |
|--------------------------|----------------------------------|--------------------------|----------------------------------|
| Number of Theory Credits | Number of lecture hours/semester | Number of Theory Credits | Number of lecture hours/semester |
| 3                        | 39 or 42                         | 3                        | 39 or 42                         |

| Content of Course 1                                                          | 39/42 Hrs |
|------------------------------------------------------------------------------|-----------|
| <b>Unit – 1 Introduction</b>                                                 | 13/14     |
| <b>Chapter No. 1</b> Meaning, Definition and Concepts                        | 07        |
| <b>Chapter No. 2</b> Characteristic features of Coastal Karnataka and Kodagu | 07        |
| <b>Unit – 2 Fairs, Festivals and Rituals-Daivaradhane</b>                    | 13/14     |
| <b>Chapter No. 3.</b> Significance – Festivals - Fairs                       | 09        |
| <b>Chapter No. 4.</b> Legends and Narratives- Paddanas                       | 05        |
| <b>Unit – 3 Performing Arts</b>                                              | 13/14     |
| <b>Chapter No.5.</b> Folk Dances and theatre- Yakshagana                     | 07        |
| <b>Chapter No. 6</b> Architecture and Built Heritage                         | 07        |

**Books for Reference**

- |                          |   |                                                         |
|--------------------------|---|---------------------------------------------------------|
| 1. K.T Achaya            | - | Indian food Historical Companion                        |
| 2. Sachin Shekhar Biswas | - | Protecting the Cultural Heritage                        |
| 3. N.K Bose              | - | Culture Zones of India in culture and Society in India. |
| 4. S. Narayan            | - | Indian Classical Dances                                 |
| 5. Prakash, H.S Shiva    | - | Traditional Theatres                                    |
| 6. Krishna N. Reddy      | - | Cultural Heritage of South India                        |
| 7. Dr. A. Murageppa      | - | Dakshin Bhartiya Jaanpad Kosh. Vol-I II                 |
| 8. Dr. Suryanath Kamat   | - | Karnataka Sankshipt Itihas                              |
| 9. Shrinivas T           | - | Bhartiya Itihas Mattu Parampare                         |
| 10. K.R. Basavaraj       | - | Karnataka History and Culture                           |

## Pedagogy

- ☐ Lecture Method – Class Room Teaching
- ☐ Visit to Archaeological sites
- ☐ Learn techniques of excavations
- ☐ Collaborative learning strategies
- ☐ Learning about digging, Trenching and Exploration
- ☐ Collection and Preservation of Artifacts

### Assessment:

#### Weightage for assessments (in percentage)

| Formative Assessment     |                     |                                         |
|--------------------------|---------------------|-----------------------------------------|
|                          | Internal Assessment | Theory Part<br>Semester End Examination |
| Internal Test            | 15                  | 60                                      |
| Assignments/Map<br>study | 10                  |                                         |
| Viva Voice               | 15                  |                                         |
| <b>Total</b>             | <b>40</b>           |                                         |
| <b>Grand Total</b>       |                     | <b>100</b>                              |

Date:13.09.2021

Course Co-ordinator

Subject Committee Chairperson

**Prof. R Rajanna**

# BA

## Semester 2

|                                                                |                             |
|----------------------------------------------------------------|-----------------------------|
| Course Title: Cultural History of Karnataka (11 AD to 1750 AD) |                             |
| Total Contact Hours: 39 to 42                                  | Course Credits: 3           |
| Formative Assessment Marks: 40                                 | Duration of ESA/Exam: 60    |
| Model Syllabus Authors:                                        | Summative Assessment Marks: |

**Course Pre-requisite(s):** Cultural History of Karnataka (11 AD to 1750 AD)

### Course Outcomes (COs):

At the end of the course the student should be able to:

- ☐ Understand the concept of cultural heritage of Karnataka
- ☐ Study various cultural factors which influence the flow of culture
- ☐ Familiarize the factors which influenced in influencing culture and society
- ☐ Analyze the factors responsible for formation of pluralistic society
- ☐ Understand the concept “Unity in diversity”.

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)

| Course Outcomes (COs) / Program Outcomes (POs) | DSC1 | DSC2 | DSC3 | DSC4 | DSC5 | DSC6 | OE1 | OE2 | SEC1 | SEC2 |
|------------------------------------------------|------|------|------|------|------|------|-----|-----|------|------|
| Disciplinary Knowledge                         | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Communication Skills                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Critical Thinking                              | x    | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Problem Solving                                |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Analytical Reasoning                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Cooperation and Team Work                      |      | x    | x    | x    |      | x    | x   | x   |      | x    |
| Reflective Thinking                            |      | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Self-motivated Learning                        |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Diversity Management and Inclusive Approach    | x    | x    | x    | x    |      | x    | x   | x   |      |      |
| Moral and Ethical Awareness Reasoning          | x    | x    | x    | x    | x    | x    | x   | x   |      | x    |
| Lifelong Learning                              |      | x    |      | x    | x    | x    | x   | x   |      | x    |

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark „X in the intersection cell if a course outcome addresses a particular program outcome.

**BA**  
**BA Semester 2**

**Title of the Course:** Cultural History of Karnataka (11 AD to 1750 AD)

| <b>Course 1</b>                 |                                         | <b>Course 2</b>                 |                                         |
|---------------------------------|-----------------------------------------|---------------------------------|-----------------------------------------|
| <b>Number of Theory Credits</b> | <b>Number of lecture hours/semester</b> | <b>Number of Theory Credits</b> | <b>Number of lecture hours/semester</b> |
| <b>3</b>                        | <b>39 or 42</b>                         | <b>3</b>                        | <b>39 or 42</b>                         |

| <b>Content of Course 1</b>                                              | <b>39/42 Hrs</b> |
|-------------------------------------------------------------------------|------------------|
| <b>Unit – 1 Introduction</b>                                            | 13/14            |
| <b>Chapter No. 1</b> Administration – Central and Provincial            | 05               |
| <b>Chapter No. 2</b> Kingship – Duties of King – Governors - Warfare    | 04               |
| <b>Chapter No. 3</b> Local Self Government – Village Administration     | 05               |
| <b>Unit – 2 Society and Economy</b>                                     | 13/14            |
| <b>Chapter No. 4.</b> Social Conditions – Society – Rituals and Customs | 05               |
| <b>Chapter No. 5.</b> Economic Conditions – Agriculture                 | 04               |
| <b>Chapter No. 6.</b> Trade and Commerce                                | 05               |
| <b>Unit – 3 Religion and Art</b>                                        | 13/14            |
| <b>Chapter No. 7</b> Bhakti Saints -Teaching and Philosophy – Sufism    | 05               |
| <b>Chapter No. 8.</b> Temple Architecture – Islamic Architecture        | 04               |
| <b>Chapter No. 9</b> Painting                                           | 05               |

**Books for Reference**

- |                             |   |                                       |
|-----------------------------|---|---------------------------------------|
| 1. P.B Desai                | - | History of Karnataka                  |
| 2. K.R Basavaraja           | - | History and Culture of Karnataka      |
| 3. B.R Hiremath             | - | Karnataka Shasanagalalli Vartakaru    |
| 4. Rahamat Tarikere         | - | <b>Karnataka Sufigalu</b>             |
| 5. Rajaram Hegde & M.V Vasu | - | Dakshina Karnataka Arasu Manethangalu |
| 6. R.R Diwakar              | - | Karnatka Through the Ages             |
| 7. Suryanath U. Kamath      | - | A History of Karnataka                |
| 8. H.K Sherwani             | - | The Bahamani's of the Deccan          |
| 9. Dept. of Archaeology     | - | Vijayanagar Adhayayana                |
| 10. Baragur Ramachandrappa  | - | Karnataka Sangathi                    |

## Pedagogy

- ☐ Lecture Method – Class Room Teaching
- ☐ Visit to historical sites
- ☐ Group Discussion
- ☐ Visit to cultural sites
- ☐ Preparation of charts

## Assessment:

### Weightage for assessments (in percentage)

| Formative Assessment     |                     |                                         |
|--------------------------|---------------------|-----------------------------------------|
|                          | Internal Assessment | Theory Part<br>Semester End Examination |
| Internal Test            | 15                  | 60                                      |
| Assignments/Map<br>study | 10                  |                                         |
| Viva Voice               | 15                  |                                         |
| <b>Total</b>             | <b>40</b>           |                                         |
| <b>Grand Total</b>       |                     | <b>100</b>                              |

Date:13.09.2021

Course Co-ordinator

Subject Committee Chairperson

**Dr. R Rajanna**



# BA

## Semester 2

|                                |                             |
|--------------------------------|-----------------------------|
| Course Title: Manuscriptology  |                             |
| Total Contact Hours: 39 to 42  | Course Credits: 3           |
| Formative Assessment Marks: 40 | Duration of ESA/Exam: 60    |
| Model Syllabus Authors:        | Summative Assessment Marks: |

**Course Pre-requisite(s):** Manuscriptology

### Course Outcomes (COs):

At the end of the course the student should be able to:

- ☐ Understand the importance of manuscripts
- ☐ Study manuscripts as an ancillary for study of history
- ☐ Understand the concept of cataloguing of manuscripts
- ☐ Practice the science of conservation and preservation of manuscripts
- ☐ Visit libraries and Archives to study conservation and preservation

### Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)

| Course Outcomes (COs) / Program Outcomes (POs) | DSC1 | DSC2 | DSC3 | DSC4 | DSC5 | DSC6 | OE1 | OE2 | SEC1 | SEC2 |
|------------------------------------------------|------|------|------|------|------|------|-----|-----|------|------|
| Disciplinary Knowledge                         | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Communication Skills                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Critical Thinking                              | x    | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Problem Solving                                |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Analytical Reasoning                           | x    | x    | x    | x    | x    | x    | x   | x   |      |      |
| Cooperation and Team Work                      |      | x    | x    | x    |      | x    | x   | x   |      | x    |
| Reflective Thinking                            |      | x    | x    | x    | x    | x    | x   | x   | x    | x    |
| Self-motivated Learning                        |      |      | x    | x    | x    | x    | x   | x   | x    | x    |
| Diversity Management and Inclusive Approach    | x    | x    | x    | x    |      | x    | x   | x   |      |      |
| Moral and Ethical Awareness Reasoning          | x    | x    | x    | x    | x    | x    | x   | x   |      | x    |
| Lifelong Learning                              |      | x    |      | x    | x    | x    | x   | x   |      | x    |

Course Articulation Matrix relates course outcomes of course with the corresponding program outcomes whose attainment is attempted in this course. Mark „X’ in the intersection cell if a course outcome addresses a particular program outcome.

**BA**  
**BA Semester 2**

**Title of the Course:** Manuscriptology

| Course 1                 |                                  | Course 2                 |                                  |
|--------------------------|----------------------------------|--------------------------|----------------------------------|
| Number of Theory Credits | Number of lecture hours/semester | Number of Theory Credits | Number of lecture hours/semester |
| 3                        | 39 or 42                         | 3                        | 39 or 42                         |

| Content of Course 1                                                                                              | 39/42 Hrs |
|------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Unit – 1 Introduction</b>                                                                                     | 13/14     |
| <b>Chapter No. 1</b> Meaning – Definition – Character                                                            | 04        |
| <b>Chapter No. 2</b> Scope and importance                                                                        | 05        |
| <b>Chapter No. 3</b> Types of Manuscripts - Methods of Study                                                     | 04        |
| <b>Unit – 2 Collection</b>                                                                                       | 13/14     |
| <b>Chapter No. 4.</b> History of Manuscriptology                                                                 | 05        |
| <b>Chapter No. 5.</b> Indian Manuscriptology                                                                     | 04        |
| <b>Chapter No. 6.</b> Manuscripts in Kannada, Tigalari, Samskrit, Pali, Tamil/Grantha,Tulu, Nandinagari and Modi | 05        |
| <b>Unit – 3 Editing</b>                                                                                          | 13/14     |
| <b>Chapter No. 7</b> Collection of Manuscripts                                                                   | 03        |
| <b>Chapter No. 8.</b> Process of Editing                                                                         | 05        |
| <b>Chapter No. 9</b> Preservation of Manuscripts                                                                 | 06        |

**Books for Reference**

- |                                           |   |                                                    |
|-------------------------------------------|---|----------------------------------------------------|
| 1. Chinthahar Chakravathi                 | - | Study of Manuscriptology                           |
| 2. M.V Seetharamiah & M. Chidanada murthy | - | Hastiprati Sastra                                  |
| 3. N. Geethacharya                        | - | Hastiprati Sastra Adhyayana                        |
| 4. Sitharam Jahagirdar                    | - | <b>Kannada Grantha Sampadhana Sastra Parichaya</b> |
| 5. S. Jagannath                           | - | Grantha Sampadana Shastra                          |
| 6. Devarakondareddy                       | - | Lipiya Huttu mattu Belavanige                      |
| 7. Madhava Na Katti                       | - | Lipishastra Pravesha                               |
| 8. B.S Sanaya                             | - | Kannada Hasta Prathigala Micro film Soochi         |
| 9. T.V Venkatalachala Sastri              | - | Halaya Honnu                                       |
| 10. A.K Sasthri                           | - | Sringeri Kadathagalu                               |

## Pedagogy

- Class room teaching
- Visit to repositories, Archives and institutions.
- Learn in repositories the techniques of preservation
- Learn conservative method
- Study and classify manuscripts in different languages

### Assessment:

#### Weightage for assessments (in percentage)

| Formative Assessment                                     |                     |                                         |
|----------------------------------------------------------|---------------------|-----------------------------------------|
|                                                          | Internal Assessment | Theory Part<br>Semester End Examination |
| Internal Test                                            | 15                  | 60                                      |
| Assignments/<br>Field study<br>/Seminar<br>/Lab practice | 15                  |                                         |
| Viva Voice                                               | 10                  |                                         |
| <b>Total</b>                                             | <b>40</b>           |                                         |
| <b>Grand Total</b>                                       |                     | <b>100</b>                              |

Date:13.09.2021

Course Co-ordinator

Subject Committee Chairperson

**Prof. R Rajanna**

**Course Matrix for B.A. (History-Hons): 5 Years (10 Semesters)**  
**for Academic Year 2021-22**  
[As per NEP-2020 Guidelines]

**FIRST SEMESTER**

| Paper No.            | Course | Title of the Course                                                                     | Instruction Hours per week | Exam Duration | Marks |     |       | Credits  |
|----------------------|--------|-----------------------------------------------------------------------------------------|----------------------------|---------------|-------|-----|-------|----------|
|                      |        |                                                                                         |                            |               | IA    | ETE | Total |          |
| 1.1                  | DSC-1  | Political history of Karnataka (BCE-3 to 10 CE) Part-1                                  | 4                          | 3             | 40    | 60  | 100   | 3        |
| 1.2                  | DSC-2  | Cultural Heritage of India                                                              | 4                          | 3             | 40    | 60  | 100   | 3        |
| 1.3                  | OE-1   | Cultural History of Karnataka (CE 3-CE 10 ) Part-I<br>OR<br>Introduction to Archaeology | 4                          | 3             | 40    | 60  | 100   | 3        |
| <b>Total Credits</b> |        |                                                                                         |                            |               |       |     |       | <b>9</b> |

**SECOND SEMESTER**

| Paper No.            | Course | Title of the Course                                                       | Instruction Hours per week | Exam Duration | Marks |     |       | Credits  |
|----------------------|--------|---------------------------------------------------------------------------|----------------------------|---------------|-------|-----|-------|----------|
|                      |        |                                                                           |                            |               | IA    | ETE | Total |          |
| 2.1                  | DSC-3  | Political History of Karnataka (CE11-1799 AD)                             | 4                          | 3             | 40    | 60  | 100   | 3        |
| 2.2                  | DSC -4 | Cultural Heritage of Karnataka                                            | 4                          | 3             | 40    | 60  | 100   | 3        |
| 2.3                  | OE-2   | Cultural History of Karnataka (11 AD to 1750 AD)<br>OR<br>Manuscriptology | 4                          | 3             | 40    | 60  | 100   | 3        |
| <b>Total Credits</b> |        |                                                                           |                            |               |       |     |       | <b>9</b> |













## ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ 2020ರ ಅನುಸಾರ ಸಿದ್ಧಪಡಿಸಿದ  
ಸ್ನಾತಕ ಅಧ್ಯಯನ ಮಂಡಳಿಯಲ್ಲಿ ಅನುಮೋದನೆಗೊಂಡಿರುವ ಸ್ನಾತಕ ಪದವಿಗಳ  
ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ ಬಿ.ಎ. ಐಚ್ಛಿಕ ಕನ್ನಡ, ಮುಕ್ತ ಆಯ್ಕೆ ಹಾಗೂ ಕಡ್ಡಾಯ ಕನ್ನಡ  
ಪಠ್ಯಕ್ರಮ 2021-2022ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಅನ್ವಯ

ಎಸ್.ವಿ.ಪಿ. ಕನ್ನಡ ಅಧ್ಯಯನ ಸಂಸ್ಥೆ

ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ 2020ರ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ವಿವಿಧ ಸ್ನಾತಕ ಪದವಿಗಳ ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯಗಳ ಬಿ.ಎ. ಐಚ್ಛಿಕ, ಮುಕ್ತ ಆಯ್ಕೆ ಹಾಗೂ ಕಡ್ಡಾಯ ಕನ್ನಡ ಪಠ್ಯಕ್ರಮ ರಚನೆಯ ಆಶಯ ಮತ್ತು ಪಠ್ಯದ ವಿಷಯ.

ಭಾರತ ಸರ್ಕಾರದ 2020ರ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯಲ್ಲಿ ಕಲಿಕೆಯ ಫಲಿತ ಮತ್ತು ಸಾಧನೆಗಳ ಸಮತೋಲನಕ್ಕೆ ಮಹತ್ವ ನೀಡಲಾಗಿದೆ. ಕಲೆ ಮತ್ತು ವಿಜ್ಞಾನ, ವಾಣಿಜ್ಯ, ಶುದ್ಧ ಶೈಕ್ಷಣಿಕ ಚಟುವಟಿಕೆಗಳು, ವೃತ್ತಿಪರ ಶಿಕ್ಷಣ ಮತ್ತು ಪಠ್ಯೇತರ ಚಟುವಟಿಕೆಗಳ ನಡುವೆ ಪೂರಕ ಸಂಬಂಧ ಇರಬೇಕೆಂಬುದು ಅದರ ಮುಖ್ಯ ಆಶಯವಾಗಿರುವುದು ವಿಶಿಷ್ಟ ಸಂಗತಿಯಾಗಿದೆ. ಅಲ್ಲದೆ ಬೋಧನೆ ಮತ್ತು ಕಲಿಕೆಯ ಬಹುಭಾಷಿಕತೆಗೆ ಪ್ರೋತ್ಸಾಹ ನೀಡುವ ಬಗೆಗೂ ಒತ್ತುಕೊಟ್ಟಿರುವುದು ಮಹತ್ವದ ವಿಷಯವಾಗಿದೆ. ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳ ವ್ಯಕ್ತಿತ್ವ ಬೆಳವಣಿಗೆಯಲ್ಲಿ ಭಾಷೆಗಳು ವಹಿಸುವ ನಿರ್ಣಾಯಕವಾದ ಪಾತ್ರವನ್ನು ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯು ಒಪ್ಪಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳು ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಮುಂದುವರಿಯಲು ಎಲ್ಲ ಬಗೆಯ ತೀರ್ಮಾನಗಳಲ್ಲಿ ಪೂರ್ಣ ಸ್ವಾತಂತ್ರ್ಯ, ಸಮಾನತೆ ಮತ್ತು ಸಮಾವರ್ತನೆ (ಇನ್‌ಕ್ಯೂಸಿವ್)ಗಳನ್ನು ಅಳವಡಿಸಿಕೊಳ್ಳಬೇಕೆಂದು ತಿಳಿಸುತ್ತಾ ಈ ಬಗೆಯ ಕ್ರಿಯಾಶೀಲತೆಯನ್ನು ಪ್ರೋತ್ಸಾಹಿಸಲು ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳು ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು ಸೇರಿದಂತೆ ಮಹಾವಿದ್ಯಾಲಯಗಳು ಪಠ್ಯಕ್ರಮ ಅಧ್ಯಯನ ಮತ್ತು ಮೌಲ್ಯಮಾಪನ ವಿಧಾನಗಳಲ್ಲಿ ಹೊಸತನವನ್ನು ಅಳವಡಿಸಲು ಸ್ವಾತಂತ್ರ್ಯವನ್ನು ನೀಡಿದೆ. ಸಂಪರ್ಕ ಮಾಧ್ಯಮದ ಜೊತೆಗೆ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಮೌಲ್ಯಗಳನ್ನು ನಾಲ್ಕು ವರ್ಷದ ಬಹುಶಿಸ್ತಿಯ ಪದವಿ ಕೋರ್ಸುಗಳಲ್ಲಿ ಬೆಳೆಸುವುದು ಭಾಷಾ ಕಲಿಕೆಯ ಉದ್ದೇಶವಾಗಿದೆ. ಅಲ್ಲದೆ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಮತ್ತು ಭಾಷಾ ಕಲಿಕೆ ಶಿಕ್ಷಣದ ಪ್ರಧಾನ ಕಾಳಜಿಯಾಗಿದೆ. ಕಲಿಕೆಯ ಮಾಧ್ಯಮದ ಜೊತೆಗೆ ವೈಯಕ್ತಿಕ, ಸಾಮಾಜಿಕ, ಆಡಳಿತಾತ್ಮಕ, ಔದ್ಯೋಗಿಕ, ವಾಣಿಜ್ಯ ವ್ಯವಹಾರ ನಿರ್ವಹಣೆಗಳ ಮೇಲೆ ಮಹತ್ವವನ್ನು ನೀಡುವುದಾಗಿದೆ. ಇದನ್ನು ಸಾಂದ್ರವಾಗಿ ಮತ್ತು ಹಿತವಾಗಿ ಅಭಿವ್ಯಕ್ತಿಸಬೇಕಾಗಿದೆ. ಸಂವಹನ ಕೌಶಲ್ಯದ ಮೂಲಕ ಅತಿ ಮಹತ್ವದ ಎಲ್ಲ ಬಗೆಯ ಜ್ಞಾನ ತಿಳುವಳಿಕೆ ಹೆಚ್ಚಿಸುವುದರ ಜೊತೆಗೆ ಉಳಿದೆಲ್ಲ ಜ್ಞಾನಶಿಸ್ತುಗಳನ್ನು ಜೋಡಿಸುವುದಾಗಿದೆ.

ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯು ಹಲವು ಹೊಸತನಗಳಿಂದ ಕೂಡಿದೆ. ಬದಲಾಗುತ್ತಿರುವ ಪ್ರಾದೇಶಿಕ, ರಾಷ್ಟ್ರೀಯ ಹಾಗೂ ಜಾಗತಿಕ ವಿದ್ಯಮಾನಗಳಿಗೆ ಅನುಗುಣವಾದ ಶಿಕ್ಷಣ ಮಾದರಿಯನ್ನು ರೂಪಿಸುವುದು ಇದರ ಮೂಲ ಉದ್ದೇಶವಾಗಿದೆ, ಸಾಂಪ್ರದಾಯಿಕ ಶಿಕ್ಷಣ ಕ್ರಮಕ್ಕಿಂತ ಭಿನ್ನವಾದ ಶಿಕ್ಷಣ ನೀತಿ ಇದಾಗಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಸಮಕಾಲೀನ ಸವಾಲುಗಳನ್ನು ಎದುರಿಸಲು ಬೇಕಾದ ಸದೃಢ ವ್ಯಕ್ತಿತ್ವಗಳಾಗಿ ರೂಪಿಸುವ ಆಶಯ ಇಲ್ಲಿದೆ. ಕಲಿಕೆ ಮತ್ತು ಫಲಿತಗಳ ನಡುವೆ ಸಮತೋಲನವನ್ನು ಸಾಧಿಸುವುದಕ್ಕೆ ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯಲ್ಲಿ ಮಹತ್ವ ನೀಡಲಾಗಿದೆ. ಈ ತನಕದ ವರ್ಗೀಕೃತ ಶಿಕ್ಷಣ ಕ್ರಮ ಜಾಗದಲ್ಲಿ ಒಳಗೊಳ್ಳುವ (ಐಟಿಐಐಐಟಿಐಐ) ವಿಧಾನವನ್ನು ಅನುಸರಿಸಲಾಗಿದೆ. ಅಂದರೆ ಇಲ್ಲಿಯವರೆಗೆ ಸಮಾನಾಂತರವಾಗಿದ್ದ ಶಿಕ್ಷಣ ಶಿಸ್ತುಗಳು ಈಗ ಪರಸ್ಪರ ಪೂರಕವಾಗಿವೆ. ಕಲೆ ಮತ್ತು ವಿಜ್ಞಾನ, ವಾಣಿಜ್ಯ, ಶುದ್ಧ ಶೈಕ್ಷಣಿಕ ಚಟುವಟಿಕೆಗಳು ವೃತ್ತಿಪರ ಶಿಕ್ಷಣ ಮತ್ತು ಪಠ್ಯೇತರ ಚಟುವಟಿಕೆಗಳು ಈ ಶಿಕ್ಷಣ ನೀತಿಯಲ್ಲಿ ಒಂದೇ ವಿಶಾಲ ಭಿತ್ತಿಯಲ್ಲಿ ಕಾಣಿಸಿಕೊಂಡಿವೆ. ಇದು ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯ ಮುಖ್ಯ ಆಶಯವಾಗಿರುವುದು ವಿಶಿಷ್ಟವಾದ ಸಂಗತಿಯಾಗಿದೆ. ಅಲ್ಲದೆ ಬೋಧನೆ ಮತ್ತು ಕಲಿಕೆಯಲ್ಲಿ ಬಹುಭಾಷಿಕತೆಗೆ ಪ್ರೋತ್ಸಾಹ ನೀಡುವ ಬಗೆಗೂ ಹೇಳಿರುವುದು ಮಹತ್ವದ ಮತ್ತು ಸಮಕಾಲೀನ ಸವಾಲನ್ನು ಎದುರಿಸುವ ವಿಧಾನವೂ ಆಗಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳೂ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಮುಂದುವರೆಯಲು ಎಲ್ಲ ಬಗೆಯ ಅವಕಾಶಗಳನ್ನು ಮುಕ್ತವಾಗಿರಿಸಲಾಗಿದೆ. ಹೀಗೆ ಮಾಡುವುದರ ಮೂಲಕ ಶಿಕ್ಷಣದ ಪ್ರತಿ ಹಂತದಲ್ಲೂ ಹೊರಬರುವ ಅವಕಾಶವನ್ನು ಕೊಡುವುದರ ಮೂಲಕ ಅದು ತನ್ನಷ್ಟಕ್ಕೆ ತಾನು ಸ್ವತಂತ್ರ ಹಾಗೂ ಪೂರ್ಣ ಕೋರ್ಸ್ ಆಗಿರುವಂತೆ ರೂಪಿಸಲಾಗಿದೆ.

ಈ ಎಲ್ಲ ಆಶಯಗಳನ್ನು ಸಾಕಾರಗೊಳಿಸಲು ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳು, ವಿಶ್ವವಿದ್ಯಾನಿಲಯಗಳು ಸೇರಿದಂತೆ ಮಹಾವಿದ್ಯಾಲಯಗಳ ಪಠ್ಯಕ್ರಮ, ಅಧ್ಯಯನ ಮತ್ತು ಮೌಲ್ಯಮಾಪನ ವಿಷಯಗಳಲ್ಲಿ ಹೊಸತನವನ್ನು ಅಳವಡಿಸಲು, ಅವಕಾಶ ನೀಡುವುದರ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಎಸ್.ವಿ.ಪಿ. ಕನ್ನಡ ಅಧ್ಯಯನ ಸಂಸ್ಥೆಯು ಬದ್ಧವಾಗಿದ್ದು ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಸೂಚನೆಗನುಗುಣವಾಗಿ ಪಠ್ಯಕ್ರಮಗಳ ಸಿದ್ಧತೆ ಮತ್ತು ಅಳವಡಿಕೆಗೆ ಹೆಚ್ಚಿನ ಒತ್ತನ್ನು ನೀಡಿದೆ. ಜಾಗತೀಕರಣ ಮತ್ತು ಮಾರುಕಟ್ಟೆ ಆಧಾರಿತ ಆರ್ಥಿಕ ನೀತಿಗಳಿಂದಾಗಿ ದೇಶೀಯ ಭಾಷೆಗಳು ಹಿನ್ನಡೆ ಅನುಭವಿಸುತ್ತಿರುವುದರಿಂದ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯು ಶಿಕ್ಷಣವನ್ನು ಅನ್ಯ ಭಾಷೆಗಳ ಅತಿಯಾದ ಅವಲಂಬನೆಯಿಂದ ತಪ್ಪಿಸಿ ಪ್ರಾದೇಶಿಕ ಭಾಷೆಗಳ ಮಾಧ್ಯಮದ ಮೂಲಕ ಕಲಿಸುವುದಕ್ಕೆ ಒತ್ತು ನೀಡುವುದಕ್ಕೆ ಆದ್ಯತೆ ನೀಡಿರುವ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಕನ್ನಡ ಭಾಷೆಯು ಈ ಅವಕಾಶವನ್ನು ಅರ್ಥಪೂರ್ಣವಾಗಿ ಬಳಸಿಕೊಳ್ಳಲು ಮುಂದಾಗಿದೆ.

ಕಲೆ, ವಿಜ್ಞಾನ, ವಾಣಿಜ್ಯ, ಮಾನವಿಕ, ಶಿಕ್ಷಣ, ಕಾನೂನು ಆಯಾ ಜ್ಞಾನ ಶಿಸ್ತುಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳು ಜ್ಞಾನ ಪಡೆಯುವುದು ಸರಿಯಷ್ಟೇ. ಆಯಾ ಕ್ಷೇತ್ರದ ಜ್ಞಾನ ಶಿಸ್ತುಗಳ ಜ್ಞಾನವು ಸಾಕ್ಷಾತ್ಕಾರಗೊಳ್ಳುವುದು ಭಾಷೆ ಮತ್ತು ಸಾಹಿತ್ಯದಿಂದ ಮಾತ್ರ ಸಮಾಜದಲ್ಲಿ

ಮನುಷ್ಯ ಉತ್ತಮ ನಾಗರಿಕನಾಗಿ ಬದುಕಲು ಅಗತ್ಯವಾದ ಸಂವೇದನೆಯನ್ನು ಭಾಷೆ ಮತ್ತು ಸಾಹಿತ್ಯ ರೂಪಿಸುತ್ತವೆ. ಭಾಷೆ ಕೇವಲ ಮಾಧ್ಯಮವಾಗಿರದೇ ಅದೊಂದು ಸಂಸ್ಕೃತಿಯಾಗಿರುತ್ತದೆ.

ಬಿ.ಎ., ಬಿ.ಎಸ್ಸಿ, ಬಿ.ಕಾಂ, ಬಿ.ಬಿ.ಎ., ಬಿ.ಸಿ.ಎ, ಬಿ.ಎಸ್.ಡಬ್ಲ್ಯೂ ಮುಂತಾದ ಪದವಿ ಕೋರ್ಸುಗಳ ಮೊದಲ ನಾಲ್ಕು ಸೆಮಿಸ್ಟರ್‌ಗಳಲ್ಲಿ ಭಾಷೆ ಮತ್ತು ಸಾಹಿತ್ಯದ ಬೋಧನೆ ಮಾಡುವಾಗ ವಿಷಯಾಧಾರಿತ ಪಠ್ಯಗಳಿಗೆ ಹೆಚ್ಚಿನ ಅಧ್ಯತೆಯನ್ನು ಪಠ್ಯಗಳ ಸಿದ್ಧಪಡಿಸುವಿಕೆಯಲ್ಲಿ ನೀಡಲಾಗಿದೆ. ಆಯಾ ಕೋರ್ಸುಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ಪಠ್ಯ ನಿಗದಿಪಡಿಸುವಾಗ ಮಾನವೀಯ ಮೌಲ್ಯಗಳಿಗೆ ಮತ್ತು ಸಾಮಾಜಿಕ, ರಾಜಕೀಯ ಮತ್ತು ಧಾರ್ಮಿಕ ಸಮಸ್ಯೆಗಳ ಮೇಲೆ ಬೆಳಕು ಚೆಲ್ಲುವ ಸಾಹಿತ್ಯದ ಎಲ್ಲ ಪ್ರಕಾರಗಳನ್ನು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಂಡು ಪಠ್ಯವನ್ನು ರಚಿಸುವ ಪ್ರಯತ್ನವನ್ನು ಮಾಡಲಾಗಿದೆ.

### ಕನ್ನಡ ಪಠ್ಯಕ್ರಮ ವಿನ್ಯಾಸ ಆಶಯಗಳು

ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಆಶಯಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ಕನ್ನಡ ಭಾಷಾ, ಐಚ್ಛಿಕ, ಮುಕ್ತ ಆಯ್ಕೆ ಕನ್ನಡ, ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಪಠ್ಯ ಕ್ರಮಗಳ ವಿನ್ಯಾಸವನ್ನು ರೂಪಿಸಲಾಗಿದೆ.

ಕರ್ನಾಟಕದಾದ್ಯಂತ ವಿವಿಧ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು ಈತನಕ ಅರ್ಥಪೂರ್ಣವಾದ ಹಾಗೂ ವೈವಿಧ್ಯಮಯ ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಅನುಸರಿಸುತ್ತಾ ಬಂದಿವೆ. ಸಾಹಿತ್ಯದ ಮೂಲಗುಣವಾದ ನಿತ್ಯನೂತನತೆಗೆ ಅನುಗುಣವಾಗಿ ಹೊಸತನವನ್ನು ತರಲು ಪ್ರಯತ್ನಿಸಲಾಗಿದೆ. ಈಗ ಹೊಸ ಪಠ್ಯಕ್ರಮದ ಪ್ರಕಾರ ಪ್ರಯೋಗಿಸಲ್ಪಟ್ಟು ಯಶಸ್ವಿಯಾಗಿರುವ ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯವು 'ವಿಷಯಾಧಾರಿತ ಪಠ್ಯಕ್ರಮ ವನ್ನು ಅಳವಡಿಸಲು ಉದ್ದುಕ್ತವಾಗಿದೆ. ಈ ಮೂಲಕ ಕಲಿಕೆ ಮತ್ತು ಫಲಿತಗಳ ನಡುವಿನ ಸಮತೋಲನವನ್ನು ಸಾಧಿಸುವುದು ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಶಿಕ್ಷಣವು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಭಾಷಾ ಕೌಶಲ್ಯ, ಸಾಹಿತ್ಯದ ಮಾನವೀಯ ಸಂವೇದನೆ, ಸಮಕಾಲೀನ ವಿದ್ಯಮಾನಗಳ ಅರಿವು, ಸಂಸ್ಕೃತಿಯ ಬೆಳಕು ಮತ್ತು ರಾಷ್ಟ್ರೀಯತೆಯ ಮನೋಭಾವವನ್ನು ಕಟ್ಟಿಕೊಡುವುದರಲ್ಲಿ ಯಶಸ್ವಿಯಾಗಬೇಕು ಎನ್ನುವ ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯ ಆಶಯವನ್ನು ವಿಷಯಾಧಾರಿತ ಪಠ್ಯಕ್ರಮದ ಮೂಲಕ ಸಾಧಿಸಿಕೊಳ್ಳುವುದು ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಉದಾಹರಣೆಗೆ - 'ನಾಡು-ನುಡಿ-ಚಿಂತನೆ', 'ಸಾಮರಸ್ಯ', 'ಪರಿಸರ ಜಾಗತೀಕರಣ ಮೊದಲಾದವು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಉದ್ದೇಶಿತ ಫಲಿತಗಳನ್ನು ನೀಡುತ್ತವೆ. ಹಾಗೆಯೇ ಆಯಾ ಅಧ್ಯಯನ ಶಿಸ್ತುಗಳ ಸ್ವರೂಪಕ್ಕನುಗುಣವಾಗಿ ಒಂದು ಘಟಕವನ್ನು ಸ್ನಾತಕ ಅಧ್ಯಯನ ಮಂಡಳಿಯಲ್ಲಿ ಪರಿಶೀಲಿಸಿ ರೂಪಿಸಿ ಸಿದ್ಧಪಡಿಸಲಾಗಿದೆ.

ಭಾಷಾ ಪಠ್ಯಗಳನ್ನು ನಾಲ್ಕು ಸೆಮಿಸ್ಟರ್‌ಗಳಲ್ಲಿ ಪ್ರಥಮ ಭಾಷೆಯಾಗಿ ಬೋಧಿಸತಕ್ಕದ್ದು, ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್‌ಗೂ 3 ಕ್ರೆಡಿಟ್‌ಗಳು ಹಾಗೂ ನಾಲ್ಕು ಗಂಟೆ ಬೋಧನಾ ಅವಧಿ ಇರುತ್ತದೆ. ಐಚ್ಛಿಕ ಕನ್ನಡ ಪಠ್ಯಕ್ರಮವನ್ನು ಸಿದ್ಧಪಡಿಸಿದ್ದು ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್‌ಗೂ 3 ಕ್ರೆಡಿಟ್‌ಗಳು ಹಾಗೂ 3 ಗಂಟೆ ಬೋಧನಾ ಅವಧಿ ಇರುತ್ತದೆ. ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್‌ಗೆ ಕಡ್ಡಾಯ ಕನ್ನಡ (ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ-ಕನ್ನಡ ಕಲಿಕೆ) ಪಠ್ಯಕ್ರಮವನ್ನು ಒಂದು ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಬೋಧಿಸುವುದು. ಮುಕ್ತ ಆಯ್ಕೆ ಕನ್ನಡ ಪ್ರತಿಕೆಗೆ (ಕನ್ನಡ ಭಾಷೆ ಮತ್ತು ಐಚ್ಛಿಕ ಕನ್ನಡ) ನಾಲ್ಕು ಪತ್ರಿಕೆಗಳನ್ನು ಸಿದ್ಧಪಡಿಸಲಾಗಿದೆ. ಮುಕ್ತ ಆಯ್ಕೆ ಕನ್ನಡ ಪತ್ರಿಕೆಗಳನ್ನು ಎಲ್ಲ ಅಧ್ಯಯನ ಶಿಸ್ತುಗಳ ವಿದ್ಯಾರ್ಥಿಗಳೂ ನಾಲ್ಕು ಸೆಮಿಸ್ಟರ್‌ಗಳಿಗೂ ಆಯ್ಕೆ ಮಾಡಿಕೊಳ್ಳಲು ಅವಕಾಶವಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕಲಿಕೆಯು ಹೆಚ್ಚು ಪ್ರಾಯೋಗಿಕವಾಗಿರುವಂತೆ 'ಕ್ರಿಯಾ ಪುಸ್ತಕ ವನ್ನು ರೂಪಿಸಲು ಅವಕಾಶವನ್ನು ಕಲ್ಪಿಸಿ ಕೊಡಲಾಗಿದೆ.

### ಪದವಿ ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯಗಳು

1. ಕಲಾ ಕನ್ನಡ (ಬಿ.ಎ./ಬಿ.ಎಸ್.ಡಬ್ಲ್ಯೂ/ಹೆಚ್.ಆರ್.ಡಿ/ ಎಸ್.ಡಿ.ಎಸ್) ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್
2. ವಿಜ್ಞಾನ ಕನ್ನಡ (ಬಿಎಸ್ಸಿ/ಬಿ.ಎಸ್ಸಿ (ಎಫ್‌ಎನ್‌ಡಿ), ಬಿ.ಎಸ್ಸಿ (ಹೆಚ್.ಎಸ್), ಬಿ.ಎಸ್ಸಿ (ಸಿಎಸ್), ಬಿ.ಎಸ್ಸಿ (ಫ್ಯಾಶನ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಗಾರ್ಮೆಂಟ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಲೆದರ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಇಂಟಿರಿಯರ್ ಡಿಸೈನ್ ಆಂಡ್ ಡೆಕೋರೇಶನ್), ಬಿ.ಎಸ್ಸಿ (ಅನಿಮೇಶನ್ ಆಂಡ್ ವಿಡುಯಲ್ ಇಫೆಕ್ಟ್), ಬಿ.ಎಸ್ಸಿ (ಕೌನ್ಸಿಲಿಂಗ್), ಬಿ.ಎಸ್ಸಿ (ಪುಡ್ ಟೆಕ್ನಾಲಜಿ) ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್
3. ಗಣಕ ಕನ್ನಡ (ಬಿ.ಸಿ.ಎ) ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್
4. ವಾಣಿಜ್ಯ ಕನ್ನಡ (ಬಿ.ಕಾಂ) ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್
5. ವ್ಯವಹಾರ ನಿರ್ವಹಣ ಕನ್ನಡ (ಬಿ.ಬಿ.ಎ) ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್

Course Articulation Matrix Mapping of Course Outcomes (Cos)  
with Program Outcomes (Pos 1-12)

| Course Outcomes (Cos)/ | ಬಿ.ಎ.,         | ಬಿ.ಎಸ್ಸಿ. | ಬಿ.ಕಾಂ. | ಬಿ.ಸಿ.ಎ | ಬಿ.ಬಿ.ಎ | ಐಚ್ಛಿಕ | ಮುಕ್ತ | ಕಡ್ಡಾಯ      |
|------------------------|----------------|-----------|---------|---------|---------|--------|-------|-------------|
| Program Outcomes (Pos) | ಬಿ.ಎಸ್.ಡಬ್ಲ್ಯು | ಬಿ.ಎಸ್ಸಿ. |         |         |         | ಕನ್ನಡ  | ಆಯ್ಕೆ | ಕನ್ನಡ       |
|                        |                | (ಫ಼ಾರ್ಡ್) |         |         |         |        |       | ಕನ್ನಡ       |
|                        |                |           |         |         |         |        |       | ಕನ್ನಡೇತ     |
|                        |                |           |         |         |         |        |       | ರರಿಗೆ ಕನ್ನಡ |

1. ವಿವಿಧ ಬರಹಗಾರರು, ಸಾಹಿತ್ಯ  
ಕೃತಿಗಳು ಮತ್ತು ಸಾಹಿತ್ಯ  
ಚಟುವಳಿಗಳ ಅರಿವು  
ಹೆಚ್ಚಿಸಿಕೊಳ್ಳುವುದು
2. ವಿವಿಧ ಸಾಹಿತ್ಯ ಪ್ರಕಾರಗಳ  
ರೂಪ ಸ್ವರೂಪಗಳ ಬಗೆಗೆ  
ತಿಳುವಳಿಕೆ ಪಡೆಯುವುದು
3. ಭಾಷೆ-ಸಾಹಿತ್ಯದ ಶ್ರೀಮಂತಿಕೆಯ  
ಜೊತೆಗೆ ಮಾನವೀಯ ಮೌಲ್ಯಗಳನ್ನು  
ಮೂಡಿಸಿಕೊಳ್ಳುವುದು
4. ಸಾಹಿತ್ಯ ಮೂಲಕ ಸಮಾಜೋ,  
ಧಾರ್ಮಿಕ, ರಾಜಕೀಯ,  
ಸಾಂಸ್ಕೃತಿಕ ತಿಳುವಳಿಕೆಯನ್ನು  
ಹೊಂದುವುದು
5. ವೈಚಾರಿಕ-ವೈಜ್ಞಾನಿಕ  
ಚಿಂತನೆಗಳನ್ನು ಅಳವಡಿಸಿಕೊಳ್ಳುವುದು
6. ಭಾಷಾ ಕೌಶಲ್ಯವನ್ನೂ  
ಬೆಳೆಸಿಕೊಳ್ಳುವುದು
7. ಸಾಹಿತ್ಯದ ಓದು, ತಿಳುವಳಿಕೆ  
ಹಾಗೂ ಬರವಣಿಗೆಯನ್ನು  
ರೂಡಿಸಿಕೊಳ್ಳುವುದು
8. ನಾಡು-ನುಡಿಯನ್ನು ಕುರಿತ  
ಅರಿವನ್ನು ಹೆಚ್ಚಿಸಿಕೊಳ್ಳುವುದು
9. ಸಮಕಾಲೀನ ವಿದ್ಯಮಾನಗಳ ಅರಿವು
10. ಸಾಮಾಜಿಕ ಹೊಣೆಗಾರಿಕೆಯ ಅರಿವು
11. ಸದೃಢ ಬೌದ್ಧಿಕ ವ್ಯಕ್ತಿತ್ವ ನಿರ್ಮಾಣ

**ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಮತ್ತು ಸೆಮಿಸ್ಟರ್ ಕೊನೆಯ ಲಿಖಿತ ಪರೀಕ್ಷಾ ವಿಧಾನದ ಸಲಹೆ ಮತ್ತು ಮಾದರಿ**

ಈ ಸಮಿತಿಯು ಆಂತರಿಕ (ಸಿಐಇ) ಹಾಗೂ ಸೆಮಿಸ್ಟರ್ ಕೊನೆಯ ಲಿಖಿತ ಪರೀಕ್ಷೆ (ಎಸ್‌ಐಇ)ಗಳ ವಿಧಾನವನ್ನು ಕುರಿತಂತೆ ಈ ಕೆಳಗಿನ ಸಲಹೆ ನೀಡಲು ಬಯಸುತ್ತದೆ. ಪಠ್ಯಚೌಕಟ್ಟು ಸಮಿತಿ ಸೂಚನೆಯಂತೆ ಆಂತರಿಕ (ಸಿಐಇ) ಮೌಲ್ಯಮಾಪನವು ಶೇ 40 ಅಂಕಗಳನ್ನು ಹಾಗೂ ಸೆಮಿಸ್ಟರ್ ಕೊನೆಯ ಪರೀಕ್ಷೆಯು (ಎಸ್‌ಐಇ) ಶೇ. 60 ಅಂಕಗಳ ನಿಯಮವನ್ನು ಈ ಕೆಳಗಿನ ಮಾನದಂಡಗಳನ್ನು ಅನುಸರಿಸಿ ಮಾಪನ ಮಾಡಲು ಸೂಚಿಸುತ್ತದೆ.

ಪ್ರತಿ ಪತ್ರಿಕೆಗಳ ಒಟ್ಟು ಪಾಠ ಘಟಕಗಳು - 04 (ಪ್ರಾಥಮಿಕ ಪರಿಚಯ, ಸೈದ್ಧಾಂತಿಕ ವಿವರಣೆ ಸೇರಿದಂತೆ)

| ಪರೀಕ್ಷೆ  | ಸಮಯ                                                     | ಅಂಕಗಳು     |
|----------|---------------------------------------------------------|------------|
| TEST C-1 | ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್‌ನ ಪೂರ್ವಾರ್ಧದ ಕೊನೆಗೆ 7-8ನೇ ವಾರಗಳಲ್ಲಿ     | 10         |
| TEST C-2 | ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್‌ನ ಉತ್ತರಾರ್ಧದ ಕೊನೆಗೆ 15-16ನೇ ವಾರಗಳಲ್ಲಿ   | 10         |
| ಅ-1      | ನಿಯೋಜಿತ ಪ್ರಬಂಧ, ವಿಚಾರ ಸಂಕರಣ (ಮೊದಲ 2 ತಿಂಗಳು)             | 05         |
| ಅ-2      | ರಸಪ್ರಶ್ನೆ, ಗುಂಪು ಚರ್ಚೆ, ವಿಚಾರ ಗೋಷ್ಠಿ (ಕೊನೆಯ 2 ತಿಂಗಳು)   | 05         |
| ಅ-1      | ವಿಚಾರ ಸಂಕರಣ                                             | 05         |
| ಅ-2      | ನಿಯೋಜಿತ ಪ್ರಬಂಧ, ಗುಂಪು ಚರ್ಚೆ, ವಿಚಾರ ಗೋಷ್ಠಿ               | 05         |
|          | <b>ಒಟ್ಟು ಅಂಕಗಳು</b>                                     | <b>40</b>  |
| ಅ-3      | ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್‌ನ ಅಂತಿಮ ಪರೀಕ್ಷೆ ಸಮಯ 3 ಗಂಟೆಗಳು 60 ಅಂಕಗಳು | 60         |
|          | <b>ಒಟ್ಟು ಅಂಕಗಳು</b>                                     | <b>100</b> |

**ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ (ಎಸ್‌ಐಇ)**

ಈ ವಿಧಾನವು 60 ಅಂಕಗಳ ಲಿಖಿತ ಪರೀಕ್ಷೆಗಳಿಂದ ಕೂಡಿರುತ್ತದೆ. ಈ ಪರೀಕ್ಷೆಯು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾನಿಲಯಗಳೂ ಹಾಗೂ ಅಟಾನಮಸ್ ಕಾಲೇಜುಗಳ ಪರೀಕ್ಷಾ ನಿಯಮಾನುಸಾರ ನಡೆಯುವುದರಿಂದ ವಿಶ್ವವಿದ್ಯಾನಿಲಯಗಳು ನಿಗದಿಪಡಿಸಿರುವ ಪರೀಕ್ಷಾ ಅರ್ಹತೆಗಳನ್ನು ವಿದ್ಯಾರ್ಥಿಯು ಪರಿಪೂರ್ಣಗೊಳಿಸಬೇಕು. ನಂತರ ಆಯಾ ವಿಶ್ವವಿದ್ಯಾನಿಲಯಗಳ ಬಿಬಿಎಸ್‌ಗಳು, ಬಿಬಿಇ ಸದಸ್ಯರು ರೂಪಿಸುವ ಮಾನದಂಡಗಳಂತೆ ಪರೀಕ್ಷೆ ನಡೆಯಲಿದೆ.

**ಭಾಷಾ ಕನ್ನಡ ಪಠ್ಯ ಚೌಕಟ್ಟು**

**ಬಿ.ಎ., ಬಿ.ಎಸ್.ಡಬ್ಲ್ಯು - ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ**

ಪಠ್ಯಪುಸ್ತಕಗಳ ಶಿರ್ಷಿಕೆಯನ್ನು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧ್ಯಯನದ ಮಂಡಳಿ ನಿರ್ಧರಿಸುವುದು 1, 2, 3, 4 ಸೆಮಿಸ್ಟರ್‌ಗಳು.

ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ಕ್ರೆಡಿಟ್ 03, ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ತರಗತಿಗಳು 04 (ಒಟ್ಟು 52-56 ಗಂಟೆಗಳು)

| ಸೆಮಿಸ್ಟರ್       | ಘಟಕ-1                  | ಘಟಕ-2      | ಘಟಕ-3      | ಘಟಕ-4      |
|-----------------|------------------------|------------|------------|------------|
| ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್ | ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ | ಪ್ರಕೃತಿ    | ಬಾಲ್ಯ      | ಸಂಕೀರ್ಣ    |
| ಐ, 1-1          | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು |

|                   |            |            |            |            |
|-------------------|------------|------------|------------|------------|
| ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ | ಜಾಗತೀಕರಣ   | ಸಮಾಜ       | ಪ್ರೀತಿ     | ಸಂಕೀರ್ಣ    |
| ಐ, 1-2            | 15 ಗಂಟೆಗಳು | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು |

#### ಬಿ.ಎಸ್ಸಿ-ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

ಪಠ್ಯಪುಸ್ತಕಗಳ ಶೀರ್ಷಿಕೆಯನ್ನು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧ್ಯಯನದ ಮಂಡಳಿ ನಿರ್ಧರಿಸುವುದು 1,2,3,4 ಸೆಮಿಸ್ಟರ್‌ಗಳು.

ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ಕ್ರೆಡಿಟ್ 03, ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ತರಗತಿಗಳು 04 (ಒಟ್ಟು 52-56 ಗಂಟೆಗಳು)

| ಸೆಮಿಸ್ಟರ್         | ಘಟಕ-1                  | ಘಟಕ-2      | ಘಟಕ-3             | ಘಟಕ-4      |
|-------------------|------------------------|------------|-------------------|------------|
| ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್   | ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ | ಭೂಮಿ       | ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮ | ಸಂಕೀರ್ಣ    |
| ಐ, 1-1            | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು        | 13 ಗಂಟೆಗಳು |
| ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ | ಜೀವನಕಲೆ                | ಕನಸು       | ಮಳೆ               | ಸಂಕೀರ್ಣ    |
| ಐ, 1-2            | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು        | 13 ಗಂಟೆಗಳು |

#### ಬಿ.ಸಿ.ಎ-ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

ಪಠ್ಯಪುಸ್ತಕಗಳ ಶೀರ್ಷಿಕೆಯನ್ನು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧ್ಯಯನದ ಮಂಡಳಿ ನಿರ್ಧರಿಸುವುದು 1, 2, 3, 4 ಸೆಮಿಸ್ಟರ್‌ಗಳು.

ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ಕ್ರೆಡಿಟ್ 03, ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ತರಗತಿಗಳು 04 (ಒಟ್ಟು 52 ಗಂಟೆಗಳು)

| ಸೆಮಿಸ್ಟರ್         | ಘಟಕ-1                  | ಘಟಕ-2      | ಘಟಕ-3      | ಘಟಕ-4      |
|-------------------|------------------------|------------|------------|------------|
| ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್   | ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ | ಆಕಾಶ       | ತಾರುಣ್ಯ    | ಸಂಕೀರ್ಣ    |
| ಐ, 1-1            | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು |
| ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ | ವಾಣಿಜ್ಯ                | ತಂತ್ರಜ್ಞಾನ | ದಾಂಪತ್ಯ    | ಸಂಕೀರ್ಣ    |
| ಐ, 1-2            | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು |

#### ಬಿ.ಕಾಂ-ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

ಪಠ್ಯಪುಸ್ತಕಗಳ ಶೀರ್ಷಿಕೆಯನ್ನು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧ್ಯಯನದ ಮಂಡಳಿ ನಿರ್ಧರಿಸುವುದು 1, 2, 3, 4 ಸೆಮಿಸ್ಟರ್‌ಗಳು.

ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ಕ್ರೆಡಿಟ್ 03, ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ತರಗತಿಗಳು 04 (ಒಟ್ಟು 52-56 ಗಂಟೆಗಳು)

| ಸೆಮಿಸ್ಟರ್         | ಘಟಕ-1                  | ಘಟಕ-2      | ಘಟಕ-3      | ಘಟಕ-4      |
|-------------------|------------------------|------------|------------|------------|
| ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್   | ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ | ಸಂಸ್ಕೃತಿ   | ಜಾಗತೀಕರಣ   | ಸಂಕೀರ್ಣ    |
| ಐ, 1-1            | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು |
| ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ | ಸೌಂದರ್ಯ                | ಭಕ್ತಿ      | ದೇಸಿಯತೆ    | ಸಂಕೀರ್ಣ    |
| ಐ, 1-2            | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು |



### ಬಿ.ಬಿ.ಎ-ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

ಪಠ್ಯಪುಸ್ತಕಗಳ ಶೀರ್ಷಿಕೆಯನ್ನು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧ್ಯಯನದ ಮಂಡಳಿ ನಿರ್ಧರಿಸುವುದು 1, 2, 3, 4 ಸೆಮಿಸ್ಟರ್‌ಗಳು.

ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ಕ್ರೆಡಿಟ್ 03, ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್ ತರಗತಿಗಳು 04 (ಒಟ್ಟು 52-56 ಗಂಟೆಗಳು)

| ಸೆಮಿಸ್ಟರ್         | ಘಟಕ-1                  | ಘಟಕ-2      | ಘಟಕ-3      | ಘಟಕ-4      |
|-------------------|------------------------|------------|------------|------------|
| ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್   | ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ | ಆಧುನಿಕತೆ   | ಕುಟುಂಬ     | ಸಂಕೀರ್ಣ    |
| ಐ, 1-1            | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು |
| ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ | ಕಾಯಕ                   | ಸಾಮರಸ್ಯ    | ಅಂತಃಕರಣ    | ಸಂಕೀರ್ಣ    |
| ಐ, 1-2            | 15 ಗಂಟೆಗಳು             | 15 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು | 13 ಗಂಟೆಗಳು |

### ಐಚ್ಛಿಕ ಕನ್ನಡ ಪಠ್ಯ ವಿನ್ಯಾಸ

ಒಂದರಿಂದ ಎರಡನೇ ಸೆಮಿಸ್ಟರ್‌ವರೆಗೆ

|                  |                    |                                                                               |
|------------------|--------------------|-------------------------------------------------------------------------------|
| ಮೊದಲನೇ ಸೆಮಿಸ್ಟರ್ | ಎ-1<br>ಪತ್ರಿಕೆ - 1 | ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ<br>(ಆರಂಭದಿಂದ ಹತ್ತನೇ ಶತಮಾನದವರೆಗೆ)                |
|                  | ಎ-2<br>ಪತ್ರಿಕೆ - 2 | ಮಧ್ಯಕಾಲೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ<br>(ಹನ್ನೊಂದನೇ ಶತಮಾನದಿಂದ ಹದಿನಾರನೇ ಶತಮಾನದವರೆಗೆ) |
| ಎರಡನೇ ಸೆಮಿಸ್ಟರ್  | ಎ-3<br>ಪತ್ರಿಕೆ - 1 | ಆಧುನಿಕ ಪೂರ್ವ ಕನ್ನಡ ಸಾಹಿತ್ಯ<br>(ಹದಿನೇಳನೆಯ ಶತಮಾನದಿಂದ ಹತ್ತೊಂಬತ್ತನೇ ಶತಮಾನದವರೆಗೆ)  |
|                  | ಎ-4<br>ಪತ್ರಿಕೆ - 1 | ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯ - ಪ್ರೇರಣೆಗಳು<br>(ಇಪ್ಪತ್ತನೆಯ ಶತಮಾನದಿಂದ ಮುಂದೆ)             |

### ಮುಕ್ತ ಆಯ್ಕೆ 1 ಮುಕ್ತ ಆಯ್ಕೆ 2 ಪತ್ರಿಕೆಯ ಕನ್ನಡ ಪಠ್ಯ ಚೌಕಟ್ಟು (OE)

|                                   |                     |                                                                  |
|-----------------------------------|---------------------|------------------------------------------------------------------|
| ಮೊದಲನೇ ಸೆಮಿಸ್ಟರ್<br>ಮುಕ್ತ ಆಯ್ಕೆ 1 | (ಔಇ)-1 ಕ್ರೆಡಿಟ್ -03 | ಕನ್ನಡ ಭಾಷೆ ಮತ್ತು ಸಾಹಿತ್ಯ                                         |
| ಎರಡನೇ ಸೆಮಿಸ್ಟರ್<br>ಮುಕ್ತ ಆಯ್ಕೆ 2  | (ಔಇ)-2 ಕ್ರೆಡಿಟ್ -03 | ಕನ್ನಡ ವ್ಯಾಕರಣ                                                    |
| ಮೊದಲನೇ ಸೆಮಿಸ್ಟರ್<br>ಮುಕ್ತ ಆಯ್ಕೆ 1 | (ಔಇ)-1 ಕ್ರೆಡಿಟ್ -03 | ಆಡಳಿತಾತ್ಮಕ ಕನ್ನಡ ಕಲಿಕೆ                                           |
| ಎರಡನೇ ಸೆಮಿಸ್ಟರ್<br>ಮುಕ್ತ ಆಯ್ಕೆ 2  | (ಔಇ)-2 ಕ್ರೆಡಿಟ್ -03 | ಕನ್ನಡ ಭಾಷಾಂತರ : ತತ್ತ್ವ ಮತ್ತು ಪ್ರಯೋಗ                              |
| ಮೂರನೇ ಸೆಮಿಸ್ಟರ್                   | (ಔಇ)-3 ಕ್ರೆಡಿಟ್ -03 | ಕನ್ನಡ ಜಾನಪದ ಮತ್ತು ಪ್ರಯೋಗ                                         |
| ನಾಲ್ಕನೇ ಸೆಮಿಸ್ಟರ್                 | (ಔಇ)-3 ಕ್ರೆಡಿಟ್ -03 | ಕನ್ನಡ ರಂಗಭೂಮಿ ಮತ್ತು ಪ್ರಯೋಗ<br>ಕನ್ನಡ ಸಾಹಿತ್ಯ-ಕರ್ನಾಟಕ-ಸಾಮಾನ್ಯಜ್ಞಾನ |

## ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ

ಕನ್ನಡ ಕಲಿ - 1 ಪದವಿ ಮೊದಲ ಸೆಮಿಸ್ಟರ್ - ಫಂಕ್ಷನಲ್ ಕನ್ನಡ

ಕನ್ನಡ ಕಲಿ - 2 ಪದವಿ ಎರಡನೇ ಸೆಮಿಸ್ಟರ್

ಆಯಾ ಅಧ್ಯಯನ ಮಂಡಳಿಗಳು ತಮ್ಮ ಆದ್ಯತೆಗೆ ಅನುಗುಣವಾಗಿ ಪಠ್ಯಗಳನ್ನು ರೂಪಿಸಿಕೊಳ್ಳಬಹುದು.

ಅನುಬಂಧ

ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020

ಕನ್ನಡ ಭಾಷಾ ಸ್ವರೂಪ (ಪ್ರಥಮ ಭಾಷೆ - ಕಡ್ಡಾಯ ಕನ್ನಡ)

### ಕೋರ್ಸುವಾರು ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯಕ್ರಮ

ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಭಾಷಾ ಪಠ್ಯಗಳು ಮತ್ತು ಭಾಷಾ ಅಧ್ಯಾಪಕರ ಜವಾಬ್ದಾರಿ ಎಲ್ಲರಿಗೂ ಗೊತ್ತಿರುವುದೇ ಆಗಿದೆ. ಹಲವು ಬಗೆಯ ಬಿಕ್ಕಟ್ಟುಗಳು ಮತ್ತು ವಿಷಮತೆಗಳು ಹೆಚ್ಚುತ್ತಿರುವ ಈ ಕಾಲಘಟ್ಟದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಪ್ರಜ್ಞಾವಂತರನ್ನಾಗಿ, ಸಂವೇದನಾಶೀಲರನ್ನಾಗಿ ಮಾಡುವ ಅವಕಾಶ ಭಾಷಾ ಪಠ್ಯಗಳಲ್ಲಿ ಇರುತ್ತದೆ. ಆ ಅವಕಾಶವನ್ನು ಎಂದಿನಿಂದಲೂ ಭಾಷಾ ಪಠ್ಯ ಮಂಡಳಿಗಳು ಆಸ್ಥೆಯಿಂದ ನಿಭಾಯಿಸುತ್ತಲೇ ಬಂದಿವೆ.

ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯ ಅನುಷ್ಠಾನದ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ರಚಿಸಲಾದ ಸಮಿತಿಯು ಇದನ್ನೇ ಬುನಾದಿಯಾಗಿಸಿಕೊಂಡು ಪಠ್ಯಕ್ರಮವನ್ನು ಕುರಿತ ನಕಾಶೆಯನ್ನು ರಚಿಸಿದೆ. ಕನ್ನಡವನ್ನು 'ಜ್ಞಾನದ ಭಾಷೆ' ಯಾಗಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ನೀಡಬೇಕೆನ್ನುವುದು ಸಮಿತಿಯ ಆಶಯ. ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯು ಈ ಅಂಶವನ್ನೇ ಉದ್ದೋಗ ಮತ್ತು ಕೌಶಲ್ಯಗಳು ಶಿಕ್ಷಣದ ಮುಖ್ಯ ಗುರಿ ಎಂದು ಹೇಳಿದೆ. ಹೀಗಾಗಿ ತಾಯಿ ಭಾಷೆ ಕನ್ನಡದ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳು ಸ್ಥಳೀಯ, ರಾಷ್ಟ್ರೀಯ ಜಾಗತೀಯ ಸವಾಲುಗಳನ್ನು ಸನ್ನದ್ಧರಾಗುವ ಬಗೆಯಲ್ಲಿ ಪಠ್ಯಕ್ರಮದ ವಿನ್ಯಾಸವನ್ನು ರೂಪಿಸಲಾಗಿದೆ. ಜಾಗತೀಕರಣವೂ ಸೇರಿದಂತೆ ಹಲವು ವಿದ್ಯಮಾನಗಳು ನಮ್ಮ ಸಾಮಾಜಿಕ ಮತ್ತು ಸಾಂಸ್ಕೃತಿಕ ಸನ್ನಿವೇಶಗಳನ್ನು ಸಮೀಕರಣಗಳನ್ನು, ಗ್ರಹಿಕೆಗಳನ್ನು ಆಳವಾಗಿ ಪ್ರಭಾವಿಸುತ್ತಿವೆ. ಇವು ನಮ್ಮ ಯುವ ತಲೆಮಾರುಗಳನ್ನು ತಮ್ಮ ಬೇರುಗಳಿಂದಲೇ ದೂರ ಮಾಡುತ್ತಾ ಅವರನ್ನು ಪರಕೀಯರನ್ನಾಗಿಸುತ್ತಿದೆ ಎನ್ನುವ ಆತಂಕ ಅಧ್ಯಾಪಕರನ್ನು ಕಾಡುತ್ತಿದೆ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ನಾಡು-ನುಡಿ, ಜಲ, ಭೂಮಿ, ಸಮಕಾಲೀನ ಸವಾಲುಗಳನ್ನು ಕನ್ನಡದ ಅತ್ಯುತ್ತಮ ಪಠ್ಯಗಳ ಮುಖಾಂತರ ಕಲಿಸಬಹುದೆನ್ನುವ ನಂಬಿಕೆ ಈ ಸಮಿತಿಯದ್ದು. ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸಾಹಿತ್ಯಕ ಅಭಿರುಚಿಯನ್ನು ಹೆಚ್ಚಿಸಬೇಕು. ಭಾಷೆ ಮತ್ತು ಸಾಹಿತ್ಯಗಳನ್ನು ಕುರಿತ ಪ್ರೀತಿಯನ್ನು ಹೆಚ್ಚಿಸಬೇಕು ಎನ್ನುವುದು ಪಠ್ಯಗಳ ಒಂದು ಆಯಾಮವಾದರೆ, ಮತ್ತೊಂದು ಆಯಾಮವು ನಮ್ಮ ಸಮೃದ್ಧ ಸಾಂಸ್ಕೃತಿಕ, ಸಾಹಿತ್ಯಕ ಪರಂಪರೆಯ ಅರಿವೂ ಅವರಲ್ಲಿ ಮೂಡಬೇಕೆನ್ನುವುದು. ಎರಡು ವರ್ಷಗಳ ಪಠ್ಯಗಳಲ್ಲಿ ಅವರಲ್ಲಿ ನಾಗರಿಕ ವ್ಯಕ್ತಿತ್ವದ ಧಾತುಗಳನ್ನು ತುಂಬಬೇಕು. ಸಾಹಿತ್ಯದ ಅಂತಃಕರಣ ಮತ್ತು ಸಾಮಾಜಿಕ ವ್ಯಕ್ತಿತ್ವದ ಬೌದ್ಧಿಕ ಅರಿವು ಅವರಲ್ಲಿ ಸಮನಾಗಿ ಬೆಳೆಯುತ್ತಾ ಹೋಗಬೇಕು. ಇವುಗಳಲ್ಲದೆ ಕನ್ನಡವು ಅವರ ವೃತ್ತಿಯ ದಾರಿಯೂ ಆಗಬೇಕು. ಹಲವು ವೃತ್ತಿಗಳನ್ನು ಅವರು ಆರಿಸಿಕೊಳ್ಳಲು ಅನುವಾಗುವ ಪಠ್ಯಕ್ರಮವೂ ಸೇರಬೇಕು. ಈ ಎಲ್ಲ ಅಂಶಗಳನ್ನು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಂಡು ಸಮಿತಿಯು 'ವಿಷಯಾಧಾರಿತ ಪಠ್ಯ' ವನ್ನು ರೂಪಿಸಿದೆ.

ಯಾವುದೇ ಕೋರ್ಸಿನ ಮೊದಲ ಸೆಮಿಸ್ಟರ್‌ನ ಮೊದಲ ಭಾಗವಾಗಿ (ನಾಲ್ಕು ಭಾಗಗಳಲ್ಲಿ) ಕನ್ನಡ ನಾಡು-ನುಡಿಯನ್ನು ಕುರಿತ ಭಾಗವು ಕಡ್ಡಾಯವಾಗಿ ಇರಬೇಕು. ಕನ್ನಡ ನಾಡು ರೂಪುಗೊಂಡದ್ದರಿಂದ ಪ್ರಾರಂಭಿಸಿ ಅದರ ಶ್ರೀಮಂತಿಕೆ, ವೈಶಿಷ್ಟ್ಯತೆ, ಅದರ ಲೋಕದೃಷ್ಟಿ, ಕಲಾ ಪ್ರಕಾರಗಳಲ್ಲಿನ ಸಮೃದ್ಧತೆ, ರಾಜಕೀಯ ಸಾಮಾಜಿಕ ಚಿಂತನೆಗಳ ಸ್ಪಷ್ಟಪಡ್ಡತೆ, ಅದರ ಭೌಗೋಳಿಕ ಸೌಂದರ್ಯ, ವಿವಿಧ ಕ್ಷೇತ್ರಗಳಲ್ಲಿನ ಸಾಧಕರು, ಮಹತ್ವದ ಚಳುವಳಿಗಳು, ಭಾರತ ಮತ್ತು ವಿಶ್ವಕ್ಕೆ ಕನ್ನಡದ ಕೊಡುಗೆಗಳು ಇವುಗಳಲ್ಲಿ ಕೆಲವನ್ನು ಆಯ್ದು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳ ಅಧ್ಯಯನ ಮಂಡಳಿಗಳು ಪಠ್ಯಕ್ರಮವನ್ನು ರೂಪಿಸಿಕೊಳ್ಳಬಹುದಾಗಿದೆ. ನಾಲ್ಕರಲ್ಲಿ ಕೊನೆಯ ಭಾಗವನ್ನು ಕಡ್ಡಾಯವಾಗಿ ಸಂಕೀರ್ಣ / ತಾಂತ್ರಿಕ / ವೃತ್ತಿ ತರಬೇತಿ ಆಶಯದ / ವೃತ್ತಿ ನೈಪುಣ್ಯತೆ / ಸ್ಪರ್ಧಾತ್ಮಕ ಪರೀಕ್ಷೆಗಳಿಗೆ ಪೂರಕವಾದ... ಹೀಗೆ ಇದು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳ ಅಧ್ಯಯನ ಮಂಡಳಿಗಳ ತೀರ್ಮಾನಕ್ಕೆ ಬಿಡಲಾಗಿದೆ.

ಇದಕ್ಕೆ ಪೂರಕವಾಗಿ ಹಲವು ವಿಷಯಗಳನ್ನು ಸಮಿತಿಯು ಆಯ್ಕೆ ಮಾಡಿದೆ. ಸದ್ಯಕ್ಕೆ ಪ್ರಥಮ ಮತ್ತು ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್‌ಗಳಿಗೆ ಇವುಗಳನ್ನು ಆರಿಸಲಾಗಿದ್ದು, ಆಯಾ ಘಟಕಗಳ ಆಶಯಕ್ಕೆ ಅನುಗುಣವಾಗಿ ಅಧ್ಯಯನ ಮಂಡಳಿಗಳು ಪಠ್ಯಗಳನ್ನು ಬೇರೆ ಬೇರೆ

ಮೂಲಗಳಿಂದ ಮತ್ತು ಇಲ್ಲದೆ ಇರುವ ಹೊಸ ಆಯಾಮಗಳನ್ನು ಸೇರಿಸಿಕೊಳ್ಳಬಹುದು. ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಕಲಿ ಪತ್ರಿಕೆಗಳನ್ನು ಕನ್ನಡ ಅಧ್ಯಾಪಕರೇ ಬೋಧಿಸಬೇಕು.

ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ ಮೂರು ಮತ್ತು ನಾಲ್ಕನೆಯ ಸೆಮಿಸ್ಟರ್‌ನ ಪಠ್ಯಗಳ ರೂಪರೇಷೆಗಳನ್ನು ತಿಳಿಸಲಾಗುವುದು.

### ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಕುರಿತು ಕೆಲವು ಸಲಹೆ ಸೂಚನೆಗಳು

1. ಪ್ರತಿ ಪದವಿ ಕ್ರಮಕ್ಕೂ ಪ್ರತ್ಯೇಕ ಪಠ್ಯಗಳನ್ನು ರೂಪಿಸಬೇಕು.
2. ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್‌ಗೆ ನಾಲ್ಕು ಗಂಟೆಗಳ ಬೋಧನಾ ಅವಧಿ ಕಡ್ಡಾಯವಾಗಿರಬೇಕು.
3. ಪಠ್ಯಗಳ ಆಶಯಗಳನ್ನು ಕುರಿತ ಆರಂಭಿಕ ಟಿಪ್ಪಣಿ ಇರಬೇಕು.
4. ಎರಡು ಸೆಮಿಸ್ಟರ್‌ಗಳನ್ನು ಸೇರಿಸಿ ಒಂದೊಂದು ಪಠ್ಯಪುಸ್ತಕವನ್ನು ಮಾಡುವುದು.
5. ಪ್ರತಿ ಸೆಮಿಸ್ಟರ್‌ನ ಪಠ್ಯಕ್ರಮದಲ್ಲಿ ನಾಲ್ಕು ಘಟಕಗಳು ಹಾಗೂ ಪ್ರತಿ ಘಟಕದಲ್ಲಿ ಮೂರು ಮೂರು ಅಧ್ಯಾಯಗಳು ಇರಬೇಕು.
6. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಎಲ್ಲ ಪ್ರಕಾರಗಳು (ಅನುವಾದ, ಜಾನಪದ, ಮಹಿಳಾ ಮತ್ತು ಅಲಕ್ಷಿತ ಸಮುದಾಯ, ಅಲ್ಪಸಂಖ್ಯಾತ ವರ್ಗಗಳು) ಸೇರಿದಂತೆ ಒಳಗೊಳ್ಳುವಂತೆ ಅಧ್ಯಯನ ಮಂಡಳಿಯು ಕಾಳಜಿ ವಹಿಸಬೇಕು.
7. ಕಡ್ಡಾಯ ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯಕ್ರಮ ವಿನ್ಯಾಸದಲ್ಲಿ ನಾಲ್ಕನೆಯ ಘಟಕದಲ್ಲಿ (ಸಂಕೀರ್ಣ) ಶೀರ್ಷಿಕೆಯನ್ನೂ ಒಳಗೊಂಡಂತೆ ಪಠ್ಯಕ್ರಮವನ್ನು ರೂಪಿಸುವುದನ್ನು ಅಧ್ಯಯನ ಮಂಡಳಿಗಳ ತೀರ್ಮಾನಕ್ಕೆ ಬಿಡಲಾಗಿದೆ. ವೃತ್ತಿಪರ, ತಾಂತ್ರಿಕ ತರಬೇತಿ, ಕೌಶಲ್ಯಾಧಾರಿತ ಮತ್ತು ಸೃಜನಶೀಲ ಚಟುವಟಿಕೆ ಹೀಗೆ ಆಯಾ ಪದವಿ ಕ್ರಮಗಳಿಗೆ ಪೂರಕವಾಗುವಂತೆ ಪಠ್ಯಕ್ರಮವನ್ನು ರೂಪಿಸಬೇಕು.
8. ವಿದ್ಯಾರ್ಥಿಗಳ ಸೃಜನಶೀಲತೆ, ಭಾಷಾ ನೈಪುಣ್ಯ, ಬರೆಹ ಕೌಶಲ್ಯ, ವಿಶ್ಲೇಷಣಾ ಸಾಮರ್ಥ್ಯ, ಸಮಕಾಲೀನಗೊಳಿಸುವಿಕೆ ಮತ್ತು ಅನುವಾದ ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಹೆಚ್ಚಿಸುವುದನ್ನು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಂಡು ನಿಯೋಜಿತ ಕಾರ್ಯ, ಸಾಹಿತ್ಯಕ ಕಾರ್ಯಕ್ರಮ ಇತ್ಯಾದಿಗಳನ್ನು ಆಯೋಜಿಸಬೇಕು.
9. ಪಠ್ಯ ಮತ್ತು ಪಠ್ಯೇತರ ಕಾರ್ಯಕ್ರಮಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ವೃತ್ತಿಪರ ತಿಳುವಳಿಕೆಯನ್ನು ನೀಡುವುದರ ಜೊತೆಗೆ ಅವರ ಸಮಗ್ರ ವ್ಯಕ್ತಿತ್ವವನ್ನು ವೃತ್ತಿಪರವಾಗಿ ಸಜ್ಜುಗೊಳಿಸಲು ಅನುಕೂಲವಾಗುವಂತೆ ಇರಬೇಕು. ಇದನ್ನು ಅಧ್ಯಯನ ಮಂಡಳಿ ಹಾಗೂ ಬೋಧಕರು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಳ್ಳಬೇಕು.
10. ಪೂರಕ ಪಠ್ಯಗಳಾಗಿ ದೃಶ್ಯ ಹಾಗೂ ಶ್ರವ್ಯ ಮಾಧ್ಯಮಗಳನ್ನು ಅವಶ್ಯವಾಗಿ ಬಳಸಿಕೊಳ್ಳಬೇಕು.
11. ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಭಾಷಾ ಪ್ರಯೋಗಾಲಯ ಇರುವುದು ಅಪೇಕ್ಷಣೀಯ. ಇದರ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕಂಪ್ಯೂಟರ್ ಕಲಿಕೆಯೂ ಸೇರಿದಂತೆ ಇತರ ತಾಂತ್ರಿಕ ಕಲಿಕೆಗಳನ್ನು ತಿಳಿಸಿಕೊಡಬಹುದು. (ಕನ್ನಡದಲ್ಲಿ ವರದಿ ಬರೆಯುವುದು, ಅನುವಾದ ಮಾಡುವುದು ಇತ್ಯಾದಿ)
12. ಭಾಷಾ ಪಠ್ಯ ವಿನ್ಯಾಸದಲ್ಲಿ ನೀಡಲಾಗಿರುವ ಪರಾಮರ್ಶನ ಪಠ್ಯಗಳು ಅಂತಿಮವಲ್ಲ. ಅವು ಪ್ರಾತಿನಿಧಿಕ ಮತ್ತು ಮಾದರಿ ಮಾತ್ರ ಅಂತಿಮವಾಗಿ ಆಯ್ಕೆಯು ಆಯಾ ಅಧ್ಯಯನ ಮಂಡಳಿಗಳ ವಿವೇಚನಾಧಿಕಾರಕ್ಕೆ ಬಿಟ್ಟಿದ್ದು.
13. ಪ್ರತಿ ಪಠ್ಯದಲ್ಲೂ ಪ್ರತಿ ಘಟಕದ ವಿಷಯವನ್ನು ಕುರಿತ ಟಿಪ್ಪಣಿ ಇರಬೇಕು.
14. ಪಠ್ಯದ ಕೊನೆಯಲ್ಲಿ ಪೂರಕ ಪಠ್ಯಗಳ ಪಟ್ಟಿಯನ್ನು ಕೊಡಬೇಕು. ಪೂರಕ ಪಠ್ಯವನ್ನೂ ನೀಡಬಹುದು. ಪಠ್ಯದ ಮೊದಲು ಆಶಯ ಪಠ್ಯವನ್ನೂ ಸೇರಿಸಬಹುದು.
15. ಭಾಷಾಭ್ಯಾಸದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಸ್ವಂತಿಕೆಗೆ ಅವಕಾಶ ಇರಬೇಕು.
16. ಮುಕ್ತ ಆಯ್ಕೆ (ಓಪನ್ ಇಲೆಕ್ಷನ್) ಪತ್ರಿಕೆಗಳನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳ ವೃತ್ತಿಪರತೆಯನ್ನು ಹೆಚ್ಚಿಸುವ ಸಲುವಾಗಿ ರೂಪಿಸಲಾಗಿದ್ದು, ಕಾಲೇಜಿನಲ್ಲಿ ವ್ಯಾಸಂಗ ಮಾಡುತ್ತಿರುವ ಎಲ್ಲ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೂ ಈ ವಿಷಯಗಳ ಮಹತ್ವವನ್ನು ಕುರಿತು ಮನವರಿಕೆ ಮಾಡಿಕೊಡಬೇಕು.

17. ಪಠ್ಯಪುಸ್ತಕಗಳ ಶೀರ್ಷಿಕೆಯನ್ನು ಆಯಾ ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಅಧ್ಯಯನ ಮಂಡಳಿ ನಿರ್ಧರಿಸುವುದು. 1, 2, 3, 4  
ಸೆಮಿಸ್ಟರ್‌ಗಳು.

# ಪ್ರಥಮ ಬಿ.ಎ. ಕನ್ನಡ ಐಚ್ಛಿಕ

ಮೊದಲ ಚತುರ್ಮಾಸ

## ಸಾಹಿತ್ಯ ಮಂಗಳ -1 (ಎ 1)

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಹೆಚ್.ಜಿ. ಶ್ರೀಧರ, ಡಾ. ಸುಬ್ರಹ್ಮಣ್ಯ ಭಟ್, ಶ್ರೀಮತಿ ಗೀತಾ ಕುಮಾರಿ

| Sl. No. | Course Code                        | Title of the Course                              | Category of Courses | Teaching Hours per week (L+T+P) | SEE | CIE | Total Marks | Credits |
|---------|------------------------------------|--------------------------------------------------|---------------------|---------------------------------|-----|-----|-------------|---------|
| 1.      | ಸಾಹಿತ್ಯ ಮಂಗಳ<br>ಮೊದಲನೆ<br>ಚತುರ್ಮಾಸ | ಪತ್ರಿಕೆ - ಎ1<br>ಪ್ರಾಚೀನ ಕನ್ನಡ<br>ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ |                     | 2+1+0                           | 60  | 40  | 100         | 6       |

**NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ**  
ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ

**ಪ್ರಥಮ ಬಿ.ಎ. ಕನ್ನಡ ಐಚ್ಛಿಕ**  
ಮೊದಲ ಚತುರ್ಮಾಸ

**ಸಾಹಿತ್ಯ ಮಂಗಳ - 1 (ಎ 1)**

ಮೊದಲ ಚತುರ್ಮಾಸ

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,  
ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು  
SEE - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು  
CIE - ನಿರಂತರ ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು

**ಪರಿವಿಡಿ**

ಪತ್ರಿಕೆ ಎ-1 (ವಾರಕ್ಕೆ 3 ಗಂಟೆ; ಸೆಮಿಸ್ಟರ್ 36 ಗಂಟೆಗಳು; 60 ಅಂಕಗಳು)

1. ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : 30 ಅಂಕಗಳು (16 ಗಂಟೆಗಳು)

ಅ. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯ ಸ್ಥೂಲ ಪರಿಚಯ : (5 ಗಂಟೆ)

ಕನ್ನಡ ಭಾಷೆಯ ಪ್ರಾಚೀನತೆ

ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯ ವಿಭಾಗ ಕ್ರಮ

ಪೂರ್ವದ ಹಳಗನ್ನಡ, ಹಳಗನ್ನಡ, ನಡುಗನ್ನಡ ಸಾಹಿತ್ಯದ ಪರಿಚಯ

ಹೊಸಗನ್ನಡ ಕಾಲಘಟ್ಟದ ಪರಿಚಯ : ನವೋದಯ, ನವ್ಯ, ದಲಿತ, ಬಂಡಾಯ ಸಾಹಿತ್ಯದ ಪರಿಚಯ

ಆ. ಪೂರ್ವದ ಹಳಗನ್ನಡ : (4 ಗಂಟೆ)

ಶಾಸನ ಸಾಹಿತ್ಯದ ಪರಿಚಯ - ಗದ್ಯಕವಿಗಳು - ಪದ್ಯಕವಿಗಳ ಪರಿಚಯ

ಕವಿರಾಜ ಮಾರ್ಗದ ಪರಿಚಯ

ಇ. ಹಳಗನ್ನಡ : ಹಳಗನ್ನಡ ಸಾಹಿತ್ಯದ ಸ್ವರೂಪ : (5 ಗಂಟೆ)

ಚಂಪೂ ಎಂದರೇನು - ಚಂಪೂ ಕವಿಗಳು : ಪಂಪ-ಪೊನ್ನ-ರನ್ನ-ಮೊದಲನೆಯ ನಾಗವರ್ಮ-ಎರಡನೆಯ ನಾಗವರ್ಮ -  
ನಾಗಚಂದ್ರ-ನಯಸೇನ ಇತರರು

ಗದ್ಯಕೃತಿಗಳು : ವಡ್ಡಾರಾಧನೆ - ಪಂಚತಂತ್ರ (2 ಗಂಟೆ)

2. ಪಠ್ಯಗಳು : 30 ಅಂಕಗಳು (20 ಗಂಟೆಗಳು)

ಅ. ಎರಡು ಶಾಸನಗಳು

ಹಲ್ಮಿಡಿ ಶಾಸನ (ಪೂರ್ವದ ಹಳಗನ್ನಡ -2 ಗಂಟೆ)

ಅತ್ತಿಮಬ್ಬೆಯ ಶಾಸನ (ಹಳಗನ್ನಡ - 2ಗಂಟೆ)

ಆ. ಕವಿರಾಜ ಮಾರ್ಗದ ಪದ್ಯಗಳು (5 ಗಂಟೆ)

ನಾಡು : 1-36, 37

ನುಡಿ : 1-46, 48, 75

ಪ್ರಾಚೀನ ಕವಿ : 1-29, 32

ಸಾಹಿತ್ಯ ರೂಪ : 1-27, 32, 34, 35, 68

ಕನ್ನಡ ಜನಪದ : 1-38, 2-28

ಇ. ವಡ್ಡಾರಾಧನೆಯ ಕಥೆ : (4 ಗಂಟೆ)

ಜಾಣಕ್ಕ ರಿಸಿಯ ಕಥೆ

ಈ. ಪಂಪನ ಕಾವ್ಯ ಭಾಗ : ಸೂಜ್ಜಡೆಯಲಪ್ಪುದು ಕಾಣಾ : (6 ಗಂಟೆ)

10ನೆಯ ಅಶ್ವಾಸ ಪದ್ಯ 15ರ ವಚನದಿಂದ ತೊಡಗಿ 25ನೆಯ ಪದ್ಯದವರೆಗೆ

ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ ಮಾದರಿ

ಅಂಕಗಳು 60

ಚಿರಿತ್ರೆಯ ಭಾಗದಿಂದ 30 ಅಂಕಗಳು

1. 82=16 ಅಂಕಗಳು

2. 52=10 ಅಂಕಗಳು (ಟಿಪ್ಪಣಿ)

3. 14=4 ಅಂಕಗಳು

ಪಠ್ಯ ಭಾಗದಿಂದ 30 ಅಂಕಗಳು

4. 82=16 ಅಂಕಗಳು

5. 32=6 ಅಂಕಗಳು (ಟಿಪ್ಪಣಿ)

6. 15=5 ಅಂಕಗಳು (ಭಾವಾರ್ಥ)

7. 13=3 ಅಂಕಗಳು

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿವಾರ್ಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಹೆಚ್.ಜಿ. ಶ್ರೀಧರ, ಡಾ. ಸುಬ್ರಹ್ಮಣ್ಯ ಭಟ್, ಶ್ರೀಮತಿ ಗೀತಾ ಕುಮಾರಿ

# ಪ್ರಥಮ ಬಿ.ಎ. ಕನ್ನಡ ಐಚ್ಛಿಕ

ಮೊದಲ ಚತುರ್ಮಾಸ

## ಸಾಹಿತ್ಯ ಮಂಗಳ -1 (ಎ 2)

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಹೆಚ್.ಬಿ. ಶ್ರೀಧರ, ಡಾ. ಸುಬ್ರಹ್ಮಣ್ಯ ಭಟ್, ಶ್ರೀಮತಿ ಗೀತಾ ಕುಮಾರಿ

| Sl. No. | Course Code                        | Title of the Course                                | Category of Courses | Teaching Hours per week (L+T+P) | SEE | CIE | Total Marks | Credits |
|---------|------------------------------------|----------------------------------------------------|---------------------|---------------------------------|-----|-----|-------------|---------|
| 1.      | ಸಾಹಿತ್ಯ ಮಂಗಳ<br>ಮೊದಲನೆ<br>ಚತುರ್ಮಾಸ | ಪತ್ರಿಕೆ - ಎ2<br>ಮಧ್ಯಕಾಲೀನ ಕನ್ನಡ<br>ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ |                     | 2+1+0                           | 60  | 40  | 100         | 6       |



**NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ**  
ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ

**ಪ್ರಥಮ ಬಿ.ಎ. ಕನ್ನಡ ಐಚ್ಛಿಕ**  
ಮೊದಲ ಚತುರ್ಮಾಸ

**ಸಾಹಿತ್ಯ ಮಂಗಳ - 1 (ಎ2)**

ಮೊದಲ ಚತುರ್ಮಾಸ

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,

ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು

SEE - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು

CIE - ನಿರಂತರ ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು

**ಪರಿವಿಡಿ**

**ಪತ್ರಿಕೆ ಎ-2 (ವಾರಕ್ಕೆ 3 ಗಂಟೆ; ಸೆಮಿಸ್ಟರ್ 36 ಗಂಟೆಗಳು; 60 ಅಂಕಗಳು)**

**1. ಮಧ್ಯಕಾಲೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : 30 ಅಂಕಗಳು (16 ಗಂಟೆಗಳು)**

**ಅ. ಮಧ್ಯಕಾಲೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯ ಗುಣಲಕ್ಷಣಗಳು : (3 ಗಂಟೆ)**

ಪ್ರೇರಣೆ ಪ್ರಭಾವಗಳು - ರಾಜಕೀಯ, ಸಾಮಾಜಿಕ, ಧಾರ್ಮಿಕ, ಸಾಂಸ್ಕೃತಿಕ, ಚಾರಿತ್ರಿಕ ಕಾರಣಗಳು

**ಆ. ಮಧ್ಯಕಾಲೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ರೂಪಗಳು**

ವಚನ-ರಗಳೆ-ಷಟ್ಪದಿ-ಕೀರ್ತನೆ-ಸಾಂಗತ್ಯ-ತ್ರಿಪದಿ (3 ಗಂಟೆ)

**ಇ. ಪ್ರಮುಖ ಕವಿಗಳು (10 ಗಂಟೆ)**

ವಚನ : ಜೇಡರ ದಾಸಿಮಯ್ಯ-ಬಸವಣ್ಣ-ಅಲ್ಲಮಪ್ರಭು-ಅಕ್ಕಮಹಾದೇವಿ ಮತ್ತು ಇತರರು

ರಗಳೆ : ಹರಿಹರ

ಷಟ್ಪದಿ : ರಾಘವಾಂಕ-ಕುಮಾರವ್ಯಾಸ-ಚಾಮರಸ - ಲಕ್ಷ್ಮೀಶ ಮತ್ತು ಇತರರು

ಕೀರ್ತನೆ: ವ್ಯಾಸರಾಯ - ವಾದಿರಾಜ-ಪುರಂದರ ದಾಸರು - ಕನಕದಾಸರು ಮತ್ತು ಇತರರು

ಸಾಂಗತ್ಯ : ನಂಜುಂಡಕವಿ - ರತ್ನಾಕರವರ್ಣಿ-ಸಂಚಿಯ ಹೊನ್ನಮ್ಮ

ತ್ರಿಪದಿ - ಸರ್ವಜ್ಞ

**2. ಪಠ್ಯಗಳು (20 ಗಂಟೆ)**

**ವಚನ : (ವಚನ ಕಮ್ಮಟ ಕೃತಿಯಿಂದ) (4 ಗಂಟೆ)**

ದಾಸಿಮಯ್ಯ : 34, 40, 41, 52, 51

ಬಸವಣ್ಣ : 160, 166, 169, 175

ಅಲ್ಲಮ : 61, 62, 72, 81

ಅಕ್ಕಮಹಾದೇವಿ : 275, 281, 312, 289

ರಗಳೆ : ಹರಿಹರನ ಪ್ರಭುದೇವರ ರಗಳೆ (3 ಗಂಟೆ)

ಕೀರ್ತನೆ : (3 ಗಂಟೆ)

ಸಕಲೇಶ ಮಾದರಸ - 1 (ತಂಗಾಳಿಗಲಿರು ಮರನೆ)

ವ್ಯಾಸರಾಯರು - 1

ಮರಂದರ ದಾಸರು - 1 (ಗಿಳಿಯ ಪಂಜರದೊಳಿಲ್ಲ)

ಕನಕದಾಸರು - 1 (ಕುಲ ಕುಲವೆಂದು)

### ಷಟ್ಪದಿ ಕಾವ್ಯ ಭಾಗಗಳು (6 ಗಂಟೆ)

ಕುಮಾರವ್ಯಾಸ - ನಿನ್ನಯ ವೀರರೈವರ ನೋಯಿಸೆನು (ಉದ್ಯೋಗ ಪರ್ವ 10ನೆಯ ಸಂಧಿ)

ತೊರವೆ ನರಹರಿ ಕುಂಭಕರ್ಣನನ್ನು ಎಬ್ಬಿಸುವ ಸೌರಂಭ

ಸಾಂಗತ್ಯ : ಹೆಳವನಕಟ್ಟೆ ಗಿರಿಯಮ್ಮನ ಚಂದ್ರಹಾಸ ಚರಿತ್ರೆಯ ಕಾವ್ಯ ಭಾಗ (2 ಗಂಟೆ)

ವಿಷಯ - ಚಂದ್ರಹಾಸನ ಭೇಟಿ

ತ್ರಿಪದಿ : ಸರ್ವಜ್ಞ 10 ಪದ್ಯ (2 ಗಂಟೆ)

ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ ಮಾದರಿ.

ಅಂಕಗಳು 60

### ಚರಿತ್ರೆಯ ಭಾಗದಿಂದ 30 ಅಂಕಗಳು

1. 82=16 ಅಂಕಗಳು (ಆಂತರಿಕ ಆಯ್ಕೆಯ ಒಟ್ಟು 4 ಪ್ರಶ್ನೆಗಳು. ಎರಡಕ್ಕೆ ಉತ್ತರಿಸುವಂತೆ)
2. 52=10 ಅಂಕಗಳು (ಟಿಪ್ಪಣಿ ಮಾದರಿಯ ಆಂತರಿಕ ಆಯ್ಕೆ. ಒಟ್ಟು ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳು)
3. 14=4 (ಒಂದು ಅಂಕದ ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳು)

### ಪಠ್ಯ ಭಾಗದಿಂದ 30 ಅಂಕಗಳು

4. 82=16 ಅಂಕಗಳು (ಆಂತರಿಕ ಆಯ್ಕೆಯ ಒಟ್ಟು 4 ಪ್ರಶ್ನೆಗಳು. ಎರಡಕ್ಕೆ ಉತ್ತರಿಸುವಂತೆ)
5. 32=6 ಅಂಕಗಳು (ಟಿಪ್ಪಣಿ ಮಾದರಿಯ ಆಂತರಿಕ ಆಯ್ಕೆ. ಒಟ್ಟು ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳು)
6. 15=5 (ಭಾವಾರ್ಥ. ಎರಡರಲ್ಲಿ ಒಂದಕ್ಕೆ)
7. 13=3 (ಒಂದು ಅಂಕದ ಮೂರು ಪ್ರಶ್ನೆಗಳು)

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಹೆಚ್.ಜಿ. ಶ್ರೀಧರ, ಡಾ. ಸುಬ್ರಹ್ಮಣ್ಯ ಭಟ್, ಶ್ರೀಮತಿ ಗೀತಾ ಕುಮಾರಿ

# ಪ್ರಥಮ ಬಿ.ಎ. ಕನ್ನಡ ಐಚ್ಛಿಕ

ಎರಡನೆ ಚತುರ್ಮಾಸ

## ಸಾಹಿತ್ಯ ಮಂಗಳ -2 (ಎ 3)

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಹೆಚ್.ಬಿ. ಶ್ರೀಧರ, ಡಾ. ಸುಬ್ರಹ್ಮಣ್ಯ ಭಟ್, ಶ್ರೀಮತಿ ಗೀತಾ ಕುಮಾರಿ

| Sl. No. | Course Code                 | Title of the Course                        | Category of Courses | Teaching Hours per week (L+T+P) | SEE | CIE | Total Marks | Credits |
|---------|-----------------------------|--------------------------------------------|---------------------|---------------------------------|-----|-----|-------------|---------|
| 1.      | ಸಾಹಿತ್ಯ ಮಂಗಳ ಎರಡನೆ ಚತುರ್ಮಾಸ | ಪತ್ರಿಕೆ - ಎ3<br>ಆಧುನಿಕ ಪೂರ್ವ ಕನ್ನಡ ಸಾಹಿತ್ಯ |                     | 2+1+0                           | 60  | 40  | 100         | 6       |

ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ 2020ರ ಅನ್ವಯ

ಪ್ರಥಮ ಬಿ.ಎ. ಕನ್ನಡ ಐಚ್ಛಿಕ

ದ್ವಿತೀಯ ಚತುರ್ಮಾಸ ಪಠ್ಯಗಳು

## ಸಾಹಿತ್ಯ ಮಂಗಳ - 2 (ಎ3)

### ಪರಿವಿಡಿ

ಪತ್ರಿಕೆ ಎ - 3 (ವಾರಕ್ಕೆ 3 ಗಂಟೆಗಳು; ಸೆಮಿಸ್ಟರ್ 36 ಗಂಟೆಗಳು; 60 ಅಂಕಗಳು)

ಪತ್ರಿಕೆಯ ಶೀರ್ಷಿಕೆ: ಆಧುನಿಕ ಪೂರ್ವ ಕನ್ನಡ ಸಾಹಿತ್ಯ-ಆರಂಭ ಮತ್ತು ಪ್ರೇರಣೆಗಳು

ಘಟಕ - 1 : ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : 30 ಅಂಕಗಳು - 18 ಗಂಟೆಗಳು

- ತತ್ತ್ವಪದಕಾರರು - ಆಧುನಿಕ ಗದ್ಯದ ವಿಕಾಸ
- ಪ್ರೇರಣೆಗಳು : ಇಂಗ್ಲಿಷ್ ವಿದ್ಯಾಭ್ಯಾಸ, ಸುಧಾರಣಾವಾದಿ ಚಳುವಳಿ  
(ರಾಜಾರಾಮ್ ಮೋಹನ್ ರಾಯ್, ದಯಾನಂದ ಸರಸ್ವತಿ, ಸ್ವಾಮಿ ವಿವೇಕಾನಂದ)
- ಮುದ್ರಣ ಸೌಲಭ್ಯ ಮಿಶನರಿಗಳ ಕೊಡುಗೆ

(ಮೊಗ್ಗಿಂಗ್, ಕಿಟ್ಟೆಲ್, ಬಿ. ಎಲ್. ರೈಸ್)

4. ರಾಷ್ಟ್ರೀಯ ಚಳುವಳಿ

**ಘಟಕ - 2 : ಸಾಹಿತ್ಯ ರೂಪಗಳು**

5. ಕಾವ್ಯ : ಮುದ್ದಣ, ಪಂಜೆ, ಎಸ್.ಜಿ. ನರಸಿಂಹಾಚಾರ್, ಹಟ್ಟಿಯಂಗಡಿ ನಾರಾಯಣ ರಾವ್, ಬಿ.ಎಂ.ಶ್ರೀ, ದ.ರಾ.ಬೇಂದ್ರೆ,
6. ನಾಟಕ : ಬಸವಪ್ಪ ಶಾಸ್ತ್ರಿ, ಚುರುಮುರಿ ಶೇಷಗಿರಿ ರಾವ್, ಕರ್ಕಿ ವೆಂಕಟರಮಣ ಶಾಸ್ತ್ರಿ
7. ಕಾದಂಬರಿ : ಯಾದವಕವಿ, ಕೆಂಪು ನಾರಾಯಣ, ಬಿ. ವೆಂಕಟಾಚಾರ್ಯ, ಗುಲ್ಲಾಡಿ ವೆಂಕಟರಾವ್, ಗಳಗನಾಥ.

**ಘಟಕ - 3 : ಪಠ್ಯಗಳು - 30 ಅಂಕಗಳು - 18 ಗಂಟೆಗಳು**

**ಪಠ್ಯಗಳು**

1. ತರವಲ್ಲ ತಗಿ ನಿನ್ನ ತಂಬೂರಿ - ಶಿಶುನಾಳ ಶರೀಫ
2. ಬಿದ್ದಿಯಬೇ ಮುದುಕಿ - ಶಿಶುನಾಳ ಶರೀಫ
3. ಜೀವನ ಗೀತೆ - ಹಟ್ಟಿಯಂಗಡಿ ನಾರಾಯಣ ರಾವ್
4. ಕನ್ನಡ ಹೆಣ್ಣು - ಬಿ.ಎಂ.ಶ್ರೀ
5. ನಾನು ಬಡವಿ - ಅಂಬಿಕಾತನಯ ದತ್ತ

**ಗದ್ಯಗಳು**

6. ಚಂದ್ರಗುಪ್ತ ಬಂಧ ವಿಮೋಚನೆ - ಕೆಂಪುನಾರಾಯಣ
7. ಸೀತಾ ಪರಿತ್ಯಾಗ - ಮುದ್ದಣ
8. ಕಮಲಾಪುರದ ಹೊಟ್ಟಿನಲ್ಲಿ - ಪಂಜೆ ಮಂಗೇಶರಾವ್

# ಪ್ರಥಮ ಬಿ.ಎ. ಕನ್ನಡ ಐಚ್ಛಿಕ

ಎರಡನೆ ಚತುರ್ಮಾಸ

## ಸಾಹಿತ್ಯ ಮಂಗಳ -2 (ಎ 4)

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯ ನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಹೆಚ್.ಬಿ. ಶ್ರೀಧರ, ಡಾ. ಸುಬ್ರಹ್ಮಣ್ಯ ಭಟ್, ಶ್ರೀಮತಿ ಗೀತಾ ಕುಮಾರಿ

| Sl. No. | Course Code                       | Title of the Course                              | Category of Courses | Teaching Hours per week (L+T+P) | SEE | CIE | Total Marks | Credits |
|---------|-----------------------------------|--------------------------------------------------|---------------------|---------------------------------|-----|-----|-------------|---------|
| 1.      | ಸಾಹಿತ್ಯ ಮಂಗಳ<br>ಎರಡನೆ<br>ಚತುರ್ಮಾಸ | ಪತ್ರಿಕೆ - ಎ4<br>ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯ -ಪ್ರೇರಣೆಗಳು |                     | 2+1+0                           | 60  | 40  | 100         | 6       |

## ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ 2020ರ ಅನ್ವಯ

ಪ್ರಥಮ ಬಿ.ಎ. ಕನ್ನಡ ಐಚ್ಛಿಕ  
ದ್ವಿತೀಯ ಚತುರ್ಮಾಸ ಪಠ್ಯಗಳು

### ಸಾಹಿತ್ಯ ಮಂಗಳ - 2 (ಎ4)

#### ಪರಿವಿಡಿ

ಪತ್ರಿಕೆ ಎ-4 (ವಾರಕ್ಕೆ 3 ಗಂಟೆಗಳು; ಸೆಮಿಸ್ಟರ್ 36 ಗಂಟೆಗಳು; 60 ಅಂಕಗಳು)

ಪತ್ರಿಕೆಯ ಶೀರ್ಷಿಕೆ : ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯ - ಪ್ರೇರಣೆಗಳು

ಘಟಕ - 1 : ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ - 30 ಅಂಕಗಳು - 18 ಗಂಟೆಗಳು

1. ನವೋದಯ, ಪ್ರಗತಿಶೀಲ, ನವ್ಯ, ದಲಿತ ಮತ್ತು ಬಂಡಾಯ ಸಾಹಿತ್ಯದ ಪ್ರೇರಣೆಗಳು ಮತ್ತು ಲಕ್ಷಣಗಳು
2. ಪರಿಚಯ ಮಾಡಿಕೊಳ್ಳಬೇಕಾದ ಬರಹಗಾರರು : ಕುವೆಂಪು, ಪುತಿನ, ಅನಕೃ, ನಿರಂಜನ, ವಿ.ಕೃ. ಗೋಕಾಕ್, ಗೋಪಾಲಕೃಷ್ಣ ಅಡಿಗ, ಎಸ್.ಎಲ್.ಭೈರಪ್ಪ, ಅನಂತಮೂರ್ತಿ, ಪೂರ್ಣಚಂದ್ರ ತೇಜಸ್ವಿ, ದೇವನೂರು ಮಹಾದೇವ, ಸಿದ್ದಲಿಂಗಯ್ಯ, ಬೊಳುವಾರು ಮಹಮ್ಮದ್ ಕುಂಜ್

ಘಟಕ - 2 : ಮಹಿಳಾ ಸಾಹಿತ್ಯ ಪ್ರೇರಣೆಗಳು ಮತ್ತು ಲೇಖಕಿಯರು

ಪರಿಚಯ ಮಾಡಿಕೊಳ್ಳಬೇಕಾದ ಲೇಖಕಿಯರು : ಸಂತೂಬಾಯಿ ನೀಲಗಾರ, ನಂಜನಗೂಡು ತಿರುಮಲಾಂಬ, ಅನುಪಮ ನಿರಂಜನ, ಕೊಡಗಿನ ಗೌರಮ್ಮ, ವೈದೇಹಿ, ಸಾ.ರಾ. ಅಬೂಬಕರ್

ಘಟಕ - 3 : ಪಠ್ಯಗಳು - 30 ಅಂಕಗಳು - 18 ಗಂಟೆಗಳು

ಪದ್ಯಗಳು

1. ಗೊಬ್ಬರ - ಕುವೆಂಪು
2. ನಾವೆಲ್ಲರೂ ಒಂದೆ ಜಾತಿ -ಎಂ. ಗೋಪಾಲಕೃಷ್ಣ ಅಡಿಗ
3. ನಿಮ್ಮೊಡನಿದ್ದೂ ನಿಮ್ಮಂತಾಗದೆ - ಕೆ.ಎಸ್. ನಿಸಾರ್ ಅಹಮದ್
4. ಸಂತೆ - ಸಿದ್ದಲಿಂಗಯ್ಯ
5. ರುರು ಪ್ರಮದಾ ಪ್ರೀತಿ - ಸ. ಉಷಾ

ಗದ್ಯಗಳು

6. ಧನಿಯರ ಸತ್ಯನಾರಾಯಣ - ಕೊರಡ್ಕಲ್ ಶ್ರೀನಿವಾಸ ರಾವ್
7. ದತ್ತ - ದೇವನೂರು ಮಹಾದೇವ
8. ಹೊಸಹೆಜ್ಜೆ - ಗಂಗಾ ಪಾದೇಕಲ್ಲು

**ಕಡ್ಡಾಯ ಕನ್ನಡ ಪಠ್ಯ (Functional Kannada)**  
**ಕನ್ನಡೇತರರಿಗಾಗಿ ಕನ್ನಡ ಕಲಿಕೆ**

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಸಂಪತ್ ಕುಮಾರ್ ಬಿ.ಪಿ, ಡಾ. ಸಾಯಿಗೀತಾ, ಡಾ. ಸುಧಾ ಕುಮಾರಿ

Course Title

ಕನ್ನಡೇತರರಿಗಾಗಿ ಕನ್ನಡ : ಕನ್ನಡ ಕಲಿಕೆ

Total Contact Hourse : 48 - 52

Course Credits : 03

Formative Assessment Marks : 40 (CIE)

Duration of ESA / Exam : 3 hours

Model Syllabus Authors : Multiple Authors

Summative Assessment Marks : 60 (SEE)

# NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ

ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

## ಕಡ್ಡಾಯ ಕನ್ನಡ ಪಠ್ಯ (Functional Kannada)

ಕನ್ನಡೇತರರಿಗಾಗಿ ಕನ್ನಡ ಕಲಿಕೆ

ವಾರದಲ್ಲಿ 4 ಗಂಟೆ, ಸೆಮಿಸ್ಟರ್ 48 ಗಂಟೆಗಳು

Weekly 4 Hours, 48 Hours/ Sem.

### ಪರಿವಿಡಿ / Content Structure

ಭಾಗ 1: ಆರಂಭಿಕ ಹೆಜ್ಜೆ 15 ಅಂಕಗಳು

Part 1 : Primary Steps (12 ಗಂಟೆಗಳು)

1. ಲಿಪೀಕರಣ ಕೀಲಿ (ಪರಿಷ್ಕೃತ ರೋಮನ್ ಲಿಪಿ ಪರಿಚಯ) Transcription Key
2. ಕನ್ನಡ ಅಕ್ಷರ ಪರಿಚಯ - ಸ್ವರ, ವ್ಯಂಜನ ಮತ್ತು ಒತ್ತಕ್ಷರಗಳು Introduction of Kannada Alphabet

ಭಾಗ 2 : ಪದಸಂಪತ್ತು 15 ಅಂಕಗಳು

Part 2 : Vocabulary (12 ಗಂಟೆಗಳು)

1. ಪ್ರಶ್ನಾಪದಗಳು Questioning Words
2. ಸರ್ವನಾಮಗಳು Pronouns
3. ಸಾಮಾನ್ಯ ಬಳಕೆಯ ಪದಗಳು Common words
4. ಕ್ರಿಯಾಪದಗಳು Verbs

ಭಾಗ : 3 ವಾಕ್ಯರಚನೆ - ಸಂಭಾಷಣೆ 15 ಅಂಕಗಳು

Part 3 : Sentence formation - Conversation (12 ಗಂಟೆಗಳು)

1. ವಿಭಕ್ತಿ ಪ್ರತ್ಯಯಗಳು Noun Cases
2. ಸರಳ ವಾಕ್ಯಗಳು, ಸಂಯುಕ್ತ ವಾಕ್ಯಗಳು Simple and Compound Sentences
3. ಭೂತ, ವರ್ತಮಾನ Tenses and sentences
4. ಪ್ರಶ್ನೋತ್ತರಗಳು Questions and Answers

ಭಾಗ : 4 ಮಾತು ಮತ್ತು ಅರಿವು 15 ಅಂಕಗಳು

Part 4 : Speech and Knowledge (12 ಗಂಟೆಗಳು)

1. ಪರಿಸರದ ಅರಿವು - ಮಿನಿಮಾಟ Environmental Knowledge - Minimata
2. ಗಾದೆಗಳು - ಆರೋಗ್ಯವೇ ಭಾಗ್ಯ Proverbs – Health is wealth
3. ಅನುವಾದ ಪರಿಚಯ Translation
4. ಕನ್ನಡ ನಾಡು ನುಡಿ ಪರಿಚಯ Introduction to Kannada Land and Language

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಸಂಪತ್ ಕುಮಾರ್ ಬಿ.ಪಿ, ಡಾ. ಸಾಯಿಗೀತಾ, ಡಾ. ಸುಧಾ ಕುಮಾರಿ



NUDI KANNADA - Functional Kannada  
Model Question Paper

Part I :

15 marks

1. Choose the appropriate word in Revised Roman script.

1X5=5

eg: karnaaTaka - kaarNataka, Karnataka, karnaaTaka

2. Write the Kannada alphabet in Kannada script

1X10=10

Part II :

15 Marks

1. Match the following.

1X5=5

eg: a) face tarakaari

b) vegetable mukha

2. Fill in the blanks.

1X5=5

eg: a) adu \_\_\_\_\_ pennu. (my)

3. Give the Kannada/English words to the words given below.

1X5=5

eg: a) night, sky

b) head, hair

c) aayaasa, aaroogya

d) ippatta aidu, naalku

Part III:

15 Marks

1. biTTa pada tumbiri. (Vibhakti pratyaya)

1X5=5

eg: \_\_\_\_\_ mane beeku. (he)

2. ii keLagina praSnegaLige uttarisi.

1X5=5

3. ii keLagina padagaLannu anukramavaagi baLasi kanishTha hattu  
vaakyagaLannu racisiri.

0.5x10 = 5

adu                      ondu                      haLe                      pensilu

idu                      nanna                      kappu                      baTTe

Or

mane, maarukaTTe yaavudaadarondu kaDe naDeyuva kaalpanika sambhaashaNeyannu bareyiri.

Part IV :

15 Marks

1. Translate these questions to Kannada and answer it.

1x5=5

eg: what is minimaaTa?

2. Write 5 proverbs in Kannada or translate the paragraph given below.

1x5=5

3. Choose one topic and write a short note.

1x5=5

**ಪ್ರಥಮ ಬಿ.ಎ./ಬಿಎಸ್‌ಡಬ್ಲ್ಯು  
ಬಿ.ಎ.(ಹೆಚ್‌ಆರ್‌ಡಿ)/ಬಿಎ(ಎಸ್‌ಡಿಎಸ್) ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ**

**BA / BSW/ HRD/ SDS Degree / Honours Degree Programme, Arts subjects**

**ಮೊದಲ ಚತುರ್ಮಾಸ**

|                                           |                                          |
|-------------------------------------------|------------------------------------------|
| Course Title                              | ಬಿ.ಎ., ಬಿ.ಎಸ್‌.ಡಬ್ಲ್ಯು - ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ |
| Total Contact Hourse : 52 to 56           | Course Credits : 03                      |
| Formative Assessment Marks : 40           | Duration of ESA / Exam : 3 hours         |
| Model Syllabus Authors : Multiple Authors | Summative Assessment Marks : 60 (SEE)    |

|                                |            |
|--------------------------------|------------|
| ವಿವರಗಳು                        | ಬೋಧನಾ ಅವಧಿ |
| ಘಟಕ - 1 ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ | 13/14      |
| ಘಟಕ - 2 ಪ್ರಕೃತಿ                | 13/14      |
| ಘಟಕ - 3 ಬಾಲ್ಯ                  | 13/14      |
| ಘಟಕ - 4 ಸಂಕೀರ್ಣ                | 13/14      |

**ಘಟಕ -1 ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ**

ಕಲಾ ಕನ್ನಡ ಪಠ್ಯವನ್ನು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಆಶಯಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ರೂಪಿಸಲಾಗಿದೆ. ಇಲ್ಲಿಯ ಮುಖ್ಯ ವಿಷಯಾಧಾರಿತ ಪಠ್ಯಕ್ರಮ. ಈ ಮೂಲಕ ಕಲಾ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕನ್ನಡ ಭಾಷಾ ಕೌಶಲ್ಯವನ್ನು ಕಲಿಸುವುದರ ಜೊತೆಗೆ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಸಂಸ್ಕೃತಿಯ ವಿವಿಧ ಆಯಾಮಗಳನ್ನು ಪರಿಚಯಿಸುವುದು ಮುಖ್ಯ ಆಶಯವಾಗಿದೆ.

ಕನ್ನಡ ಭಾಷಾ ಕಲಿಕೆಯ ನಾಲ್ಕು ಆಯಾಮಗಳಾದ ಓದುವುದು, ಬರೆಯುವುದು, ಅರ್ಥ ಮಾಡಿಕೊಳ್ಳುವುದು, ಮಾತಾಡುವುದು ಇವುಗಳನ್ನು ಸಮರ್ಪಕವಾಗಿ ಕಲಿಸುವ ಪಠ್ಯದೊಂದಿಗೆ ಅಭ್ಯಾಸಗಳನ್ನು ರೂಪಿಸಲಾಗಿದೆ.

ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಹೊಸ ಆಲೋಚನಾ ಕ್ರಮಗಳನ್ನು ರೂಪಿಸುವುದು, ವೈಚಾರಿಕ ಮನೋಭಾವವನ್ನು ಬೆಳೆಸುವುದು, ಪ್ರಾಯೋಗಿಕ ಚಿಂತನೆಗೆ ಒತ್ತು ಕೊಡುವುದು ಒಟ್ಟಾರೆಯಾಗಿ ಯುವ ಜನಾಂಗದ ಮನಸ್ಸನ್ನು, ವ್ಯಕ್ತಿತ್ವವನ್ನು ರೂಪಿಸುವುದು ಈ ಪಠ್ಯದ ಉದ್ದೇಶ. ಅದರೊಂದಿಗೆ ಕಲಾ ವಿದ್ಯಾರ್ಥಿಗಳು ಸೃಜನಶೀಲ ಬರವಣಿಗೆಯಲ್ಲಿ ತೊಡಗಿಸಿಕೊಳ್ಳಲು ಅಗತ್ಯವಾದ ಕೌಶಲ್ಯಾಧಾರಿತ ಪಠ್ಯ ಇದಾಗಿದೆ. ಇದಕ್ಕೆ ಪೂರಕವಾಗಿ ಪಠ್ಯವನ್ನು ವಿಷಯಾಧಾರಿತವಾಗಿ ರೂಪಿಸಲಾಗಿದೆ. ಈ ಮೂಲಕ ಬದುಕನ್ನು ಕುರಿತು ಸಮಗ್ರ ಗ್ರಹಿಕೆಯನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳು ಪಡೆಯುವಲ್ಲಿ ಪಠ್ಯ ನೆರವಾಗುತ್ತದೆ.

ಕನ್ನಡ ನಾಡು ರೂಪುಗೊಂಡಿದ್ದರಿಂದ ಪ್ರಾರಂಭಿಸಿ ಅದರ ಶ್ರೀಮಂತಿಕೆ, ವೈಶಿಷ್ಟ್ಯ, ಭಾಷಾವಾರು ಪ್ರಾಂತ್ಯ ರಚನೆ ಏಕೀಕರಣ ಅದರ ಲೋಕದೃಷ್ಟಿ, ಕಲಾ ಪ್ರಕಾರಗಳಲ್ಲಿನ ಸಮೃದ್ಧತೆ, ರಾಜಕೀಯ ಸಾಮಾಜಿಕ ಚಿಂತನೆಗಳ ಸ್ಫೋಪಜ್ಞತೆ, ಅದರ ಭೌಗೋಳಿಕ ಸೌಂದರ್ಯ, ವಿವಿಧ ಕ್ಷೇತ್ರಗಳಲ್ಲಿನ ಸಾಧಕರು, ಮಹತ್ವದ ಚಳುವಳಿಗಳು, ಭಾರತ ಮತ್ತು ವಿಶ್ವಕ್ಕೆ ಕನ್ನಡದ ಕೊಡುಗೆಗಳು ಇವುಗಳಲ್ಲಿ ಕೆಲವನ್ನು ಆಯ್ದು ಪಠ್ಯವನ್ನು ರೂಪಿಸಬೇಕು.

ಮೊದಲ ಘಟಕದಲ್ಲಿ ಕನ್ನಡ ನಾಡು ನುಡಿಗಳ ಇತಿಹಾಸ, ವೈಶಿಷ್ಟ್ಯ, ವೈಭವಗಳನ್ನು ಒಳಗೊಂಡ ಪರಿಚಯಿಸುವ ಪಠ್ಯಗಳನ್ನು ಇಲ್ಲಿ ನೀಡಲಾಗಿದೆ. ಇಂದಿನ ವಿದ್ಯುನ್ಮಾನ ಯುಗದಲ್ಲಿ ಸಾಹಿತ್ಯದಿಂದ ವಿಮುಖರಾಗುತ್ತಿರುವ ಯುವಪೀಳಿಗೆಗೆ ಸಾಹಿತ್ಯದ ಸಮಕಾಲೀನ ಔಚಿತ್ಯದ ಬಗ್ಗೆ ತಿಳಿಸುವುದು ಇಲ್ಲಿಯ ಮುಖ್ಯ ಆಶಯ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಸಂಬಂಧಿಸಿದ ಕವಿತೆ, ಲೇಖನಗಳನ್ನು ಇಲ್ಲಿ ಕೊಡಲಾಗಿದೆ.

## ಘಟಕ 2 : ಪ್ರಕೃತಿ

ಮನುಷ್ಯ ಜೀವಿಯು ಪ್ರಕೃತಿಯ ಅವಿಭಾಜ್ಯ ಅಂಗ. ಪ್ರಕೃತಿ ಮತ್ತು ಮನುಷ್ಯರ ನಡುವಿನ ಅನ್ಯೋನ್ಯ ಸಂಬಂಧ ಇಂದಿನ ಅಗತ್ಯ ಪ್ರಕೃತಿಯನ್ನು ಮೂಲದೇವತೆಯೆಂದು ನೋಡುವ ಆರಾಧನಾ ನೆಲೆ ಅಥವಾ ಮಾತೃನೆಲೆ. ಎರಡನೆಯದು ಪ್ರಕೃತಿಯು ಮನುಷ್ಯರ ಉಪಭೋಗಕ್ಕಾಗಿಯೇ ಇದೆಯೆಂದು ನೋಡುವ ಭೋಗವಾದಿ ನೆಲೆ, ಮೂರನೆಯ ಮುಖ್ಯವಾದ ನೆಲೆ ಎಂದರೆ ಸೌಂದರ್ಯದ ನೆಲೆ. ಇದು ಕಲಾ ಮೀಮಾಂಸೆಯ ಜೊತೆಯಲ್ಲಿಯೇ ಬೆಳೆದು ಬಂದಿದೆ. ಈ ಮೂರು ನೆಲೆಗಳ ಜೊತೆಯಲ್ಲಿಯೇ ಪ್ರಕೃತಿಯು ಮನುಷ್ಯರಿಗೆ ಗುರುವೂ, ಮಾದರಿಯೂ ಆಗುವ ಹಲವು ಅಂಶಗಳು ಇವೆ. ಸಕಲ ಜೀವಜಾತಗಳನ್ನು ಪೊರೆಯುವ, ಬದುಕಲು ಅವಕಾಶ ಮಾಡಿಕೊಡುವ ಸಹಬಾಳ್ವೆಯ ಮೂಲಪಾರವನ್ನು ಪ್ರಕೃತಿಯಿಂದ ಕಲಿಯಬೇಕಿದೆ. ಹಾಗೆಯೇ ನೆಲೆಯ ನಾಗರಿಕತೆಯ ಮೌಲ್ಯ ವ್ಯವಸ್ಥೆಯನ್ನೇ ಪುನರ್ ರಚಿಸಲು ಅವಕಾಶ ಮಾಡಿಕೊಡುತ್ತದೆ. ನಿತ್ಯನೂತನತೆಯ ನೆಲೆ, ಶಾಶ್ವತ ಮತ್ತು ನಶ್ವರತೆಯ ನೆಲೆ ಜೀವಪರತೆಯ ನೆಲೆ / ಕ್ರಿಯಾಶೀಲತೆಯ ನೆಲೆ ಇತ್ಯಾದಿ ಅಂಶಗಳನ್ನು ಒಳಗೊಳ್ಳುವ ಪಠ್ಯಗಳನ್ನು ಸೇರಿಸಿಕೊಳ್ಳಬಹುದು. ಪ್ರಕೃತಿಯೊಂದಿಗಿನ ಅನ್ಯೋನ್ಯ ಸಂಬಂಧವನ್ನು ಮರೆತರೆ ಅಪಾಯ ಕಟ್ಟಿಟ್ಟದ್ದು. ಅತಿಯಾದ ನಗರೀಕರಣದ ಮತ್ತು ಭೋಗಲಾಲಸೆಯಿಂದ ನಿಸರ್ಗದಿಂದ ದೂರ ಸರಿಯುತ್ತಿರುವ ಮನುಷ್ಯನನ್ನು ಮತ್ತೆ ಅದರ ಬಳಿಗೆ ತರುವುದು ಅತ್ಯಂತ ಅಗತ್ಯ. ಆದ್ದರಿಂದ ಎರಡನೇ ಘಟಕದಲ್ಲಿ ಕನ್ನಡದ ವಿವಿಧ ಕವಿಗಳ ಲೇಖಕರ ಪ್ರಕೃತಿ ಕುರಿತ ಪಠ್ಯಗಳನ್ನು ಸಂಯೋಜಿಸಿದೆ

## ಘಟಕ 3 : ಬಾಲ್ಯ

ಬಾಲ್ಯವು ಮಾನವ ಬದುಕಿನ ಅತ್ಯಂತ ಮುಖ್ಯವಾದ ಮಾತ್ರವಲ್ಲ, ಸುಂದರವಾದ ಘಟ್ಟವೂ ಹೌದು. ಮನುಷ್ಯರ ವ್ಯಕ್ತಿತ್ವವು ಬಾಲ್ಯದ ಧಾತುವಿನಿಂದಲೇ ರೂಪುಗೊಳ್ಳುತ್ತದೆ. 'ಆ ಕಾಲವೊಂದಿತ್ತು ಬಾಲ್ಯ ತಾನಾಗಿತ್ತು ಎನ್ನುವ ಕವಿವಾಣಿಯೂ ಇದನ್ನು ಸಮರ್ಥಿಸುತ್ತದೆ. ಬಾಲ್ಯದ ಮುಗ್ಧತೆ, ನಂಬಿಕೆ, ಕರಾರುಗಳಿಲ್ಲದ ಪ್ರೀತಿ, ಬದುಕಿನ ಪ್ರತಿ ಕ್ಷಣವನ್ನು ಉತ್ಕಟವಾಗಿ ಅನುಭವಿಸುವ ಮನಸ್ಸಿತಿ, ಕ್ಷಮಾಗುಣ, ಕುತೂಹಲ, ಪ್ರಶ್ನೆಗಳನ್ನು ಒಳಗೊಂಡ ಕಾಲವಿದು. ಹೀಗೆ ರಮ್ಯವಾಗಿ ಕಾಣಿಸುವ ಬಾಲ್ಯಕಾಲಕ್ಕೆ ದುರಂತದ ಮುಖವೂ ಇದೆ. ಬಾಲಕಾರ್ಮಿಕರಿಂದ ಹಿಡಿದು, ಶಿಕ್ಷಣ ವಂಚಿತರಾದ ಇನ್ನಿತರ ಹಲವು ಬಗೆಯ ಶೋಷಣೆ ಮತ್ತು ದೌರ್ಜನ್ಯಗಳಿಗೆ ಒಳಗಾಗುವ ಸಂದರ್ಭಗಳನ್ನೂ ಪಠ್ಯದ ತಯಾರಿಯ ಸಂದರ್ಭದ ಗಮನಿಸಬೇಕು. ಬಾಲ್ಯದಲ್ಲಿ ಎದುರಾದ ಹಲವು ಘಟನೆಗಳು ಇಡಿ ಬದುಕಿನ ಮೇಲೆ ಪರಿಣಾಮ ಬೀರುವಷ್ಟು ಪ್ರಬಲವಾಗಿರುತ್ತದೆ. ವ್ಯಕ್ತಿತ್ವವನ್ನು ರೂಪಿಸುವಲ್ಲಿ ಬಾಲ್ಯದ ಪಾತ್ರ ಪ್ರಮುಖವಾದುದು. ಇದೇ ತಾನೇ ಬಾಲ್ಯಾವಸ್ಥೆಯನ್ನು ದಾಟಿ ಹದಿಹರೆಯಕ್ಕೆ ಕಾಲಿಡುತ್ತಿರುವ ಪದವಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಮ್ಮ ಬಾಲ್ಯ ಬಣ್ಣಗಳನ್ನು ಮೆಲುಕು ಹಾಕುವ ಅವಕಾಶ ನೀಡಿ ಪ್ರಾಯೋಗಿಕ ಚಟುವಟಿಕೆಗಳ ಮೂಲಕ ಅವರದೇ ಹೊಸಲೋಕವನ್ನು ಸೃಜಿಸುವಂತೆ ಪ್ರೇರೇಪಿಸುವ ರೀತಿಯ ಪಠ್ಯವನ್ನು ಇಲ್ಲಿ ರೂಪಿಸಿದೆ.

## ಘಟಕ 4 : ಸಂಕೀರ್ಣ

ಈ ಭಾಗದಲ್ಲಿ ಕಲೆ ಮತ್ತು ಸಾಹಿತ್ಯ, ಕಲೆ ಮತ್ತು ಮನೋವಿಕಾಸಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ವಿಷಯಗಳನ್ನು ತಿಳಿಸಬೇಕು.

ಕಲಾ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅನುಕೂಲವಾಗುವ ಪಠ್ಯದಲ್ಲಿಲ್ಲದ ವಿಷಯಗಳನ್ನು ತಿಳಿಸಬೇಕು.

ಇದಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ವಿಶೇಷ ಪಠ್ಯಗಳನ್ನು ಆಧರಿಸಿದಂತೆ ಜ್ಞಾನವನ್ನು ಹೆಚ್ಚಿಸುವುದಕ್ಕೆ ಅದ್ಭುತ ನೀಡಬೇಕು.

ಪ್ರಥಮ ಚತುರ್ಮಾಸ ಬಿ.ಎ. 2021-22 ನೇ ಸಾಲಿನ ಕನ್ನಡ ಭಾಷ್ಯ ಪಠ್ಯಪುಸ್ತಕ

**NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ**  
**ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ**  
**ಪ್ರಥಮ ಬಿ.ಎ./ಬಿಎಸ್‌ಡಬ್ಲ್ಯು**  
**ಬಿ.ಎ.(ಹೆಚ್‌ಆರ್‌ಡಿ)/ಬಿಎ(ಎಸ್‌ಡಿಎಸ್) ಕನ್ನಡ**

**ಮೊದಲ ಚತುರ್ಮಾಸ**  
**ಕಲಾ ಗಂಗೋತ್ರಿ - 1**

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,  
ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು  
SEE - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು  
CIE - ನಿರಂತರ ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು  
(ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ - ಪ್ರಕೃತಿ - ಬಾಲ್ಯ - ಸಂಕೀರ್ಣ - ಪರಿಕಲ್ಪನೆಗಳನ್ನೊಳಗೊಂಡಂತೆ)

**ಪರಿವಿಡಿ**

**ಘಟಕ I ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ 15 ಅಂಕಗಳು**

- |                              |                                             |
|------------------------------|---------------------------------------------|
| 1. ಸರಳ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ | ರಂ.ಶ್ರೀ ಮುಗಳಿ - ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ ಆಧಾರಿತ (ಸಂ) |
| 2. ಕನ್ನಡ ನುಡಿ                | ಬೆಟಗೇರಿ ಕೃಷ್ಣಶರ್ಮ (ಕಾವ್ಯ)                   |
| 3. ಆಲೂರು ವೆಂಕಟರಾಯರು          | (ಸಾಲುದೀಪ ಕೃತಿಯಿಂದ)                          |
| 4. ಪಂಜೆ ಮಂಗೇಶರಾಯ             | (ಸಾಲುದೀಪ ಕೃತಿಯಿಂದ)                          |

**ಘಟಕ II ಪ್ರಕೃತಿ**

**15 ಅಂಕಗಳು**

- |                                                                         |                          |
|-------------------------------------------------------------------------|--------------------------|
| 1. ಗುತ್ತಿ ತಿಮ್ಮಿ - ಹುಲಿಕಲ್ಲನೆತ್ತಿ- ಮಲೆಗಳಲ್ಲಿ ಮದುಮಗಳು ಆಯ್ದ ಭಾಗ (ಕುವೆಂಪು) |                          |
| 2. ಧ್ಯಾನಸ್ಥ                                                             | ಸುಬ್ರಾಯ ಚೊಕ್ಕಾಡಿ (ಕಾವ್ಯ) |
| 3. ಜನಪದ ಕಾವ್ಯ - ನಿಸರ್ಗ (ಜನಪದ ಗೀತಾಂಜಲಿ) ಪು.188-189                       |                          |
| 4. ಬೆಳಗು                                                                | ದ.ರಾ. ಬೇಂದ್ರೆ (ಕಾವ್ಯ)    |

**ಘಟಕ III ಬಾಲ್ಯ**

**15 ಅಂಕಗಳು**

- |                                                        |                                    |
|--------------------------------------------------------|------------------------------------|
| 1. ಚಂದ್ರಗಿರಿ- ಸಾ.ರಾ. ಅಬೂಬಕ್ಕರ ಅಭಿನಂದನಾ ಗ್ರಂಥದ ಆಯ್ದ ಭಾಗ |                                    |
| 2. ನೆನಪಿದೆಯೇ -                                         | ಜಿ.ಎಸ್.ಎಸ್. (ಕಾವ್ಯ)                |
| 3. ಊರು ಕೇರಿ                                            | ಸಿದ್ಧಲಿಂಗಯ್ಯನವರ ಆತ್ಮ ಕಥನದ ಆಯ್ದ ಭಾಗ |
| 4. ಉಚಲ್ಯಾ                                              | ಲಕ್ಷ್ಮಣ ರಾವ್ ಗಾಯಕ್‌ವಾಡ್ (ಸಂಗ್ರಹ)   |

**ಘಟಕ IV ಸಂಕೀರ್ಣ**

**15 ಅಂಕಗಳು**

- |                                 |                                            |
|---------------------------------|--------------------------------------------|
| 1. ಸಂಸ್ಕೃತಿ ಸಂಕೀರ್ಣವಾಗಿ ಹುಲಿ-ದನ | ಡಾ. ಗಣನಾಥ ಎಕ್ಕಾರು                          |
| 2. ಭಾವುಕತೆ ಕನಸಾಗದಿರಲಿ           | ಡಾ. ವಿರೂಪಾಕ್ಷ ದೇವರಮನೆ (ಮನಶ್ಶಾಸ್ತ್ರೀಯ ಲೇಖನ) |
| 3. ಮನೋವಿಜ್ಞಾನದ ಹಾಡು             | ಗಂಗಾಧರ ಬೆಳ್ಳಾರೆ                            |
| 4. ಪತ್ರಿಕಾ ವರದಿ ತಯಾರಿ           | ಚಿತ್ರಲೇಖನ -ಪ್ರಬಂಧ ರಚನೆಗಳ ಕುರಿತು ಮಾಹಿತಿ     |

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಎಸ್.ಆರ್. ಅರುಣಕುಮಾರ್, ಶ್ರೀ ಹರೀಶ್ ಟಿ.ಜಿ, ಎಂ.ಡಿ. ಮಂಚಿ

ಮಾದರಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ-ಅಂಕಗಳ ವಿಂಗಡಣೆ-ಒಟ್ಟು ಅಂಕಗಳು-60+40(ಆಂತರಿಕ)

I 8 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು. 3\*8=24

1. ಪ್ರಶ್ನೆ 1. ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-ಅದಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ) : ಆಂತರಿಕ ಆಯ್ಕೆಯ ಎರಡು ಪ್ರಶ್ನೆಗಳು.  
-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.

II 5 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು. 3\*5=15

1. ಪ್ರಶ್ನೆ 1 ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ): ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು

III ಪದ್ಯ: ಭಾವಾರ್ಥ ಆಂತರಿಕ ಆಯ್ಕೆ 5 ಅಂಕಗಳ 2 ಪ್ರಶ್ನೆಗಳು

1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು. 1\*5=05

IV ಪದ್ಯ : 4 ಅಂಕಗಳ 4 ಪ್ರಶ್ನೆಗಳು

2ಕ್ಕೆ ಉತ್ತರಿಸುವುದು. 2\*4=08

V 1 ಅಂಕಗಳ 8 ಪ್ರಶ್ನೆಗಳು 1\*8=08

- ಅ) ಕಾವ್ಯ - 4
- ಆ) ಗದ್ಯ - 2
- ಇ) ಸಂಕೀರ್ಣ - 2

**ಪ್ರಥಮ ಬಿ.ಸಿ.ಎ. ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ**

ಮೊದಲ ಚತುರ್ಮಾಸ

**BCA Degree / Honours Degree Programme**

Course Title

ಬಿ.ಸಿ.ಎ. - ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

Total Contact Hourse : 52 to 56

Course Credits : 03

Formative Assessment Marks : 40(CIE)

Duration of ESA / Exam : 3 hours

Model Syllabus Authors : Multiple Authors

Summative Assessment Marks : 60 (SEE)

ವಿವರಗಳು

ಬೋಧನಾ ಅವಧಿ

ಘಟಕ - 1 ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ

13/14

ಘಟಕ - 2 ಆಕಾಶ

13/14

ಘಟಕ - 3 ತಾರುಣ್ಯ

13/14

ಘಟಕ - 4 ಸಂಕೀರ್ಣ

13/14

### ಘಟಕ -1 ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ

ಕನ್ನಡ ನಾಡು ರೂಪುಗೊಂಡದ್ದರಿಂದ ಪ್ರಾರಂಭಿಸಿ ಅದರ ಶ್ರೀಮಂತಿಕೆ, ವೈಶಿಷ್ಟ್ಯತೆ, ಅದರ ಲೋಕದೃಷ್ಟಿ, ಕಲಾ ಪ್ರಕಾರಗಳಲ್ಲಿನ ಸಮೃದ್ಧತೆ, ರಾಜಕೀಯ ಸಾಮಾಜಿಕ ಚಿಂತನೆಗಳ ಸ್ಪೋಷಜ್ಞತೆ, ಅದರ ಭೌಗೋಳಿಕ ಸೌಂದರ್ಯ, ವಿವಿಧ ಕ್ಷೇತ್ರಗಳಲ್ಲಿನ ಸಾಧಕರು, ಮಹತ್ವದ ಚಳುವಳಿಗಳು, ಭಾರತ ಮತ್ತು ವಿಶ್ವಕ್ಕೆ ಕನ್ನಡದ ಕೊಡುಗೆಗಳು ಇವುಗಳಲ್ಲಿ ಕೆಲವನ್ನು ಆಯ್ದು ಪಠ್ಯವನ್ನು ರೂಪಿಸುವುದು. ಕನ್ನಡ ನಾಡು-ನುಡಿಯ ಬಗೆಗೆ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಅಭಿಮಾನವನ್ನು ಜಾಗೃತ ಮೂಡಿಸುವುದು ಈ ಘಟಕದ ಉದ್ದೇಶವಾಗಿರುತ್ತದೆ.

### ಘಟಕ -2 ಆಕಾಶ

ಆಕಾಶವು ವಿಶ್ವಾತ್ಮಕ ತತ್ವಗಳಲ್ಲಿ ಒಂದು ಮಾತ್ರವಲ್ಲದೆ, ಮಾನವ ಸಂಕುಲವನ್ನು ಪೊರೆಯುವ ಶಕ್ತಿಗಳಲ್ಲಿ ಒಂದಾಗಿದೆ. ಆಕಾಶವನ್ನು ಪಂಚಭೂತಗಳಲ್ಲಿ ಒಂದಾಗಿ ಪರಿಗಣಿಸುವುದು ಇದೇ ಕಾರಣಕ್ಕೆ ವಿಶ್ವಾತ್ಮಕ ತತ್ವಗಳು ತಮ್ಮ ಅನಂತ ಶಕ್ತಿಗಳ ಕಾರಣಕ್ಕಾಗಿ ಮಾತ್ರವಲ್ಲದೆ ಮನುಷ್ಯರ ಅಹಂಕಾರಕ್ಕೆ ಕಾರಣವಿಲ್ಲ ಎನ್ನುವ ಸತ್ಯವನ್ನು ತಿಳಿಸುವ ಕಾರಣಕ್ಕಾಗಿಯೂ ಮುಖ್ಯ. ವಿಸ್ತಾರ, ಔನ್ನತ್ಯ, ನಿಸ್ಸಾರ್ಥತೆ, ಕೊಟ್ಟು ದಣಿಯದ ಔದಾರ್ಯ, ತೆರೆದ ಮನಸ್ಸು, ಉನ್ನತೀಕರಣದಲ್ಲಿಯೇ ನೆಟ್ಟ ದೃಷ್ಟಿ ಇಂತಹ ಅನೇಕ ಕಾರಣಗಳಿಗಾಗಿ ಆಕಾಶವು ನಮ್ಮ ಮಾದರಿಗಳಲ್ಲಿ ಒಂದಾಗಿದೆ. ಓಜೋನ್ ಪದರಕ್ಕೆ ಒದಗಿರುವ ಆತಂಕವೂ ಸೇರಿದಂತೆ ಆಕಾಶವನ್ನು ಕುರಿತ ವೈಜ್ಞಾನಿಕ ನೆಲೆಗಳನ್ನೂ ಪಠ್ಯವು ಒಳಗೊಂಡರೆ ಅದಕ್ಕೊಂದು ಸಮಗ್ರತೆ ಸಿಗುತ್ತದೆ. ನಕ್ಷತ್ರ ಮಾಲಿಕೆಗಳು, ಧೂಮಕೇತುಗಳು, ಮಳೆ, ಮೋಡ, ಗುಡುಗು ಸಿಡಿಲು ಇಂಥ ಪ್ರಾಥಮಿಕ ಸಂಗತಿಗಳಿಂದ ಹಿಡಿದು ಅದರ ವರ್ಣನಾತ್ಮಕ ವಿವರಗಳಿರುವ ಪಠ್ಯಗಳನ್ನು ಆರಿಸಿಕೊಳ್ಳಬಹುದು.

### ಘಟಕ -3 ತಾರುಣ್ಯ

ತಾರುಣ್ಯವು ಮನುಷ್ಯ ಬದುಕಿನ ಅತಿ ಆಕರ್ಷಕ, ನಿರ್ಣಾಯಕ ಕಾಲಾವಧಿಯಾಗಿದೆ. ಈ ಅವಧಿಯಲ್ಲಿನ ತಲ್ಲಣಗಳು, ಆಕರ್ಷಣೆಗಳು, ಆಮಿಷಗಳು ಮುಂತಾದವು ಅತಿ ವಿಶಿಷ್ಟವಾಗಿದ್ದು ಅವನ ವ್ಯಕ್ತಿತ್ವ ಮಾಗುವಿಕೆಗೆ ತಳಹದಿಯಾಗಿರುತ್ತದೆ. ಹುಡುಗಾಟಿಕೆ ಮತ್ತು ಜವಾಬ್ದಾರಿಗಳ ನಡುವಿನ ದ್ವಂದ್ವಗಳನ್ನು ಮತ್ತು ಈ ಅವಧಿಯಲ್ಲಿನ ಒಳಿತು-ಕೆಡಕುಗಳನ್ನು ಸಾಹಿತ್ಯ ಭಾಗಗಳ ಮುಖೇನ ತಿಳಿಸಿಕೊಡುವುದು. ಜೀವನದ ಮಹತ್ವದ ಘಟ್ಟವಾದ ಈ ಅವಧಿಯಲ್ಲಿ ಅವನ ಮನಸ್ಸು ಮಾಗುವತ್ತ ಚಲಿಸುತ್ತಿದ್ದು ಕನಸುಗಾರಿಕೆ, ಆದರ್ಶಗಳು, ಭ್ರಮೆಗಳು, ಹೊಸತನದ, ಹುಡುಕಾಟ, ಪ್ರೀತಿ ಪ್ರಣಯಗಳ ಸೆಳೆತ, ಪ್ರತಿಭೆ ಮುಂತಾದವುಗಳ ಬಗ್ಗೆ ಅವನನ್ನು ಮೂಡಿಸುವಲ್ಲಿ ಸಾಹಿತ್ಯದ ನೆರವನ್ನು ತಿಳಿಸಿಕೊಡುವುದು.

### ಘಟಕ -4 ಸಂಕೀರ್ಣ

ತಾಂತ್ರಿಕ ವಿಷಯಗಳನ್ನು ಕನ್ನಡದಲ್ಲಿ ರೂಪಿಸಬೇಕಾದ ಅಗತ್ಯತೆಗಳನ್ನು ತಿಳಿಸಿಕೊಡುವುದು ಇಂದಿನ ತಂತ್ರಜ್ಞಾನ ಯುಗದಲ್ಲಿ ಅದಕ್ಕೆ ಅಗತ್ಯವಾದ ಕನ್ನಡವನ್ನು ರೂಪಿಸುವ ತರಬೇತಿ ನೀಡುವುದು. ಗಣಕ ಕ್ಷೇತ್ರದಲ್ಲಿ ಕನ್ನಡವನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಬಳಸುವುದಕ್ಕೆ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಸಜ್ಜುಗೊಳಿಸುವುದು, ಗಣಕ ಕ್ಷೇತ್ರಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ತಾಂತ್ರಿಕ ವಿಷಯಗಳನ್ನು ಉದಾಹರಣೆ ಇ-ಮೇಲ್, ಕನ್ನಡ ಅಂತರ್ಜಾಲ ತಾಣಗಳು, ಕನ್ನಡ ತಂತ್ರಾಂಶಗಳು, ಕನ್ನಡ ವಿಕಿಪೀಡಿಯಾ ಮುಂತಾದ ಪರಿಭಾಷೆಯನ್ನು ಕನ್ನಡದಲ್ಲಿ ತಿಳಿಸುವುದು.

## NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ

ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

### ಪ್ರಥಮ ಬಿ.ಸಿ.ಎ. ಕನ್ನಡ

ಮೊದಲ ಚತುರ್ಮಾಸ

#### ಗಣಕ ಗಂಗೋತ್ರಿ-1

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,

ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು

SEE - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು

CIE - ನಿರಂತರ ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು

(ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ - ಆಕಾಶ -ತಾರುಣ್ಯ - ಸಂಕೀರ್ಣ)

#### ಪರಿವಿಡಿ

##### ಘಟಕ I ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ

15 ಅಂಕಗಳು

- |                  |                           |
|------------------|---------------------------|
| 1. ಕನ್ನಡಿಗರ ತಾಯೀ | ಗೋವಿಂದ ಪೈ (ಕಾವ್ಯ)         |
| 2. ಕನ್ನಡ ಪದಗೊಳ   | ಜಿ.ಪಿ. ರಾಜರತ್ನಂ (ಕಾವ್ಯ)   |
| 3. ಕನ್ನಡ ಚೆಲುವು  | ಟಿ. ಕೇಶವ ಭಟ್ಟ (ಲೇಖನ)      |
| 4. ತಾಯಿ ಕೊಟ್ಟ ವರ | ಕು.ಶಿ. ಹರಿದಾಸ ಭಟ್ಟ (ಲೇಖನ) |

##### ಘಟಕ II ಆಕಾಶ

15 ಅಂಕಗಳು

- |                               |                                   |
|-------------------------------|-----------------------------------|
| 1. ಚಂದ್ರಮುಖಿ                  | ಕೆ.ಪಿ. ಪೂರ್ಣಚಂದ್ರ ತೇಜಸ್ವಿ (.....) |
| 2. ನವಗ್ರಹ ಪರಿಕಲ್ಪನೆ ಅಂದು ಇಂದು | ಜಿ.ಟಿ. ನಾರಾಯಣ ರಾವ್ (ಲೇಖನ)         |
| 3. ಮುಗಿಲುಗಳು                  | ವಿ.ಸೀತಾರಾಮಯ್ಯ                     |
| 4. ದೇವರು ರುಜು ಮಾಡಿದನು         | ಕುವೆಂಪು (ಕಾವ್ಯ)                   |

##### ಘಟಕ III ತಾರುಣ್ಯ

15 ಅಂಕಗಳು

- |                            |                                 |
|----------------------------|---------------------------------|
| 1. ಹುಚ್ಚು ಕೋಡಿಯ ಮನಸ್ಸು     | ಹೆಚ್.ಎಸ್. ವೆಂಕಟೇಶಮೂರ್ತಿ (ಕಾವ್ಯ) |
| 2. ಅಮಾಸ                    | ದೇವನೂರು ಮಹಾದೇವ (ಕತೆ)            |
| 3. ಹದಿಹರೆಯದವರನ್ನು ಕುರಿತು   | ಪಿ. ಲಂಕೇಶ್                      |
| 4. ಒಂದು ಮಾಣಿಯ ಪರಿಣಯ ಪ್ರಸಂಗ | ಡಾ. ಹೆಚ್.ಎಸ್. ಅನುಪಮ             |

##### ಘಟಕ IV ಸಂಕೀರ್ಣ

15 ಅಂಕಗಳು

- |                               |                              |
|-------------------------------|------------------------------|
| 1. ಕಂಪ್ಯೂಟರ್‌ನಲ್ಲಿ ಕನ್ನಡ      | ಎ. ಸತ್ಯನಾರಾಯಣ                |
| 2. ಇಂಟರ್‌ನೆಟ್                 | ಎಂ.ಸಿ. ಪ್ರವೀಣ್ ಕುಮಾರ್ ಹಾಲಾಡಿ |
| 3. ವಿದ್ಯಮಾನ ಮಾಧ್ಯಮ            | ಡಾ. ವೀರೇಶ ಬಡಿಗೇರ             |
| 4. ಅಂಟಾರ್ಕ್ಟಿಕಾದಲ್ಲಿ ಅಂತರ್ಜಾಲ |                              |

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿವಾರ್ಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಶ್ರೀಮತಿ ವಾಣಿ ಅಜಕ್ಕಾನ, ಡಾ. ವಿನೋದ, ಶ್ರೀಮತಿ ಪ್ರಮೀಳಾ

ಮಾದರಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ-ಅಂಕಗಳ ವಿಂಗಡಣೆ-ಒಟ್ಟು ಅಂಕಗಳು-60+40(ಆಂತರಿಕ)

I 8 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $3 \times 8 = 24$

1. ಪ್ರಶ್ನೆ 1. ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-ಅದಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ) : ಆಂತರಿಕ ಆಯ್ಕೆಯ ಎರಡು ಪ್ರಶ್ನೆಗಳು.  
-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.

II 5 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು .  $3 \times 5 = 15$

1. ಪ್ರಶ್ನೆ 1 ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ): ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು

III ಪದ್ಯ: ಭಾವಾರ್ಥ ಆಂತರಿಕ ಆಯ್ಕೆ 5 ಅಂಕಗಳ 2 ಪ್ರಶ್ನೆಗಳು

1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.  $1 \times 5 = 05$

IV ಪದ್ಯ : 4 ಅಂಕಗಳ 4 ಪ್ರಶ್ನೆಗಳು

2ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.  $2 \times 4 = 08$

V 1 ಅಂಕಗಳ 8 ಪ್ರಶ್ನೆಗಳು  $1 \times 8 = 08$

ಅ) ಕಾವ್ಯ - 4

ಆ) ಗದ್ಯ - 2

ಇ) ಸಂಕೀರ್ಣ - 2



# ಪ್ರಥಮ ಬಿ.ಕಾಂ. ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

ಮೊದಲ ಚತುರ್ಮಾಸ

## B.Com Degree / Honours Degree Programme

|                                           |                                       |
|-------------------------------------------|---------------------------------------|
| Course Title                              | ಬಿ.ಕಾಂ. - ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ             |
| Total Contact Hourse : 52 to 56           | Course Credits : 03                   |
| Formative Assessment Marks : 40           | Duration of ESA / Exam : 3 hours      |
| Model Syllabus Authors : Multiple Authors | Summative Assessment Marks : 60 (SEE) |

|                                |            |
|--------------------------------|------------|
| ವಿವರಗಳು                        | ಬೋಧನಾ ಅವಧಿ |
| ಘಟಕ - 1 ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ | 13/14      |
| ಘಟಕ - 2 ಸಂಸ್ಕೃತಿ               | 13/14      |
| ಘಟಕ - 3 ಜಾಗತೀಕರಣ               | 13/14      |
| ಘಟಕ - 4 ಸಂಕೀರ್ಣ                | 13/14      |

### ಘಟಕ -1 ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ

ಕನ್ನಡ ನಾಡು ರೂಪುಗೊಂಡದ್ದರಿಂದ ಪ್ರಾರಂಭಿಸಿ ಅದರ ಶ್ರೀಮಂತಿಕೆ, ವೈಶಿಷ್ಟ್ಯತೆ, ಅದರ ಲೋಕದೃಷ್ಟಿ, ಕಲಾ ಪ್ರಕಾರಗಳಲ್ಲಿನ ಸಮೃದ್ಧತೆ, ರಾಜಕೀಯ ಸಾಮಾಜಿಕ ಚಿಂತನೆಗಳ ಸ್ಪೋಪಜ್ಞತೆ, ಅದರ ಭೌಗೋಳಿಕ ಸೌಂದರ್ಯ, ವಿವಿಧ ಕ್ಷೇತ್ರಗಳಲ್ಲಿನ ಸಾಧಕರು, ಮಹತ್ವದ ಚಳುವಳಿಗಳು, ಭಾರತ ಮತ್ತು ವಿಶ್ವಕ್ಕೆ ಕನ್ನಡದ ಕೊಡುಗೆಗಳು ಇವುಗಳಲ್ಲಿ ಕೆಲವನ್ನು ಆಯ್ದು ಪಠ್ಯವನ್ನು ರೂಪಿಸುವ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ನಾಡು-ನುಡಿ ಕುರಿತ ಅಭಿಮಾನವನ್ನು ಜಾಗೃತಗೊಳಿಸುವುದು ಈ ಘಟಕದ ಉದ್ದೇಶವಾಗಿರುತ್ತದೆ.

### ಘಟಕ -2 ಸಂಸ್ಕೃತಿ

ಸಂಸ್ಕೃತಿಯನ್ನು ಅರಾಲ್ಪ ಬೆಳಕು ಮತ್ತು ಮಾಧುರ್ಯ ಎಂದು ಕರೆಯುತ್ತಾನೆ. ಮಾನವ ಸಮುದಾಯವು ಆಪಾರ ಶ್ರದ್ಧೆ, ಶ್ರಮ ಮತ್ತು ಪ್ರೀತಿಯಿಂದ ಸಂಸ್ಕೃತಿಯನ್ನು ರೂಪಿಸುತ್ತಿರುತ್ತದೆ. ಸಂಸ್ಕೃತಿ ಎನ್ನುವುದು ಜೀವನ ಮೌಲ್ಯಗಳು, ಕಲೆಗಳು, ಸಾಂಸ್ಕೃತಿಕ ಆಚರಣೆಗಳು, ರಾಜಕೀಯ ಹಾಗೂ ಧಾರ್ಮಿಕ ವ್ಯವಸ್ಥೆ ಈ ಎಲ್ಲವನ್ನೂ ಒಳಗೊಂಡಿರುತ್ತದೆ. ಬದುಕನ್ನು ಒಳಗಿನಿಂದಲೂ, ಹೊರಗಿನಿಂದಲೂ ಸಮೃದ್ಧಗೊಳಿಸುವ ಎಲ್ಲ ಅಂಶಗಳನ್ನೂ ನಾವು ಸಂಸ್ಕೃತಿ ಎಂದು ಕರೆಯಬಹುದು. ಸಕಲ ಜೀವ ಜಾತರನ್ನು ಗೌರವಿಸುವ, ಒಳಗೊಳ್ಳುವ, ಅವರ ಅಸ್ತಿತ್ವ ಮತ್ತು ಅಸ್ತಿತ್ವಗಳನ್ನು ಒಪ್ಪುವುದನ್ನು, ಭಿನ್ನವಿದ್ದು ಬೆರೆಯುವುದನ್ನು, ಮಾನವ ಸಹಜ ದೌರ್ಬಲ್ಯಗಳನ್ನು ಮೀರಲು ಪ್ರಾಮಾಣಿಕ ಪ್ರಯತ್ನ ನಡೆಸುವುದನ್ನು ಸಂಸ್ಕೃತಿಯ ಪ್ರಕ್ರಿಯೆ ಎಂದು ಕರೆಯಬಹುದು. ಸಂಸ್ಕೃತಿ ಸಂಬಂಧಿ ಪಠ್ಯಗಳನ್ನು ಇಲ್ಲಿ ಕೊಡುವ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸಂಸ್ಕೃತಿಯ ಬೆಳಕು ಮತ್ತು ಮಾಧುರ್ಯವನ್ನು ಬೆಳೆಸುವ ಉದ್ದೇಶವಿದೆ.

### ಘಟಕ -3 ಜಾಗತೀಕರಣ

ಜಾಗತೀಕರಣವು ಸಮಕಾಲೀನ ಜಾಗತಿಕ ವಿದ್ಯಮಾನವಾಗಿದ್ದು, ಅದು ಇಂದು ಆಯ್ಕೆಯಾಗಿ ಉಳಿದಿಲ್ಲ. ಅದು ಬೇಕಾಗಿ ಬೇಡವಾಗಿ ಎಲ್ಲ ರಾಷ್ಟ್ರಗಳೂ ಅನಿವಾರ್ಯವಾಗಿ ಒಳಗಾಗುತ್ತಿರುವ ಒಂದು ಪ್ರಕ್ರಿಯೆಯಾಗಿದೆ. ಇಡೀ ವಿಶ್ವವನ್ನೇ 'ಏಕತಾಣ ವಾಗಿ, 'ವಿಶ್ವಹಳ್ಳಿ' ಯಾಗಿ ರೂಪಿಸುವುದು ಇದರ ಉದ್ದೇಶವಾಗಿದೆ. ಆದರೆ ಇದರ ಪರಿಣಾಮವು ಮಾತ್ರ ಇದಕ್ಕೆ ವಿರುದ್ಧವಾಗಿದೆ. ಇದರ ಇತ್ಯಾತ್ಮಕ ಮತ್ತು ನೇತೃತ್ವಕ ಅಂಶಗಳನ್ನು ಪಠ್ಯಗಳಾಗಿ ಇಡುವ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸಮಕಾಲೀನ ಆಗುಹೋಗುಗಳನ್ನು ಕುರಿತ

ಅರಿವನ್ನು ಹೆಚ್ಚಿಸಬಹುದಾಗಿದೆ. ಸಂಸ್ಕೃತಿಗಳ ವೈವಿಧ್ಯತೆ, ಜೀವಂತಿಕೆಯನ್ನು ನಾಶ ಮಾಡುತ್ತಾ ಏಕರೂಪಿ ಸಂಸ್ಕೃತಿಯನ್ನು ಇದು ರೂಪಿಸುತ್ತಿದೆ. ಆಹಾರ, ವಸ್ತ್ರ, ಕ್ರೀಡೆ, ಸಾಂಸ್ಕೃತಿಕ ಆಚರಣೆಗಳು, ದೈನಂದಿನ ಬಳಕೆಯ ಉತ್ಪನ್ನಗಳು ಈ ಎಲ್ಲದರ ಮೇಲೂ ಬಲಾಢ್ಯ ರಾಷ್ಟ್ರಗಳ ಆಕ್ರಮಣವಾಗುತ್ತಿದೆ ಭಾರತವೂ ಸೇರಿದಂತೆ ಮೂರನೇ ಜಗತ್ತಿನ ರಾಷ್ಟ್ರಗಳು ಇದರ ಮೂಲ ಬಲಿಪಶುಗಳಾಗುತ್ತಿವೆ ಎನ್ನುವುದನ್ನು ನಾವು ಅವಶ್ಯವಾಗಿ ಗಮನಿಸಬೇಕು. ಅನೇಕತೆಯಲ್ಲಿ ಏಕತೆ ಎನ್ನುವ ಜನತಾಂತ್ರಿಕ ಆಶಯಕ್ಕೆ ವಿರುದ್ಧವಾಗಿ ಏಕತೆಯ ದಬ್ಬಾಳಿಕೆಯ ಮೂಲಕ ಅನೇಕ ಆರ್ಥಿಕ, ಸಾಂಸ್ಕೃತಿಕ ವ್ಯವಸ್ಥೆಗಳನ್ನೇ ನಾಶ ಮಾಡುವ ಮೂಲಕ ಹಲವು ವೃತ್ತಿಗಳನ್ನೇ ಇದು ವಿನಾಶದಂಚೆಗೆ ತಳ್ಳುತ್ತಿದೆ ಎನ್ನುವ ಅಂಶವನ್ನೂ ಗಮನಿಸಬೇಕು. ಅಮಾನವೀಯ ಮನೋವಿನ್ಯಾಸವನ್ನೂ ಏಕರೂಪ ವಿನ್ಯಾಸ ಇದು ರೂಪಿಸುತ್ತಿದೆ. ಇಲ್ಲಿ ಮನೋವಿನ್ಯಾಸದ ಅಪಾಯಗಳನ್ನು ಮನವರಿಕೆ ಮಾಡಿಸುವ ವೈವಿಧ್ಯಮಯವಾದ ಮತ್ತು ಬಹುತ್ವದ ಜೀವಂತಿಕೆಯನ್ನು ವೇದ್ಯಗೊಳಿಸುವ ಪಠ್ಯಗಳನ್ನು ಇಲ್ಲಿ ಕೊಡಲಾಗುವುದು.

#### ಘಟಕ -4 ಸಂಕೀರ್ಣ

ಸಾಹಿತ್ಯ ಮತ್ತು ವಾಣಿಜ್ಯ ಅಂಶಗಳ ಸಂಬಂಧಗಳು, ಕನ್ನಡ ಸಾಹಿತ್ಯದಲ್ಲಿ ಚಿತ್ರಿತವಾಗಿರುವ ವ್ಯಾಪಾರಿ, ವ್ಯಾಪಾರ ಮನೋಭಾವ ವ್ಯಾಪಾರದಲ್ಲಿ ಧರ್ಮ, ಮಾನವೀಯತೆಯ ಚಿತ್ರಣಗಳು. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ವಿವಿಧ ಪ್ರಕಾರಗಳಲ್ಲಿ ಬಿಂಬಿತವಾಗಿರುವ ವಾಣಿಜ್ಯ ಮತ್ತು ಸಂಬಂಧಿತ ಅಂಶಗಳನ್ನು ಬೋಧಿಸುವುದು.

### NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

#### ಪ್ರಥಮ ಬಿ.ಕಾಂ. ಕನ್ನಡ

ಮೊದಲ ಚತುರ್ಮಾಸ

#### ವಾಣಿಜ್ಯ ಗಂಗೋತ್ರಿ - 1

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,

ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು

SEE - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು

CIE - ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು

(ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ - ಸಂಸ್ಕೃತಿ-ಜಾಗತೀಕರಣ - ಸಂಕೀರ್ಣ)

#### ಪರಿವಿಡಿ

##### ಘಟಕ I ಕನ್ನಡ ನಾಡು-ನುಡಿ

15 ಅಂಕಗಳು

1. ನಾಡು ನುಡಿ (ಕವಿರಾಜಮಾರ್ಗ) (15 ಪದ್ಯಗಳು) (ಕಾವ್ಯ)
2. ಕನ್ನಡ ತಾಯಿ ನೋಟ ಬಿವಂಶೀ (ಕಾವ್ಯ)
3. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ (ಹೊಸಗನ್ನಡ ಸಂಕ್ಷಿಪ್ತ ಪರಿಚಯ) (ಲೇಖನ)
4. ನನ್ನ ಕನ್ನಡ ಜಗತ್ತು ಕೆ.ವಿ. ಸುಬ್ಬಣ್ಣ (ಲೇಖನ)

##### ಘಟಕ II ಸಂಸ್ಕೃತಿ

15 ಅಂಕಗಳು

- |                    |                             |
|--------------------|-----------------------------|
| 1. ಮುತ್ತೈದೆ ಸಾವು   | ಜಿ.ಪಿ. ರಾಜರತ್ನಂ (ಕಾವ್ಯ)     |
| 2. ಗಂಗಾಮಾಯಿ        | ಡಾ. ಚಂದ್ರಶೇಖರ ಕಂಬಾರ (ಕಾವ್ಯ) |
| 3. ಸಂಸ್ಕೃತಿ ಚಿಂತನೆ | ದೇವುಡು (ಲೇಖನ)               |
| 4. ಬಿಳಿಗಿರಿ ರಂಗ    | ಮಾಸ್ತಿ (ಕಥೆ)                |

### ಘಟಕ III ಜಾಗತೀಕರಣ

15 ಅಂಕಗಳು

- |                              |                           |
|------------------------------|---------------------------|
| 1. ದಿಕ್ಕು                    | ಪ್ರತಿಭಾ ನಂದಕುಮಾರ್ (ಕಾವ್ಯ) |
| 2. ನನ್ನ ಅವತಾರ                | ಗೋಪಾಲಕೃಷ್ಣ ಅಡಿಗ (ಕಾವ್ಯ)   |
| 3. ಜಾಗತೀಕರಣದ ಸಾಂಸ್ಕೃತಿಕ ನೆಲೆ | ಎಸ್.ಆರ್. ವಿಜಯಶಂಕರ (ಲೇಖನ)  |
| 4. ಹಕ್ಕಿ ಮತ್ತು ಅವಳು          | ಮಿತ್ರಾ ವೆಂಕಟರಾಜ್ (ಕಥೆ)    |

### ಘಟಕ IV ಸಂಕೀರ್ಣ

15 ಅಂಕಗಳು

- |                           |                                 |
|---------------------------|---------------------------------|
| 1. ಕಾಸು ಕುಡಿಕೆ            | ಜಯದೇವ ಪ್ರಸಾದ್ ಮೊಳೆಯಾರ್ (ಸಂಗ್ರಹ) |
| 2. ನಾವೇಕೆ ಆಸಾಮಿಗಳಾಗಬಾರದು  | ನಾರಾಯಣ ಶೇವಿರೆ                   |
| 3. ವಾಣಿಜ್ಯ ಪದಕೋಶ (ಸಂಗ್ರಹ) |                                 |
| 4. ಕೆ.ಎಸ್. ಹೆಗ್ಡೆ ಸಾಧನೆ   | ಶ್ರೀ ಮುದ್ರಾಡಿ                   |

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಶ್ರೀ ನೇಮಿಚಂದ್ರ ಗೌಡ, ಡಾ. ಜ್ಯೋತಿಪ್ರಿಯ, ಶ್ರೀ ಸಂತೋಷ ಅಳ್ಳ

ಮಾದರಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ-ಅಂಕಗಳ ವಿಂಗಡಣೆ-ಒಟ್ಟು ಅಂಕಗಳು-60+40(ಆಂತರಿಕ)

#### I 8 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು. 3x8=24

1. ಪ್ರಶ್ನೆ 1. ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯು 2 ಪ್ರಶ್ನೆಗಳು-ಅದಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯು 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ) : ಆಂತರಿಕ ಆಯ್ಕೆಯು ಎರಡು ಪ್ರಶ್ನೆಗಳು.  
-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.

#### II 5 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು. 3x5=15

1. ಪ್ರಶ್ನೆ 1 ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯು 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯು 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ): ಆಂತರಿಕ ಆಯ್ಕೆಯು 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು

#### III ಪದ್ಯ: ಭಾವಾರ್ಥ ಆಂತರಿಕ ಆಯ್ಕೆ 5 ಅಂಕಗಳ 2 ಪ್ರಶ್ನೆಗಳು

1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು. 1x5=05

IV ಪದ್ಯ : 4 ಅಂಕಗಳ 4 ಪ್ರಶ್ನೆಗಳು

2ಕ್ಕೆ ಉತ್ತರಿಸುವುದು. 2x4=08

V 1 ಅಂಕಗಳ 8 ಪ್ರಶ್ನೆಗಳು 1x8=08

ಅ) ಕಾವ್ಯ - 4

ಆ) ಗದ್ಯ - 2

ಇ) ಸಂಕೀರ್ಣ - 2

ಪ್ರಥಮ ಬಿಎಸ್ಸಿ/ಬಿ.ಎಸ್ಸಿ (ಎಫ್‌ಎನ್‌ಡಿ), ಬಿ.ಎಸ್ಸಿ (ಹೆಚ್.ಎಸ್), ಬಿ.ಎಸ್ಸಿ (ಸಿಎಸ್), ಬಿ.ಎಸ್ಸಿ (ಫ್ಯಾಶನ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಗಾರ್ಮೆಂಟ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಲೆದರ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಇಂಟಿರಿಯರ್ ಡಿಸೈನ್ ಆಂಡ್ ಡೆಕೋರೇಶನ್), ಬಿ.ಎಸ್ಸಿ (ಆನಿಮೇಶನ್ ಆಂಡ್ ವಿಜುವಲ್ ಇಫೆಕ್ಟ್ಸ್), ಬಿ.ಎಸ್ಸಿ (ಕೌನ್ಸಿಲಿಂಗ್), ಬಿ.ಎಸ್ಸಿ (ಪುಡ್ ಟೆಕ್ನಾಲಜಿ), ಬಿ.ಎಸ್ಸಿ (ಫ್ಯಾಡ್) ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

ಮೊದಲ ಚತುರ್ಮಾಸ

### B.Sc FAD Degree / Honours Degree Programme, Science subjects

|                                           |                                                    |
|-------------------------------------------|----------------------------------------------------|
| Course Title                              | ಬಿ.ಎಸ್ಸಿ (ಫ್ಯಾಡ್) - ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ: ವಿನ್ಯಾಸ ಕನ್ನಡ |
| Total Contact Hourse : 52 to 56           | Course Credits : 03                                |
| Formative Assessment Marks : 40 (CIE)     | Duration of ESA / Exam : 3 hours                   |
| Model Syllabus Authors : Multiple Authors | Summative Assessment Marks : 60 (SEE)              |

|                                |            |
|--------------------------------|------------|
| ವಿವರಗಳು                        | ಬೋಧನಾ ಅವಧಿ |
| ಘಟಕ - 1 ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ | 13/14      |
| ಘಟಕ - 2 ಸೌಂದರ್ಯ                | 13/14      |
| ಘಟಕ - 3 ಒಲುಮೆ                  | 13/14      |
| ಘಟಕ - 4 ಸಂಕೀರ್ಣ                | 13/14      |

#### ಘಟಕ -1 ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ

ಕನ್ನಡ ನಾಡು ರೂಪುಗೊಂಡದ್ದರಿಂದ ಪ್ರಾರಂಭಿಸಿ ಅದರ ಶ್ರೀಮಂತಿಕೆ, ವೈಶಿಷ್ಟ್ಯತೆ, ಅದರ ಲೋಕದೃಷ್ಟಿ, ಕಲಾ ಪ್ರಕಾರಗಳಲ್ಲಿನ ಸಮೃದ್ಧತೆ, ರಾಜಕೀಯ ಸಾಮಾಜಿಕ ಚಿಂತನೆಗಳ ಸ್ವೋಪಜ್ಞತೆ, ಅದರ ಭೌಗೋಳಿಕ ಸೌಂದರ್ಯ, ವಿವಿಧ ಕ್ಷೇತ್ರಗಳಲ್ಲಿನ ಸಾಧಕರು,

ಮಹತ್ವದ ಚಟುವಟಿಕೆಗಳು, ಭಾರತ ಮತ್ತು ವಿಶ್ವಕ್ಕೆ ಕನ್ನಡದ ಕೊಡುಗೆಗಳು ಇವುಗಳಲ್ಲಿ ಕೆಲವನ್ನು ಆಯ್ದು ಪಠ್ಯವನ್ನು ರೂಪಿಸುವ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ನಾಡು-ನುಡಿ ಕುರಿತ ಅಭಿಮಾನವನ್ನು ಜಾಗೃತಗೊಳಿಸುವುದು ಈ ಘಟಕದ ಉದ್ದೇಶವಾಗಿರುತ್ತದೆ.

#### ಘಟಕ -2 ಸೌಂದರ್ಯ

ಸೌಂದರ್ಯ ಎನ್ನುವುದು ಮನುಷ್ಯ ಕಲ್ಪನೆಯೂ ಹೌದು, ಪ್ರಕೃತಿಯ ಕಾಲಾತೀತ ವಾಸ್ತವವೂ ಹೌದು. ಸೌಂದರ್ಯವು ವಸುವಿನಲ್ಲಿದೆಯೋ? ನೋಡುವ ಕಣ್ಣಿನಲ್ಲಿದೆಯೋ ಎನ್ನುವುದು ಬೀಜವೃಕ್ಷ ನ್ಯಾಯದಷ್ಟು ಆದಿಮವಾದುದು. ಸೌಂದರ್ಯ ಮೀಮಾಂಸೆಯನ್ನೂ ಮಾನವ ನಾಗರಿಕತೆ ಬಲು ಶ್ರದ್ಧೆಯಿಂದ ಪ್ರೀತಿಯಿಂದ ಕಟ್ಟಿದೆ. ಮನಸ್ಸಿನ ಸೌಂದರ್ಯಕ್ಕೂ ವಸ್ತು ಸೌಂದರ್ಯಕ್ಕೂ ಇರುವ ಸಂಬಂಧವನ್ನು ಹೇಳುವ ಪಠ್ಯಗಳನ್ನು ಆರಿಸಬಹುದು. ದೈಹಿಕವಾದ ಸೌಂದರ್ಯ ಮಾದರಿಗಳಿಂದ ಹಿಡಿದು ಪ್ರಾಕೃತಿಕ ಸೌಂದರ್ಯದ ತನಕ, ವಾಸ್ತುಶಿಲ್ಪದ ಸೌಂದರ್ಯದಿಂದ ಹಿಡಿದು ಮನೆಯ ಒಳಾಂಗಣದ ಸೌಂದರ್ಯದ ತನಕ, ಸಾಹಿತ್ಯದ ಪಠ್ಯಗಳ ಸೌಂದರ್ಯ ಮೀಮಾಂಸೆಯ ತನಕ ಪಠ್ಯಗಳನ್ನು ಆರಿಸಬಹುದು. ಸೌಂದರ್ಯಾಭಿರುಚಿ ಎಂದರೇನು ಎನ್ನುವುದರ ಬಗ್ಗೆಯೂ ಪಠ್ಯಗಳನ್ನು ಆರಿಸಬಹುದು. ಸೌಂದರ್ಯದ ಅತಿ ಮೋಹವು ವ್ಯಸನವೂ ಆಗಬಹುದು ಎನ್ನುವುದನ್ನೂ ಅವಶ್ಯವಾಗಿ ಗಮನಿಸಬಹುದು. ಸೌಂದರ್ಯ ಪ್ರಜ್ಞೆ ಹೆಣ್ಣಿನ ದೌರ್ಬಲ್ಯ ಎನ್ನುವ ಮಿಥ್ಯೆಯ ಬಗೆಗೂ ಚರ್ಚಿಸಬಹುದು. ಅದನ್ನು ಒಂದು ವಿಶೇಷ ಸಂವೇದನೆಯಾಗಿ ನೋಡುವ ಸಾಧ್ಯತೆಯೂ ಇದೆ.

#### ಘಟಕ -2 ಒಲುಮೆ

ಒಲುಮೆ, ಒಲವು ಎನ್ನುವ ಪರಿಕಲ್ಪನೆಗಳಲ್ಲಿ ವ್ಯಕ್ತವಾಗುವುದು ಪ್ರೀತಿ, ಅಂತಃಕರಣ, ಬಾಂಧವ್ಯ, ಗೌರವ ಎಲ್ಲವೂ ಬೆರೆತ ಮನಃಸ್ಥಿತಿ. ಕ್ಷಣವೊಂದರಲ್ಲಿ ಪ್ರೀತಿ ಹುಟ್ಟಿತು, ಅದರ ಒಲುಮೆಯು ಕಾಲದ ಕುಲುಮೆಯಲ್ಲಿ ಬೆಂದು ಹದವಾಗುವ ಸ್ಥಿತಿ. ನಂಬಿಕೆ-ಅಪನಂಬಿಕೆಗಳ, ಬೇಕು-ಬೇಡಗಳ ಪ್ರಾಥಮಿಕ ಘಟ್ಟಗಳನ್ನು ದಾಟಿದಾಗ ಸಿಗುವ ಅಮೃತವೇ ಒಲುಮೆ ಎನ್ನಬಹುದು. ಇದು ಗಂಡು-ಹೆಣ್ಣಿನ, ಗಂಡ-ಹೆಂಡತಿಯ ಸಂಬಂಧಕ್ಕೆ ಮಾತ್ರ ಸೀಮಿತವಲ್ಲ. ತಾಯಿ-ಮಗು, ತಂದೆ-ಮಕ್ಕಳು, ಅಕ್ಕ-ತಂಗಿ, ಅಣ್ಣ ತಮ್ಮ ಸ್ನೇಹಿತರು - ಹೀಗೆ ಎಲ್ಲಾ ಮಾನವ ಸಂಬಂಧಗಳಿಗೂ ಅನ್ವಯವಾಗುತ್ತದೆ. ಸಂಬಂಧವು ಅರಳಿ ಪರಿಮಳ ಸೂಸುವ ಅಂತಿಮ ಘಟ್ಟವನ್ನು ಒಲುಮೆ ಎಂದು ಗುರುತಿಸಬಹುದು. ಸಾಹಿತ್ಯದ ಹಲವು ಪ್ರಕಾರಗಳಲ್ಲಿ ಅಭಿವ್ಯಕ್ತವಾಗಿರುವ ಒಲುಮೆಯ ವಿವಿಧ ಬಣ್ಣಗಳನ್ನು ಪಠ್ಯಗಳಲ್ಲಿ ಸಂಯೋಜಿಸಬಹುದು.

#### ಘಟಕ -4 ಸಂಕೀರ್ಣ

ವಿಜ್ಞಾನದ ಜೊತೆಗೆ ಬದುಕಿನ ಇನ್ನಿತರ ಆಲೋಚನಾ ನೆಲೆಗಳನ್ನೂ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಲುಪಿದ ಆಶಯದಿಂದ ಸಂಕೀರ್ಣ ಎನ್ನುವ ಭಾಗವನ್ನು ಪಠ್ಯದಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿದೆ. ಸಾಹಿತ್ಯ ಮತ್ತು ಸಾಮಾಜಿಕ ಸಂಸ್ಕೃತಿ ಹಾಗೂ ವೈಜ್ಞಾನಿಕತೆಯ ವಿವಿಧ ಆಯಾಮಗಳನ್ನು ಪ್ರಸ್ತಾಪಿಸುವ ಸಲುವಾಗಿ ಈ ಬಗೆಯ ಓದಿನಿಂದ ಸಾಹಿತ್ಯಕ್ಕೆ ಇರುವ ಅನ್ಯಶಿಸ್ತುಗಳ ಜೊತೆಗಿನ ಒಡನಾಟ ಮತ್ತು ಅನನ್ಯತೆ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಲಭಿಸುತ್ತದೆ.

ವಿಜ್ಞಾನ ಮತ್ತು ಸಾಹಿತ್ಯ ಸಂಬಂಧಗಳು

ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ವಿಜ್ಞಾನ ಬರಹಗಳ ಇತಿಹಾಸ

ಇಬ್ಬರು ಬರಹಗಾರರ ಎರಡು ಲೇಖನಗಳು

ಸಾಮಾಜಿಕ ಮತ್ತು ಮಾನವೀಯ ಮೌಲ್ಯಗಳ ಮಹತ್ವವನ್ನು ಸಾರುವ ಕನ್ನಡದ ಉತ್ತಮ ಬರಹಗಳು - ಈ ರೀತಿ ಇನ್ನಿತರ ಪಠ್ಯಗಳು

## NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ

ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

ಪ್ರಥಮ ಬಿಎಸ್ಸಿ/ಬಿ.ಎಸ್ಸಿ (ಎಫ್‌ಎನ್‌ಡಿ), ಬಿ.ಎಸ್ಸಿ (ಹೆಚ್.ಎಸ್), ಬಿ.ಎಸ್ಸಿ (ಸಿಎಸ್), ಬಿ.ಎಸ್ಸಿ (ಫ್ಯಾಶನ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಗಾರ್ಮೆಂಟ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಲೆದರ್ ಡಿಸೈನ್), ಬಿ.ಎಸ್ಸಿ (ಇಂಟಿರಿಯರ್ ಡಿಸೈನ್ ಆಂಡ್ ಡೆಕೋರೇಶನ್), ಬಿ.ಎಸ್ಸಿ (ಅನಿಮೇಶನ್ ಆಂಡ್ ವಿಜುವಲ್ ಇಫೆಕ್ಟ್ಸ್), ಬಿ.ಎಸ್ಸಿ (ಕೌನ್ಸಿಲಿಂಗ್), ಬಿ.ಎಸ್ಸಿ (ಪುಡ್ ಟೆಕ್ನಾಲಜಿ)

### ವಿಜ್ಞಾನ ಗಂಗೋತ್ರಿ - 1

ಮೊದಲ ಚತುರ್ಮಾಸ

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,

ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು

ಖಜಾ - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು

ಅಖಜಾ - ನಿರಂತರ ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು

(ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ - ಸೌಂದರ್ಯ- ಒಲುಮೆ-ಸಂಕೀರ್ಣ)

### ಘಟಕ I ಪರಿವಿಡಿ

#### ಕನ್ನಡ ನಾಡುನುಡಿ ಚಿಂತನೆ

15 ಅಂಕಗಳು

1. ಉದಯವಾಗಲಿ ನಮ್ಮ ಚೆಲುವ ಕನ್ನಡನಾಡು - ಹುಯಿಲಗೋಳ ನಾರಾಯಣ ರಾವ್ (ಕಾವ್ಯ)
2. ನನ್ನ ಕನ್ನಡ ಜಗತ್ತು ಕೆ.ವಿ. ಸುಬ್ಬಣ್ಣ(ಲೇಖನ)
3. ಬೆಂಕಿ ಬಿದ್ದಿದೆ ಮನೆಗೆ ಕಯ್ಯಾರ ಕಿಣ್ಣಣ್ಣ ರೈ (ಕಾವ್ಯ)
4. ಕನ್ನಡ ನಾಡು, ನುಡಿ, ಜಲ, ಭಾಷೆ ಡಾ. ಗೀತಾ ನಾಗಭೂಷಣ (ಲೇಖನ)

#### ಘಟಕ II ಸೌಂದರ್ಯ

15 ಅಂಕಗಳು

1. ಶಾನುಭೋಗರ ಮಗಳು ಕೆ.ಎಸ್.ನ (ಕಾವ್ಯ)
2. ಮಾತಿನ ಮಲ್ಲಿ ಹಾ.ಮಾ. ನಾಯಕ (ಪ್ರಬಂಧ)
3. ಬೆಳಗು ದ.ರಾ. ಬೇಂದ್ರೆ (ಕಾವ್ಯ)
4. ಪಾತಾಳ ಗಂಗಾ-  
ಬರಿದಾಗಲಿರುವ ಅಂತರಗಂಗೆ ಸಂತೋಷಕುಮಾರ್ ಮೆಹಂದಳೆ (ಲೇಖನ)

#### ಘಟಕ III ಒಲುಮೆ

15 ಅಂಕಗಳು

1. ಪ್ರೀತಿ ಇಲ್ಲದ ಮೇಲೆ ಜಿ.ಎಸ್.ಎಸ್. (ಕಾವ್ಯ)
2. ನನ್ನ ದೇವರು ಕುವೆಂಪು (ಕತೆ)
3. ನಾವು ಹುಡುಗಿಯರೇ ಹೀಗೆ ಪ್ರತಿಭಾ ನಂದಕುಮಾರ್ (ಕಾವ್ಯ)
4. ಜ್ಞಾನ ಸಮಾಜದ ಕಡೆಗೆ  
ಎ.ಪಿ.ಜಿ. ಅಬ್ದುಲ್ ಕಲಾಂ ಅನು: ಜಿ.ಕೆ. ಮಧುಸ್ಥ (ಲೇಖನ)

#### ಘಟಕ IV ಸಂಕೀರ್ಣ

15 ಅಂಕಗಳು

1. ಅಕ್ಷರ ಕಲಿಕೆಗಾಗಿ ಹೋರಾಟ ದೇ. ಜವರೇಗೌಡ (ಲೇಖನ)
2. ರೊಟ್ಟಿ ಪಿ. ಲಂಕೇಶ್ (ಕತೆ)
3. ನಾಗರಿಕತೆ ಬರೆವ ಜರವಾ ಚಿತ್ರ ರಹಮತ್ ತರೀಕೆರೆ (ಲೇಖನ)

4. ಸೂರ್ಯನಿಗೆ ಕಂಕಣ ಕಟ್ಟಿದವರು ಯಾರು? ಡಾ. ಬಿ.ಎ. ವಿವೇಕ ರೈ (ಲೇಖನ)

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ವರದರಾಜ ಚಂದ್ರಗಿರಿ, ಡಾ. ರವಿಕುಮಾರ್, ಶ್ರೀ ನಟೀಶ್ ಆಳ್ವ

ಮಾದರಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ-ಅಂಕಗಳ ವಿಂಗಡಣೆ-ಒಟ್ಟು ಅಂಕಗಳು-60+40(ಆಂತರಿಕ)

I 8 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $3 \times 8 = 24$

1. ಪ್ರಶ್ನೆ 1. ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-ಅದಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ) : ಆಂತರಿಕ ಆಯ್ಕೆಯ ಎರಡು ಪ್ರಶ್ನೆಗಳು.  
-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.

II 5 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $3 \times 5 = 15$

1. ಪ್ರಶ್ನೆ 1 ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ): ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು

III ಪದ್ಯ: ಭಾವಾರ್ಥ ಆಂತರಿಕ ಆಯ್ಕೆ 5 ಅಂಕಗಳ 2 ಪ್ರಶ್ನೆಗಳು

1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.  $1 \times 5 = 05$

IV ಪದ್ಯ : 4 ಅಂಕಗಳ 4 ಪ್ರಶ್ನೆಗಳು

2ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.  $2 \times 4 = 08$

V 1 ಅಂಕಗಳ 8 ಪ್ರಶ್ನೆಗಳು  $1 \times 8 = 08$

ಅ) ಕಾವ್ಯ - 4

ಆ) ಗದ್ಯ - 2

ಇ) ಸಂಕೀರ್ಣ - 2

# ಪ್ರಥಮ ಬಿಎಸ್ಸಿ ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

ಮೊದಲ ಚತುರ್ಮಾಸ

## B.Sc Degree / Honours Degree Programme, Science subjects

Course Title

ಬಿ.ಎಸ್ಸಿ - ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

Total Contact Hourse : 52 to 56

Course Credits : 03

Formative Assessment Marks : 40

Duration of ESA / Exam : 3 hours

Model Syllabus Authors : Multiple Authors

Summative Assessment Marks : 60 (SEE)

ವಿವರಗಳು

ಬೋಧನಾ ಅವಧಿ

ಘಟಕ - 1 ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ

13/14

ಘಟಕ - 2 ಭೂಮಿ

13/14

ಘಟಕ - 3 ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮ

13/14

ಘಟಕ - 4 ಸಂಕೀರ್ಣ

13/14

### ಘಟಕ -1 ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ

ಕನ್ನಡ ನಾಡು ರೂಪುಗೊಂಡದ್ದರಿಂದ ಪ್ರಾರಂಭಿಸಿ ಅದರ ಶ್ರೀಮಂತಿಕೆ, ವೈಶಿಷ್ಟ್ಯತೆ, ಅದರ ಲೋಕದೃಷ್ಟಿ, ಕಲಾ ಪ್ರಕಾರಗಳಲ್ಲಿನ ಸಮೃದ್ಧತೆ, ರಾಜಕೀಯ ಸಾಮಾಜಿಕ ಚಿಂತನೆಗಳ ಸ್ವೋಪಜ್ಞತೆ, ಅದರ ಭೌಗೋಳಿಕ ಸೌಂದರ್ಯ, ವಿವಿಧ ಕ್ಷೇತ್ರಗಳಲ್ಲಿನ ಸಾಧಕರು, ಮಹತ್ವದ ಚಳುವಳಿಗಳು, ಭಾರತ ಮತ್ತು ವಿಶ್ವಕ್ಕೆ ಕನ್ನಡದ ಕೊಡುಗೆಗಳು ಇವುಗಳಲ್ಲಿ ಕೆಲವನ್ನು ಆಯ್ದು ಪಠ್ಯವನ್ನು ರೂಪಿಸುವ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ನಾಡು-ನುಡಿ ಕುರಿತ ಅಭಿಮಾನವನ್ನು ಜಾಗೃತಗೊಳಿಸುವುದು ಈ ಘಟಕದ ಉದ್ದೇಶವಾಗಿರುತ್ತದೆ.

### ಘಟಕ -2 ಭೂಮಿ

ಭೂಮಿಯು ಮನುಷ್ಯರ ಮೂಲರಂಗವಾಗಿದೆ. ಭೂಮಿಯು ನಮ್ಮ ಮೂಲದೇವತೆಯೂ ಹೌದು. ಆದ್ದರಿಂದಲೇ ಭೂಮಿತಾಯಿ ಎನ್ನುವುದು ಆರಾಧನೆಯ ನೆಲೆ ಮಾತ್ರವಲ್ಲ, ಅದು ನಮ್ಮ ಅಸ್ತಿತ್ವದ ಸಂಗತಿಯೂ ಆಗಿದೆ. ಭೂಮಿಯಿಲ್ಲದೆ, ಭೂಮಿಯ ಜೀವ ಸಂಪನ್ಮೂಲಗಳಿಲ್ಲದೆ ಮನುಷ್ಯರ ಅಸ್ತಿತ್ವವೇ ಇರಲಾರದು. ಭೂಮಿಯ ಒಳಗು, ಹೊರಗು ಈ ಎಲ್ಲವು ನಮ್ಮ ಸವಲತ್ತು ಹೌದು. ಜವಾಬ್ದಾರಿಯೂ ಹೌದು. ಇತ್ತೀಚಿನ ಕಾಲಘಟ್ಟದಲ್ಲಿ ಭೂಮಿಯನ್ನು ಮನುಷ್ಯರು ಶೋಷಣೆ ಮಾಡುತ್ತಾ ಬಂದಿದ್ದು ಮನುಕುಲದ ಅಸ್ತಿತ್ವವೇ ಆತಂಕವನ್ನು ಎದುರಿಸುತ್ತಿದೆ. ಈ ಭಾಗದಲ್ಲಿ ಭೂಮಿಯ ವೈಜ್ಞಾನಿಕ ವಿವರಣೆಯಿಂದ ಹಿಡಿದು, ಆರಂಭದಿಂದ ಇಲ್ಲಿಯ ತನಕ ಮನುಷ್ಯರು ಭೂಮಿಯನ್ನು ನೋಡುತ್ತಾ ಬಂದಿರುವ ದೃಷ್ಟಿಕೋನಗಳನ್ನು ಪಠ್ಯವಾಗಿ ಇಡಬಹುದು. ಆರಾಧನೆಯಿಂದ ಹಿಡಿದು ಇಲ್ಲದ ಅಧಿಕಾರವನ್ನು ಭೂಮಿಯ ಮೇಲೆ ಚಲಾಯಿಸುವುದರ ತನಕ ಪಠ್ಯ ವಸ್ತುಗಳನ್ನು ಆರಿಸಿಕೊಳ್ಳುವುದು. ಜಲ ಸಂಪನ್ಮೂಲಗಳಿಂದ ಹಿಡಿದು, ಅದಿರುಗಳು, ಕೃಷಿ ಈ ಎಲ್ಲವನ್ನೂ ಒಳಗೊಳ್ಳುವುದು, ಭೂಮಿಯ ಮೇಲಿನ ಮನುಷ್ಯರ ಅತಿಕ್ರಮಣದಿಂದಾಗುವ ದುಷ್ಪರಿಣಾಮಗಳಿಗೆ ಒತ್ತು ಕೊಡುವುದು ಸಮಕಾಲೀನ ಆತಂಕಗಳ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಅಪೇಕ್ಷಣೀಯ. ಸಾಹಿತ್ಯದ ಮತ್ತು ಸಾಹಿತ್ಯೇತರ ಆಕರಗಳಿಂದಲೂ ಪಠ್ಯಗಳನ್ನು ಆರಿಸಿಕೊಂಡು ಭೂಮಿಯ ಮಹತ್ವವನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮನವರಿಕೆ ಮಾಡಿಕೊಡುವುದು ಈ ಭಾಗದ ಉದ್ದೇಶವಾಗಿರುತ್ತದೆ.

### ಘಟಕ -3 ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮ



ಆಧುನಿಕ ಭಾರತೀಯ ಸಮಾಜವು ಎದುರಿಸುತ್ತಿರುವ ಮುಖ್ಯ ಸವಾಲುಗಳಲ್ಲಿ ಒಂದು ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮದ ಕೊರತೆ, ಸಾಂಪ್ರದಾಯಿಕ, ವಿಧಿವಾದಿ ಬದುಕಿನ ದೃಷ್ಟಿಕೋನವು ಭಾರತೀಯರನ್ನು ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮದಿಂದ ಅಂತರದಲ್ಲಿ ಇಟ್ಟಿದೆ. ಅಥವಾ ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮ ಮತ್ತು ಮೂಢನಂಬಿಕೆಗಳ ನಡುವಿನ ಸಂಘರ್ಷವು ಭಾರತೀಯರ ಲಕ್ಷಣವೇ ಆಗಿ ಬಿಟ್ಟಿದೆ. ವಿಜ್ಞಾನಿಗಳು, ಪ್ರಗತಿಪರ ಚಿಂತಕರು ಭಾರತದ ಪ್ರಗತಿಗೆ ಮಾರಕವಾಗಿರುವ ಲಕ್ಷಣವೇ ಆಗಿಬಿಟ್ಟಿದೆ. ವಿಜ್ಞಾನಿಗಳು, ಪ್ರಗತಿಪರ ಚಿಂತಕರು ಭಾರತದ ಪ್ರಗತಿಗೆ ಮಾರಕವಾಗಿರುವ ಸಂಗತಿಗಳಲ್ಲಿ ಇದೂ ಒಂದು ಎಂದು ಪ್ರತಿಪಾದಿಸುತ್ತಾರೆ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮವನ್ನು ಬೆಳೆಸುವುದು ತೀರ ಅಗತ್ಯವಾಗಿದೆ. ನಂಬಿಕೆಗೂ, ಮೂಢನಂಬಿಕೆಗೂ ಇರುವ ವ್ಯತ್ಯಾಸವನ್ನು ತಿಳಿಸುವುದರ ಜೊತೆಗೆ ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮವು ಆರೋಗ್ಯಕರವಾದ ಮತ್ತು ಸಮಾನ ಪಾತಳಿಯ ಬದುಕಿನ ಕ್ರಮಗಳನ್ನು ರೂಪಿಸಬಲ್ಲದು ಎನ್ನುವುದನ್ನು ತಿಳಿಸುವುದು. ಸಾಮಾಜಿಕ, ಧಾರ್ಮಿಕ ಮತ್ತು ಸಾಂಸ್ಕೃತಿಕ ಲೋಕಗಳಲ್ಲಿನ ತರತಮಗಳನ್ನು ನಿವಾರಿಸುವಲ್ಲಿ ವೈಜ್ಞಾನಿಕ ಮನೋಭಾವದ ಪಾತ್ರವನ್ನು ಚರ್ಚಿಸುವಂತಹ, ಸದೃಢ ಸಮಾಜವನ್ನು ರೂಪಿಸುವಲ್ಲಿ ವೈಜ್ಞಾನಿಕ ಮನೋಭಾವದ ಜವಾಬ್ದಾರಿಯನ್ನು ಎತ್ತಿ ಹಿಡಿಯುವ ಪಠ್ಯಗಳನ್ನು ಆರಿಸಿಕೊಂಡು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ವೈಜ್ಞಾನಿಕ ಮನೋಭಾವದ ಅಗತ್ಯ ಮತ್ತು ಮಹತ್ವ ಕುರಿತು ಅರಿವು ಮೂಡಿಸುವ ಉದ್ದೇಶ ಈ ಭಾಗದ್ದಾಗಿದೆ.

#### ಘಟಕ -4 ಸಂಕೀರ್ಣ

ವಿಜ್ಞಾನದ ಜೊತೆಗೆ ಬದುಕಿನ ಇನ್ನಿತರ ಆಲೋಚನಾ ನೆಲೆಗಳನ್ನೂ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಲುಪಿದ ಆಶಯದಿಂದ ಸಂಕೀರ್ಣ ಎನ್ನುವ ಭಾಗವನ್ನು ಪಠ್ಯದಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿದೆ. ಸಾಹಿತ್ಯ ಮತ್ತು ಸಾಮಾಜಿಕ ಸಂಸ್ಕೃತಿ ಹಾಗೂ ವೈಜ್ಞಾನಿಕತೆಯ ವಿವಿಧ ಆಯಾಮಗಳನ್ನು ಪ್ರಸ್ತಾಪಿಸುವ ಸಲುವಾಗಿ ಈ ಬಗೆಯ ಓದಿನಿಂದ ಸಾಹಿತ್ಯಕ್ಕೆ ಇರುವ ಅನ್ಯತೆಗಳ ಜೊತೆಗಿನ ಒಡನಾಟ ಮತ್ತು ಅನನ್ಯತೆ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಲಭಿಸುತ್ತದೆ.

ವಿಜ್ಞಾನ ಮತ್ತು ಸಾಹಿತ್ಯ ಸಂಬಂಧಗಳು

ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ವಿಜ್ಞಾನ ಬರಹಗಳ ಇತಿಹಾಸ

ಇಬ್ಬರು ಬರಹಗಾರರ ಎರಡು ಲೇಖನಗಳು

ಸಾಮಾಜಿಕ ಮತ್ತು ಮಾನವೀಯ ಮೌಲ್ಯಗಳ ಮಹತ್ವವನ್ನು ಸಾರುವ ಕನ್ನಡದ ಉತ್ತಮ ಬರಹಗಳು - ಈ ರೀತಿ ಇನ್ನಿತರ ಪಠ್ಯಗಳು

## NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ

ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

ಪ್ರಥಮ ಬಿಎಸ್ಸಿ

ಮೊದಲ ಚತುರ್ಮಾಸ

## ವಿಜ್ಞಾನ ಗಂಗೋತ್ರಿ - 1

ಮೊದಲ ಚತುರ್ಮಾಸ

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,

ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು

SEE - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು

CIE - ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು

(ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ - ಭೂಮಿ- ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮ-ಸಂಕೀರ್ಣ)

## ಪರಿವಿಡಿ

### ಘಟಕ I ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ

15 ಅಂಕಗಳು

1. ಪಂಪಭಾರತ ಪಂಪ (ಆಯ್ದ ಕಾವ್ಯ ಭಾಗ)
2. ಕಣ್ಣೆ ಕಡು ಚೆಲ್ವವಡೆದಿರುತಿಹುದು ನಂಜುಂಡ (ಕಾವ್ಯ)
3. ಹುತ್ತರಿ ಹಾಡು ಪಂಜೆ ಮಂಗೇಶ ರಾವ್ (ಕಾವ್ಯ)
4. ನಮ್ಮ ನುಡಿ ಮಾಸ್ತಿ (ಲೇಖನ)

### ಘಟಕ II ಭೂಮಿ

15 ಅಂಕಗಳು

1. ಬೆಟ್ಟದ ಜೀವ ಶಿವರಾಮ ಕಾರಂತ (ಕಾದಂಬರಿಯ ಆಯ್ದ ಭಾಗ)
2. ಮಳೆ ಬರುವ ಹಾಗಿದೆ ಅನುವಾದ : ಹೆಚ್.ಎಸ್. ಶಿವಪ್ರಕಾಶ್ (ಕಾವ್ಯ)
3. ಲಾರಾ ಇಂಗಲ್ಸ್ ವೈಲ್ಡರ್ ಆಯ್ದ ಭಾಗ - ಗದ್ಯ (ಕನ್ನಡಕ್ಕೆ : ಪ್ರೊ. ಎಸ್.ಅನಂತನಾರಾಯಣ)
4. ಯದುಗಿರಿಯ ಮೌನ ವಿಕಾಸ ಪು.ತಿ.ನ. (ಕಾವ್ಯ)

### ಘಟಕ III ವೈಜ್ಞಾನಿಕ ಮನೋಧರ್ಮ

15 ಅಂಕಗಳು

1. ಡಾರ್ವಿನನ ಜೀವನದಿಂದ ಕಲಿಯಬೇಕಾದ ಪಾಠಗಳು ಬಿ.ಪಿ. ರಾಧಾಕೃಷ್ಣ
2. ಮಂಕುತಿಮ್ಮನ ಕಗ್ಗ ಡಿ.ವಿ.ಜಿ (ಆಯ್ದ ಚೌಪದಿಗಳು)
3. ಪಂಚತಂತ್ರದ ಕತೆ ಕಥಾ ಚೌಕಟ್ಟು ಭಾಗ : ಮೊದಲನೆಯ ಭಾಗ
4. ಹಸುರು ಹೊನ್ನು ಬಿ.ಜಿ.ಎಲ್. ಸ್ವಾಮಿ (ಲೇಖನ)

### ಘಟಕ IV ಸಂಕೀರ್ಣ

15 ಅಂಕಗಳು

1. ತಂದೆಯವರ ಸಹಾಯ ಮಾಲ್ಗುಡಿಯ ದಿನಗಳು (ಅನು: ಡಾ. ಎಚ್. ರಾಮಚಂದ್ರ ಸ್ವಾಮಿ)
2. ನೆನಪುಗಳು ನೋಯಲಿಲ್ಲ ನೇಮಿಚಂದ್ರ (ಕತೆ)
3. ತಾವು ವರ್ಣದ ತಾಯಿ ಪಿ. ಚಂದ್ರಿಕಾ (ಕಾವ್ಯ)
4. ಸೌಂದರ್ಯ ಮತ್ತು ಮೈಬಣ್ಣ ಮೂಲ: ರಾಮ ಮನೋಹರ ಲೋಹಿಯಾ

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿರ್ವಾಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಶೈಲಜಾ, ಶ್ರೀ ಪುತ್ರಿ ವಸಂತ ಕುಮಾರ್, ಡಾ. ಪ್ರಜ್ಞಾ ಮಾರ್ಪಳ್ಳಿ

ಮಾದರಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ-ಅಂಕಗಳ ವಿಂಗಡಣೆ-ಒಟ್ಟು ಅಂಕಗಳು-60+40(ಆಂತರಿಕ)

I 8 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು. 3x8=24

1. ಪ್ರಶ್ನೆ 1. ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-ಅದಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ) : ಆಂತರಿಕ ಆಯ್ಕೆಯ ಎರಡು ಪ್ರಶ್ನೆಗಳು.  
-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.

II 5 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $3 \times 5 = 15$

1. ಪ್ರಶ್ನೆ 1 ಪದ್ಯ : ಅಂತರಿಕ ಆಯ್ಕೆಯು 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಅಂತರಿಕ ಆಯ್ಕೆಯು 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ): ಅಂತರಿಕ ಆಯ್ಕೆಯು 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು

III ಪದ್ಯ: ಭಾವಾರ್ಥ ಅಂತರಿಕ ಆಯ್ಕೆ 5 ಅಂಕಗಳ 2 ಪ್ರಶ್ನೆಗಳು

1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.  $1 \times 5 = 05$

IV ಪದ್ಯ : 4 ಅಂಕಗಳ 4 ಪ್ರಶ್ನೆಗಳು

2ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.  $2 \times 4 = 08$

V 1 ಅಂಕಗಳ 8 ಪ್ರಶ್ನೆಗಳು  $1 \times 8 = 08$

- ಅ) ಕಾವ್ಯ - 4
- ಆ) ಗದ್ಯ - 2
- ಇ) ಸಂಕೀರ್ಣ - 2

## ಪ್ರಥಮ ಬಿ.ಬಿ.ಎ. ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ

ಮೊದಲ ಚತುರ್ಮಾಸ

B.B.A Degree / Honours Degree Programme

Course Title

ಬಿ.ಬಿ.ಎ. -

ಕನ್ನಡ ಭಾಷಾ ಪಠ್ಯ ವ್ಯವಹಾರ ನಿರ್ವಹಣಾ ಕನ್ನಡ

Total Contact Hour : 52 to 56

Course Credits : 03

Formative Assessment Marks : 40(CIE)

Duration of ESA / Exam : 3 hours

Model Syllabus Authors : Multiple Authors

Summative Assessment Marks : 60 (SEE)

ವಿವರಗಳು

ಬೋಧನಾ ಅವಧಿ

ಘಟಕ - 1 ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ

13/14

ಘಟಕ - 2 ಆಧುನಿಕತೆ

13/14

ಘಟಕ - 3 ಕುಟುಂಬ

13/14

ಘಟಕ - 4 ಸಂಕೀರ್ಣ

13/14

### ಘಟಕ -1 ಕನ್ನಡ ನಾಡು-ನುಡಿ-ಚಿಂತನೆ

ಪದವಿ ಪಠ್ಯಗಳಲ್ಲಿ ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆಗಳು ಮತ್ತು ಕನ್ನಡ ಭಾಷಾ ಸಂಸ್ಕೃತಿಗೆ ಇರುವ ಬಹುಮುಖಿ ಆಯಾಮಗಳನ್ನು ಪರಿಗಣಿಸಿ ಘಟಕ-1 ಅನ್ನು ರೂಪಿಸಲಾಗಿದೆ. ರಾಷ್ಟ್ರಕವಿ ಕುವೆಂಪು ಅವರ ಕನ್ನಡ ಡಿಂಡಿಮ - ಮುನ್ನುಡಿ ಲೇಖನ. ಡಾ. ಹಾ.ಮಾ. ನಾಯಕರವರ 'ಕನ್ನಡ ಕಟ್ಟುವ ಕೆಲಸ' ಲೇಖನ ಮತ್ತು ಹುಯಿಳಗೋಳ ನಾರಾಯಣ ರಾಯರ 'ಉದಯವಾಗಲಿ ನಮ್ಮ ಚೆಲುವ ಕನ್ನಡ ನಾಡು - ಕವನವನ್ನು ಅಧ್ಯಯನಕ್ಕೆ ಇಡಲಾಗಿದೆ. ಇದರಿಂದ ಕನ್ನಡ ನಾಡು-ನುಡಿಯ ಬಗ್ಗೆ ಹೆಚ್ಚಿನ ಅಭಿಮಾನ ಮೂಡುವುದಲ್ಲದೇ ಕನ್ನಡದ ಹಿರಿಮೆ-ಗರಿಮೆಯನ್ನು ಪರಿಚಯಿಸಲಾಗುತ್ತದೆ.

### ಘಟಕ -2 ಆಧುನಿಕತೆ

ಕಳೆದ ಶತಮಾನದಿಂದ ಜಗತ್ತು ಆಧುನಿಕತೆಯ ಜೊತೆಗೆ ಮುಖಾಮುಖಿಯನ್ನು ನಡೆಸುತ್ತಲೇ ಬಂದಿದೆ. ಆಧುನಿಕತೆಯು ಆಕರ್ಷಣೆಯೂ ಹೌದು. ಬದಲಾವಣೆಯ ಪ್ರಕ್ರಿಯೆಯೂ ಹೌದು. ಸವಾಲು ಹೌದು, ದುರಂತವೂ ಹೌದು. ಮುಖ್ಯವಾಗಿ ಮೂರನೆಯ ಜಗತ್ತಿನ ರಾಷ್ಟ್ರಗಳ ವಿಷಯದಲ್ಲಿ ಇದು ಇನ್ನೂ ಹೆಚ್ಚು ಸಂಕೀರ್ಣವಾಗಿದೆ. ಆಧುನಿಕತೆಯು ಸಾಮಾಜಿಕ ತರತಮಗಳನ್ನು ನಿವಾರಿಸಿಕೊಳ್ಳಲು ಇರುವ ಪರಿಹಾರ ಮಾರ್ಗ ಎಂದೇ ಭಾವಿಸಲಾಗಿತ್ತು. ಕಾಲಕ್ರಮೇಣ ಆಧುನಿಕ ವಿದ್ಯಮಾನಗಳು ಶ್ರೇಣಿಕರಣವನ್ನು ಇನ್ನೂ ಬಲಪಡಿಸುತ್ತಿವೆ ಎನ್ನುವ ಸತ್ಯ ಈಗ ಬಯಲಾಗುತ್ತಿದೆ. ಆಧುನಿಕತೆಯ ಪರ ಮತ್ತು ವಿರೋಧದ ಅಂಶಗಳಿಗಿರುವ ಪಠ್ಯಗಳನ್ನು ಸಂಯೋಜಿಸಿದರೆ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಆಧುನಿಕತೆಯ ಸ್ಪಷ್ಟ ಚಿತ್ರಣ ಸಿಗುತ್ತದೆ.

### ಘಟಕ -3 ಕುಟುಂಬ

ಸಮಾಜದ ಮೂಲ ಘಟಕ ಕುಟುಂಬ, ಸಮಾಜದ ಎಲ್ಲ ಸಂಸ್ಥೆಗಳೂ (ದಾಂಪತ್ಯ, ಸ್ನೇಹ, ಪ್ರಭುತ್ವ ಮೌಲ್ಯ ವ್ಯವಸ್ಥೆ ಇತ್ಯಾದಿ) ಹುಟ್ಟುವುದೇ ಈ ಮೂಲ ಘಟಕದಿಂದ ಕುಟುಂಬದ ಆಧಾರ ಸ್ತಂಭವಾಗಿ ಗಂಡ-ಹೆಂಡತಿಯನ್ನು ಗುರುತಿಸಲಾಗುತ್ತಿದೆ ಎನ್ನುವುದು ನಿಜವಾದರೂ, ಅಲ್ಲಿ ಗಂಡಾಳಿಕೆಯ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಅದು ಶ್ರೇಣೀಕೃತ ಸಮೀಕರಣವಾಗುತ್ತದೆ. ಗಂಡು ಕೇಂದ್ರದಲ್ಲಿದ್ದರೆ "ಹೆಣ್ಣು ಅಂಚಿನಲ್ಲಿರುವ ಸ್ಥಿತಿ ಇದಕ್ಕೊಂದು ವಿಷಮತೆಯನ್ನು ತರುತ್ತದೆ. ಇದರ ಜೊತೆ ಜೊತೆಗೇ ಹೆಣ್ಣು ಕುಟುಂಬದ ಕಣ್ಣು ಎನ್ನುವ ಧೋರಣೆಯೂ ಅಷ್ಟೇ ಪ್ರಬಲವಾಗಿ ಚಾಲ್ತಿಯಲ್ಲಿದೆ. ಮಕ್ಕಳ ಮೇಲಿನ ಮೊದಲು ಮತ್ತು ಗಾಢವಾದ ಪ್ರಭಾವ ಕುಟುಂಬದ್ದೇ ಆಗಿರುತ್ತದೆ. ತಾಳ್ಮೆ, ಪ್ರೀತಿ, ತ್ಯಾಗ, ಶ್ರಮ, ಸಹಿಷ್ಣುತೆ, ಒಗ್ಗಟ್ಟು ಇತ್ಯಾದಿ ಗುಣಗಳನ್ನೆಲ್ಲ ನಾವು ಕಲಿಯುವುದು ಕುಟುಂಬ ವ್ಯವಸ್ಥೆಯಿಂದಲೇ, ಸಮಾಜದ ಮೂಲ ಘಟಕ ಕುಟುಂಬ ಎಂಬ ಧ್ಯೇಯದೊಂದಿಗೆ ಶಿವರಾಮ ಕಾರಂತರ ಬೆಟ್ಟದ ಜೀವ ಕಾದಂಬರಿಯ ಆಯ್ದ ಭಾಗ ಪಠ್ಯವನ್ನು ಇಡಲಾಗಿದೆ. ಈ ಭಾಗದಲ್ಲಿ ಕುಟುಂಬಿಕ ಪರಿಸರದ ಚಿತ್ರಣ, ಸ್ನೇಹ ಹಾಗೂ ಕುಟುಂಬದ ಆಧಾರ ಸ್ತಂಭವಾಗಿ ಕುಟುಂಬದ ಯಜಮಾನನನ್ನು ಗುರುತಿಸಲಾಗುತ್ತದೆ. ಬಡ ಹೆಣ್ಣುಮಗಳ ಮದುವೆ ಸಂದರ್ಭದಲ್ಲಿ ಎದುರಾಗಬಹುದಾದ ಸಮಸ್ಯೆಗಳ ಒಳನೋಟದ ಚಿತ್ರಣವಿದೆ. ಕಣಿವೆಯ ಮುದುಕ ಕವಿತೆಯಲ್ಲಿ ವಿಶ್ವ ಕುಟುಂಬೀಯ ಕಷ್ಟದಲ್ಲಿ ಈ ಭಾವದ ನೆಲೆ ಇದರಷ್ಟೇ ಸ್ವಾಭಾವಿಕವಾಗಿ ದೈವವನ್ನು ಚಿತ್ರಿಸಿದ್ದಾರೆ. ಕುಟುಂಬ ವ್ಯವಸ್ಥೆಯ ದಿಕ್ಕು-ದೇಸುಗಳನ್ನು ಒಳಗೊಳ್ಳುವ ಪಠ್ಯಗಳನ್ನು ಸಾಹಿತ್ಯ ಮತ್ತು ಸಾಹಿತ್ಯೇತರ ಮೂಲಗಳಿಂದ ಸಂಗ್ರಹಿಸಿ ಪಠ್ಯಗಳನ್ನು ರೂಪಿಸಬಹುದು.

### ಘಟಕ -4 ಸಂಕೀರ್ಣ

ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಮಾನವೀಯತೆಯ ವ್ಯವಹಾರಿಕ ದೃಷ್ಟಿಕೋನವನ್ನು ಬೆಳೆಸುವುದು. ವ್ಯವಹಾರದಲ್ಲಿ ಮೌಲ್ಯಾಧಾರಿತ ಗುಣಗಳನ್ನು ಅಳವಡಿಸಿಕೊಳ್ಳುವಂತೆ ಪ್ರೇರೇಪಿಸುವುದು. ವ್ಯವಹಾರ ಮತ್ತು ಸ್ಪರ್ಧೆ ಬದುಕಿನ ನಿಜ ಅರ್ಥವನ್ನು ತಿಳಿಸುವುದು. ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಮಾನವೀಯತೆ ವ್ಯವಹಾರಿಕ ದೃಷ್ಟಿಕೋನ ಹಾಗೂ ವ್ಯವಹಾರದಲ್ಲಿ ಮೌಲ್ಯಾಧಾರಿತ ಗುಣಗಳನ್ನು ಅಳವಡಿಸಿಕೊಳ್ಳುವಂತೆ ಪ್ರೇರೇಪಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಲೇಖನವನ್ನು ಅಧ್ಯಯನಕ್ಕೆ ಇಡಲಾಗಿದೆ.

# NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ

ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

## ಪ್ರಥಮ ಬಿ.ಬಿ.ಎ. ಕನ್ನಡ

ಮೊದಲ ಚತುರ್ಮಾಸ

## ನಿರ್ವಹಣಾ ಗಂಗೋತ್ರಿ - 1

ಮೊದಲ ಚತುರ್ಮಾಸ

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,

ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು

SEE - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು

CIE - ನಿರಂತರ ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು

(ಕನ್ನಡ ನಾಡು ನುಡಿ ಚಿಂತನೆ - ಆಧುನಿಕತೆ - ಕುಟುಂಬ - ಸಂಕೀರ್ಣ)

### ಪರಿವಿಡಿ

#### ಘಟಕ I ನಾಡು ನುಡಿಯ ಚಿಂತನೆ

15 ಅಂಕಗಳು

- |                                  |                      |
|----------------------------------|----------------------|
| 1. ನಮ್ಮ ಹೆಮ್ಮೆಯ ಕನ್ನಡ ಪರಂಪರೆ     | ಡಾ. ಕಾಳೇಗೌಡ ನಾಗವಾರ   |
| 2. ಮಂಗಲ ಗೀತೆ                     | ಕಡಂಗೋಡ್ಲು ಶಂಕರ ಭಟ್ಟ  |
| 3. ಬೆಂಕಿ ಬಿದ್ದಿದೆ ಮನೆಗೆ          | ಕಯ್ಯಾರ ಕಿಚ್ಚಣ್ಣ ರೈ   |
| 4. ಕನ್ನಡಮೆನಿಪ್ಪಾ ನಾಡು ಚೆಲ್ವಾಯ್ತು | ಆಂಡಯ್ಯ (ಕಬ್ಬಿಗರ ಕಾವ) |

#### ಘಟಕ II ಆಧುನಿಕತೆ

15 ಅಂಕಗಳು

- |                      |                              |
|----------------------|------------------------------|
| 1. ಮನೆಯಿಂದ ಮನೆಗೆ     | ಕೆ.ಎಸ್. ನರಸಿಂಹಸ್ವಾಮಿ (ಕಾವ್ಯ) |
| 2. ಕುರುಡು ಕಾಂಚಾಣ     | ದ.ರಾ. ಬೇಂದ್ರೆ (ಕಾವ್ಯ)        |
| 3. ಲೂಟಿಯ ಹೆದ್ದಾರಿಗಳು | ನಾಗೇಶ್ ಹೆಗಡೆ (ಲೇಖನ)          |
| 4. ಗೇಣಿದಾರರ ಏಣಿಯಾಟ   | ನಾಗವೇಣಿ ಎಚ್. (ಲೇಖನ)          |

#### ಘಟಕ III ಕುಟುಂಬ

15 ಅಂಕಗಳು

- |                                                         |                   |
|---------------------------------------------------------|-------------------|
| 1. ಮೊಸರಿನ ಮಂಗಮ್ಮ                                        | ಮಾಸ್ತಿ (ಸಣ್ಣ ಕತೆ) |
| 2. ತೊಟ್ಟಿಲು ತೂಗಿತು                                      | ತ.ರಾ.ಸು (ಕತೆ)     |
| 3. ಹದಿಬದೆಯ ಧರ್ಮ                                         | ಆಯ್ದ ಪದಗಳು        |
| 4. ಜನಪದ ತ್ರಿಪದಿಗಳು (ತಾಯಿ-ಮಗು, ಪತಿ-ಪತ್ನಿ, ಸಹೋದರತೆ, ತವರು) |                   |

#### ಘಟಕ IV ಸಂಕೀರ್ಣ

15 ಅಂಕಗಳು

- |                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| 1. ಸೃಜನಶೀಲತೆ ಮತ್ತು ಆವಿಷ್ಕಾರ                  | (ಅನುವಾದ ಲೇಖನ) (ಅಬ್ದುಲ್ ಕಲಾಂ- ಅನು : ಮಧ್ಯಸ್ಥ) |
| 2. ಕೊಳ್ಳುಬಾಕತನ ಸಂಸ್ಕೃತಿ<br>ಬದಲಾವಣೆ ತಂದ ಪ್ರೇಮ | ಗುರುರಾಜ ಕರ್ಜಗಿ (ಲೇಖನ)                       |
| 3. ಇತಿಹಾಸ ಎಂಬ ಗುರು                           | ಸುಧಾಮೂರ್ತಿ (ಲೇಖನ)                           |
| 4. ಇಬ್ಬರು ರೈತರು                              | ಸುಂ.ರಂ ಎಕ್ಕುಂಡಿ (ಕಾವ್ಯ)                     |

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿವಾರ್ಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಡಾ. ಡಿ.ಕೆ. ಸರಸ್ವತಿ, ಡಾ. ಸೌಮ್ಯಲತಾ ಪಿ., ಶ್ರೀ ರಘುರಾಜ್

ಮಾದರಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ-ಅಂಕಗಳ ವಿಂಗಡಣೆ-ಒಟ್ಟು ಅಂಕಗಳು-60+40(ಆಂತರಿಕ)

I 8 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು. 3\*8=24

1. ಪ್ರಶ್ನೆ 1. ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-ಅದಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ) : ಆಂತರಿಕ ಆಯ್ಕೆಯ ಎರಡು ಪ್ರಶ್ನೆಗಳು.  
-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.

II 5 ಅಂಕಗಳ ಒಟ್ಟು 3 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು. 3\*5=15

1. ಪ್ರಶ್ನೆ 1 ಪದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು
2. ಪ್ರಶ್ನೆ 2 ಗದ್ಯ : ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು.
3. ಪ್ರಶ್ನೆ 3 ಸಂಕೀರ್ಣ(ನಾಟಕ): ಆಂತರಿಕ ಆಯ್ಕೆಯ 2 ಪ್ರಶ್ನೆಗಳು-1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು

III ಪದ್ಯ: ಭಾವಾರ್ಥ ಆಂತರಿಕ ಆಯ್ಕೆ 5 ಅಂಕಗಳ 2 ಪ್ರಶ್ನೆಗಳು

1ಕ್ಕೆ ಉತ್ತರಿಸುವುದು. 1\*5=05

IV ಪದ್ಯ : 4 ಅಂಕಗಳ 4 ಪ್ರಶ್ನೆಗಳು

2ಕ್ಕೆ ಉತ್ತರಿಸುವುದು. 2\*4=08

V 1 ಅಂಕಗಳ 8 ಪ್ರಶ್ನೆಗಳು 1\*8=08

ಅ) ಕಾವ್ಯ - 4

ಆ) ಗದ್ಯ - 2

ಇ) ಸಂಕೀರ್ಣ - 2

# NEP ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ - 2020ರ ಅನ್ವಯ

ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ

## ಪ್ರಥಮ ಪದವಿ

## ಮುಕ್ತ ಆಯ್ಕೆ ಪತ್ರಿಕೆ (Open Elective)

ಮೊದಲನೆ ಚತುರ್ಮಾಸ

ಬಹುರೂಪಿ-1

ಒಟ್ಟು ಕ್ರೆಡಿಟ್‌ಗಳು 3, ಬೋಧನಾ ಅವಧಿ 4+0+0,

ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಒಟ್ಟು 100 ಅಂಕಗಳು

SEE - ಸೆಮಿಸ್ಟರ್ ಅಂತ್ಯದ ಪರೀಕ್ಷೆ - 60 ಅಂಕಗಳು

CIE - ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನ - 40 ಅಂಕಗಳು

(ಮುಕ್ತ ಆಯ್ಕೆ : ಕನ್ನಡ ಭಾಷಾ ಪತ್ರಿಕೆ)

### ಪರಿವಿಡಿ

#### ಘಟಕ I ಕನ್ನಡ ಭಾಷೆ ಮತ್ತು ಸಾಹಿತ್ಯ

15 ಅಂಕಗಳು

1. ಕನ್ನಡ ಭಾಷೆಯ ಪ್ರಾಚೀನತೆ
2. ಹಳಗನ್ನಡ ಸಾಹಿತ್ಯ ಪರಿಚಯ
3. ಪ್ರಾಚೀನ ಕನ್ನಡ ಕವಿ ಮತ್ತು ಕಾವ್ಯಗಳು
4. ಶ್ರೀ ವಿಜಯ, ಪಂಪ, ರನ್ನ, ನಾಗವರ್ಮ, ನಾಗಚಂದ್ರ - ಸಂಕ್ಷಿಪ್ತ ಪರಿಚಯ
5. ಶ್ರೀ ವಿಜಯನ ಕಾವ್ಯಭಾಗ
6. ಪಂಪ ಕಾವ್ಯಭಾಗ

#### ಘಟಕ II ಮಧ್ಯಕಾಲೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ

15 ಅಂಕಗಳು

1. ಪ್ರಮುಖ ಪ್ರಕಾರಗಳು ಮತ್ತು ಕವಿಗಳು - ಸಂಕ್ಷಿಪ್ತ ಪರಿಚಯ
2. ವಚನ - ಬಸವಣ್ಣ - ಅಕ್ಕಮಹಾದೇವಿ
3. ರಗಳೆ - ಹರಿಹರ
4. ಕೀರ್ತನೆ - ಪುರಂದರ ದಾಸ, ಕನಕದಾಸ
5. ಷಟ್ಪದಿ - ರಾಘವಾಂಕ, ಕುಮಾರವ್ಯಾಸ
6. ಸಾಂಗತ್ಯ - ರತ್ನಾಕರವರ್ಣಿ, ಸಂಚಿಹೊನ್ನಮ್ಮ
7. ತ್ರಿಪದಿ - ಸರ್ವಜ್ಞ

#### ಘಟಕ III ಕಾವ್ಯಭಾಗ

15 ಅಂಕಗಳು

1. ಬಸವಣ್ಣನ ವಚನ
2. ಕುಮಾರವ್ಯಾಸನ ಕಾವ್ಯಭಾಗ
3. ರತ್ನಾಕರವರ್ಣಿಯ ಕಾವ್ಯಭಾಗ
4. ಸರ್ವಜ್ಞನ ತ್ರಿಪದಿ

#### ಘಟಕ IV ಹೊಸಗನ್ನಡ ಸಾಹಿತ್ಯ

15 ಅಂಕಗಳು

1. ನವೋದಯ, ನವ್ಯ, ದಲಿತ ಬಂಡಾಯ - ಸಂಕ್ಷಿಪ್ತ ಪರಿಚಯ
2. ಬಿ.ಎಂ.ಶ್ರೀ - ಕರುಣಾಳು ಬಾ ಬೆಳಕೆ
3. ಗೋಪಾಲಕೃಷ್ಣ ಅಡಿಗ - ಯಾವ ಮೋಹನ ಮುರಳಿ ಕರೆಯಿತು
4. ಸಿದ್ದಲಿಂಗಯ್ಯ - ಸಾವಿರಾರು ನದಿಗಳು

ಪ್ರಧಾನ ಸಂಪಾದಕರು : ಪ್ರೊ. ಸೋಮಣ್ಣ

ಕಾರ್ಯನಿವಾರ್ಹಕ ಸಂಪಾದಕರು : ಡಾ. ಮಾಧವ ಎಂ.ಕೆ.

ಸಂಪಾದಕರು : ಕೃಷ್ಣಮೂರ್ತಿ, ಡಾ. ಪ್ರಕಾಶ್ಚಂದ್ರ ಶಿಶಿಲ, ಡಾ. ಯೋಗೀಶ ಕೈರೋಡಿ

ಮಾದರಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ - ಅಂಕಗಳ ವಿಂಗಡಣೆ - ಒಟ್ಟು ಅಂಕಗಳು - 60

1. ವಿವರಣಾತ್ಮಕ ಉತ್ತರವಿರುವ ಪ್ರಶ್ನೆಗಳು :

4 ಪ್ರಶ್ನೆಗಳಲ್ಲಿ 2 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $10 \times 2 = 20$

2. ಸಂಕ್ಷಿಪ್ತ ಉತ್ತರವಿರುವ ಪ್ರಶ್ನೆಗಳು :

4 ಪ್ರಶ್ನೆಗಳಲ್ಲಿ 2 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $5 \times 2 = 10$

3. ಪದ್ಯ ಭಾಗದಿಂದ ಸಂದರ್ಭ ಸಹಿತ ಉತ್ತರವಿರುವ ಪ್ರಶ್ನೆಗಳು :

4 ಪ್ರಶ್ನೆಗಳಲ್ಲಿ 2 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $4 \times 2 = 8$

4. ಟಿಪ್ಪಣಿ ರೂಪದ ಉತ್ತರ

5. 4 ಪ್ರಶ್ನೆಗಳಲ್ಲಿ ಒಟ್ಟು 2 ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $4 \times 2 = 8$

6. ಎಲ್ಲಾ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸುವುದು.  $1 \times 14 = 14$





**MANGALORE UNIVERSITY**  
**POLITICAL SCIENCE**

BA Political Science Programme offered from the Academic year 2021-22

**Programme Structure**

**First Semester**

| Course Code | Course Title                        | Credits | Teaching Hrs/Week | Total Marks/ Assessment* |
|-------------|-------------------------------------|---------|-------------------|--------------------------|
| DSC-1       | Basic Concepts in Political Science | 3       | 3                 | 100 (60+40)              |
| DSC-2       | Political Theory                    | 3       | 3                 | 100 (60+40)              |
| OE-1        | Human Rights                        | 3       | 3                 | 100 (60+40)              |

**Second Semester**

|       |                                                         |   |   |             |
|-------|---------------------------------------------------------|---|---|-------------|
| DSC-3 | Western Political Thought                               | 3 | 3 | 100 (60+40) |
| DSC-4 | Indian National Movement and Constitutional Development | 3 | 3 | 100 (60+40) |
| OE-2  | Indian Polity: Issues and Concerns                      | 3 | 3 | 100 (60+40) |

\* Total marks for each course is 100. This would consist of an internal assessment for 40 marks and end semester examination for 60 marks.

**Programme Objectives:**

- 1.To familiarize the students with the basic ideas, thoughts, institutions and processes of the political system and enable them to grasp the principles and forces at work.
- 2.To inculcate among students the value and spirit of citizenship, universal brotherhood and democracy for a humane, vibrant and inclusive social and political order.
- 3.To acquaint students with the national and international political settings and prepare them to explore different career options including that of civil services and for responsible positions at different levels.
- 4.To equip students with the necessary skills and knowledge for meaningful political participation and to critically reflect on issues related to governance.

**Programme Outcomes:**

At the end of the successful completion of the course, students will have -

- 1.A nuanced understanding of the theoretical perspectives and basic aspects related to the political system and comprehend its dynamics.
- 2.Acquired and internalized the socially relevant values of harmony, democracy, citizenship for national progress, and contribute to the public good with responsibility and sensitivity.
- 3.An ability to analytically reflect on national and international processes and have the necessary skill, confidence and knowledge for making appropriate career choices including that of civil services and politics, and to shoulder responsibilities at different levels.
- 4.Necessary skills and knowledge to critically analyse and participate constructively in the political process, face the societal reality and challenges with knowledge and confidence, and offer insightful suggestions for the public good.

**DSC-1: BASIC CONCEPTS IN POLITICAL SCIENCE**

| Course Title: BASIC CONCEPTS IN POLITICAL SCIENCE |                                                |
|---------------------------------------------------|------------------------------------------------|
| Course Code: DSC-1                                | Course Credits: 3                              |
| No. of Teaching Hours/Week: 3                     | Duration of End Sem. Exam: 3 Hours             |
| Total Contact Hours: 45                           | Assessment (Marks): 60 (Theory) + 40 (IA) =100 |

**Course Objective:**

1. To introduce students to the concepts, categories, theories, and constructs of Political Science
2. To inculcate among students values and essentials of responsible and active citizenship.
3. To enable students to comprehend the values and principles underlying political order and to reflect constructively on the issues of governance.
4. To enable students to understand the interface between politics and society, and the complexities in political choices.

**Learning Outcome:**

At the end of the course, the students will -

1. Have an understanding of the fundamental concepts and aspects related to Political Science.
2. Have an appreciation and internalisation of the values of responsible and active citizenry.
3. Be prepared for constructive engagement with the political system with an awareness of the core values and principles of sound political order.
4. Have a nuanced understanding of the dimensions of politics - society linkages, and the priorities and concerns essential in complex political choices.

**Pedagogy:** Lectures/Tutorials/Interactive Sessions/Open Educational Resources (as reference materials), practical exercises/Assignments/ Seminars/Group discussions and counselling.

## **DSC-1: BASIC CONCEPTS IN POLITICAL SCIENCE**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Unit 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15 hours |
| 1.1 Meaning of Politics; Nature, Scope and Importance of Political Science; Approaches to the study of Political Science (Philosophical, Behavioural and Marxian); Emergence of the idea of Political Domain.<br>1.2 Meaning, Definitions and Elements of State; Difference between State and Government, State and Society, State and Association; Theories of State -Idealist, Liberal, Neo-Liberal, Marxist and Gandhian.<br>1.3 Civil Society- Meaning and Importance. |          |
| Unit 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15 hours |
| 2.1 Emergence, Meaning and Characteristics of Sovereignty<br>2.2 Kinds of Sovereignty; Theories of Sovereignty- Monistic, Pluralistic, Historical, Philosophical<br>2.3 Pluralistic Critique of Austin's Concept of Sovereignty; Challenges to the State Sovereignty in the Age of Globalization                                                                                                                                                                           |          |
| Unit 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15 hours |
| 3.1 Liberty: Meaning and Kinds; Positive and Negative Liberty<br>3.2 Equality: Meaning and Kinds (Social, Economic and Political)<br>3.3 Power and Justice- Meaning and Kinds; Political Obligation- Meaning and Significance                                                                                                                                                                                                                                              |          |

**Exercise:**

- ✓ List out the priorities and concerns of politics.
- ✓ List out the modern elements of State.
- ✓ List out the countries and identify the issues related to equality.
- ✓ Identify an issue and discuss the role of civil society.

**Basic readings:**

1. Anup Chand Kapur, *Principles of Political Science*, Delhi; S Chand & Co Ltd, 2010
2. Amal Ray and Mohit Bhattacharya, *Political Theory Ideas & Institutions*, Kolkatta; The World Press Pvt. Ltd., 2013
3. M.J. Vinod and Meena Deshpande, *Contemporary Political Theory*, Delhi: PHI Learning, 2013
4. S. Ramaswamy, *Political Theory: Ideas & Concepts*, Delhi; Macmillan, 2002.
5. Atlantic Research Division, *Understanding Political Theory*, New Delhi; Atlantic Pub., 2021

**Suggested Readings:**

1. S. P. Verma, *Modern Political Theory*, New Delhi, Vikas, 1983.
2. N.N. Agarwal, Vidya Bhushan, Vishnoo Bhawan, R., *Principles of Political Science*, New Delhi; S. Chand & Co., 1998.
3. Atlantic Research Division, *Political Theory Concepts and Debates*, New Delhi; Atlantic Pub., 2021
4. S.C Pant, *Political Science Theory*, Prakashan Kendra, Lucknow, 1998.
5. S. N Dubey, *Political Science Theory*, Lakshmi Narain Agarwal, Agra, 2002.
6. J C Johari, *Principle of Modern Political Science*, New York, Greater Noida: Sterling Pub., 2009.
7. Anup Chand Kapur, *Principles of Political Science*, Delhi; S Chand & Co Ltd, 2010
8. O.P. Gauba, *An Introduction to Political Theory*, Delhi; National Publishing House, 2019
9. Eddy Asirvatham and K K Misra, *Political Theory*, Delhi; S. Chand & Co., 2010

**DSC-2: POLITICAL THEORY**

|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Course Title: POLITICAL THEORY |                                               |
| Course Code: DSC-2             | Course Credits: 3                             |
| No. of Teaching Hours/Week: 3  | Duration of End Sem. Exam: 3Hours             |
| Total Contact Hours: 45        | Assessment (Marks): 60 (Theory) +40 (IA) =100 |

**Course Objectives:**

1. To introduce the students to the concepts and constructs in political theory.
2. To enable students to evolve a comparative perspective on ideas and ideologies.
3. To help students understand the politico-normative issues with conceptual clarity and to apply it in practice.
4. To equip students to handle complex and abstract arguments in political theory.

**Learning Outcomes**

At the end of the course, the students will-

1. Have a nuanced understanding of the aspects and constructs of Political Theory.
2. Develop a conceptual framework and a capacity to grasp political ideas and issues from a normative perspective.
3. Comprehend the logic, ideological foundations and implications of the political ideas and issues backed by theoretical insights and apply the insights in practice.
4. Have an ability to formulate and construct logical arguments with an awareness of the ontological premises of the argument.

**Pedagogy:** Lectures/Tutorials/Interactive sessions/Open Educational Resources (as reference materials), practical exercises/Assignments/Seminars/Group discussions and counselling.

**DSC-2: POLITICAL THEORY**

|        |                                                                                                                                                                |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit 1 | 15 hours                                                                                                                                                       |
| 1.1    | Meaning, Nature and Importance of Theory and Political Theory; Traditional Approaches to Political Theory- Normative, Historical, Philosophical, Institutional |
| 1.2    | Modern Approaches-Behavioural, Post-Behavioural, David Easton's Political System and Marxian                                                                   |
| 1.3    | Relevance of Political Theory; Decline and Resurgence of Political Theory                                                                                      |
| Unit 2 | 15 hours                                                                                                                                                       |
| 2.1    | Liberalism: J.S Mill                                                                                                                                           |
| 2.2    | Neo-Liberalism: Rawls                                                                                                                                          |
| 2.3    | Libertarianism: Nozick                                                                                                                                         |
| Unit 3 | 15 hours                                                                                                                                                       |
| 3.1    | Communitarianism and Multiculturalism-Meaning and Indian perspectives; Post Colonialism, and its Limitations                                                   |
| 3.2    | Proponents of Secularism: Nehru, Gandhi, Rajiv Bhargav                                                                                                         |
| 3.3    | Critics of Secularism: Ashish Nandy, T.N. Madan, S.N. Balagangadhara                                                                                           |

**Exercise:**

- ✓ Write about the Myth and Reality of Communitarianism in India
- ✓ Compare the concept of Liberty, Equality and Justice in the Modern world
- ✓ Write the understanding of secularism in India

**Essential Readings:**

1. M.J. Vinod and Meena Deshpande, *Contemporary Political Theory*, Delhi: PHI Learning, 2013
2. Michael Dusche, *Identity politics in India and Europe*, New Delhi; Sage, 2010
3. Andrew Heywood, *Political Theory An Introduction*, Palgrave Macmillan, 2015
4. Rajeev Bhargava and Ashok Acharya, eds., *Political Theory An Introduction*, New Delhi: Pearson Longman, 2008
5. John S. Dryzek, *et al.*, *Oxford Handbook of Political Theory*, Oxford; OUP, 2006
6. Balagangadhara, S.N., and Jakob De Roover, "The Secular State and "Religious Conflict: Liberal neutrality and the Indian Case of Pluralism". *The Journal of Political Philosophy* 15, no. 1: 67-92, 2007.
7. Rajeev Bhargava, ed. *Secularism and Its Critics*, Oxford University Press, New Delhi, 1998.

**Suggested Readings:**

1. Sushila Ramaswamy, *Political Theory Ideas and Concepts*, Delhi; PHI Learning, 2015
2. Ashcroft. B, *The Post-Colonial Studies Reader*, Rout ledge London, 1995
3. Bhikhu Parekh, *Rethinking Multiculturalism: Cultural Diversity and Political Theory*, London: Macmillan, 2000
4. N. Manu Chakravarthy, ed., *Selected writings by K.V. Subbanna, Along with Interviews and Tributes*, Shimoga: AksharaPrakashana, 2009
5. Ahmed. V, *Theory: Classes, Nations Literatures*, Verso, London, 1992.
6. G.N. Devy, *After Amnesia Tradition and Change in Indian Literary criticism*, Hyderabad; Orient Longman, 1995
7. Christopher Butler, *Postmodernism: A Very Short Introduction*, OUP Oxford, 2002.
8. H. Arendt., *On Revolution*, Viking, New York, 1963
5. V. Bryson, *Feminist political Theory*, Macmillan, London, 1992.
6. Norris Christopher, *The Truth about Postmodernism*, Wiley- Blackwell, New Jersey, 1993.
7. W. Connolly, *Identity/Difference: Democratic Negotiations*, Cornell University Press, NY, 1991.
8. Edward Said, *Orientalism*, Pantheon Books, New York, 1978.
9. Elshtain. J. B, *Public Man, Private Man: women in Social and Political Thought*, Princeton University Press, Princeton NJ, 1981.



10. Fanon. F., *Black skin, White Masks*, translated by C. L. Markham, Grove Press, New York, 1967.
11. Jean Francis Lyotard. *The Postmodern Condition- A report on Knowledge*. Parris: Minuit, 1979.
12. Veena Das, Dipankar Gupta and Patricia. eds., *Tradition, Pluralism and Identity*, New Delhi, Uberoi, 1999.
13. Jawaharlal Nehru, *The Discovery of India*, Jawaharlal Nehru Memorial Fund, Oxford University Press, New Delhi, 1988.
14. Rochana Bajpai, "The conceptual vocabularies of secularism and minority rights in India", *Journal of Political Ideologies*, 2002.
15. ರಾಜೇಂದ್ರ ಚೆನ್ನಿ, ದೇಶೀವಾದ, ಬೆಂಗಳೂರು; ಅಭಿನವ, 2017.
16. ರಾಜಾರಾಮ ಹೆಗಡೆ ಮತ್ತು ಸದಾನಂದಜಿ.ಎಸ್. (ಸಂ) "ಪೂರ್ವಾವಲೋಕನ", ವಸಂತಪ್ರಕಾಶನ, ಬೆಂಗಳೂರು, 2016

**OE-1: HUMAN RIGHTS**

(Open

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Course Title: HUMAN RIGHTS    |                                               |
| Course Code: OE-1             | Course Credits: 3                             |
| No. of Teaching Hours/Week: 3 | Duration of End Sem. Exam: 3Hours             |
| Total Contact Hours: 45       | Assessment (Marks): 60 (Theory) +40 (IA) =100 |

Elective)

**Course objectives**

1. To enable students to understand the significance and foundations of the idea of human rights.
2. To familiarise students with the major texts and provisions governing human rights and mechanisms for monitoring and enforcing human rights.
3. To equip students with the responsibility to respect, defend and promote human rights.
4. To make students comprehend, sensitise and analyze the trends and contemporary challenges to human rights.

**Learning Outcomes**

At the end of the course, the students will-

1. Understand and appreciate the value and basis of human rights.
2. Have necessary knowledge of the legal provisions and requirements for effective implementation of human rights as well as mechanisms available for implementation of human rights.
3. Be able to identify, contextualise and use knowledge about human rights in a given situation.
4. Have the knowledge and skill to analyse the trends and challenges to human rights, and to apply human rights standards to societal issues with a solution to overcome the problem.

**Pedagogy:** Lectures/Tutorials/Interactive sessions/Open Educational Resources (as reference materials), practical exercises/Assignments/Seminars/Group discussions and counselling.

**OE-1: HUMAN RIGHTS**

|        |                                                                                                                                                                                                             |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit 1 | 15 hours                                                                                                                                                                                                    |
| 1.1    | Meaning, nature, scope and classification of Human Rights                                                                                                                                                   |
| 1.2    | The Human Rights of First generation (Civil and Political Rights), Second generation (Economic, Social and Cultural Rights), Third generation (Collective Rights) and Fourth generation (Subjective Rights) |
| 1.3    | Universal Declaration of Human Rights                                                                                                                                                                       |
| Unit 2 | 15 hours                                                                                                                                                                                                    |
| 2.1    | Human Rights and Fundamental Rights, Fundamental Rights and Fundamental Duties in India                                                                                                                     |
| 2.2    | National Human Rights Commission (NHRC) – Composition and functions                                                                                                                                         |
| 2.3    | Karnataka State Human Rights Commission (KSHRC) – Composition and functions                                                                                                                                 |
| Unit 3 | 15 hours                                                                                                                                                                                                    |
| 3.1    | National Commission and Committees for SCs/STs; National Commission for Minorities; National Commission for Women.                                                                                          |
| 3.2    | Major issues and Concerns of Human Rights – Discrimination and violence against women, children, Dalits and Minorities, Trafficking, Child Labour and Bonded Labour                                         |
| 3.3    | Challenges to Human Rights                                                                                                                                                                                  |

**Exercise:**

- ✓ Group Discussion on Human Rights and its types (comparison of Western and Eastern concept of Human Rights).
- ✓ Students can be asked to do collage making and present the same.
- ✓ Find out the different types of complaints received by NHRC and bring out the results on any one of such cases.
- ✓ To make it more participatory learning, the students are required to visit the website of NHRC ([www.nhrc.nic.in](http://www.nhrc.nic.in)), wherein at the left-hand side, a link is provided to the instructions. After going through the guidelines issued by NHRC's, briefly explain the guidelines on– Custodial death/rape, Encounter death, and Guidelines on the arrest.

**Essential Readings:**

1. Aftab Alam, ed., *Human Rights in India: Issues and Challenges*, Delhi; Raj Publications, 2012.
2. S.M. Begum, ed., *Human Rights in India: Issues and Perspectives*, New Delhi: APH, 2000.
3. Andrew Clapham, *Human Rights A Very Short Introduction*, Oxford; OUP, 2015.
4. Upendra Baxi (ed.), *The Right to be Human*, Lancer International, Crawford, New Delhi, 1987.
5. Darren J. O'Byrne, *Human Rights An Introduction*, New York; Routledge, 2013.

**Suggested Readings**

1. James (ed.), *The Rights of People*, Oxford, New York, 1988.
2. Craston, M. *What are Human Rights*, Bodely Head, London, 1973.
3. Rhonda L. Callaway & Julie Harrelson-Stephens, "International Human Rights", Viva books, New Delhi, 2010.
4. Janusz Symonides, *Human Rights Concept and Standards*, Rawat, New Delhi, 2019.
5. Asish Kumar Das and Prasant Kumar Mohanty, *Human Rights in India*, New Delhi; Sarup & Sons, 2007.
6. "Protect Human Rights", <http://www.un.org/en/sections/what-we-do/protect-human-rights/index.html>
7. K.S. Pavithran, *Human Rights in India: Discourses and Contestations*, New Delhi; Gyan Pub., 2018.
8. Sunil Deshta and Kiran Deshta, *Fundamental Human Rights*, Deep and Deep, New Delhi, 2011.
9. Jack Donnelly and Rhoda Howard (ed.), *International Handbook of Human Rights*, Westport, Connecticut: Greenwood Press, 1987.
10. Jack Donnelly, *Universal Human Rights in Theory and Practice*, New Delhi, Manas, 2005.

11. Tapan Biswal, *Human Rights Gender and Environment*, Viva Books, New Delhi 2006.
12. Satya.P. Kanan, *Human Rights Evolution and Development*, Wisdom Press, New Delhi 2012.
13. Gerwith, *Human Rights: Essays on Justification and Application*, University of Chicago Press, Chicago, 1982.
14. Khan, Mumtaz Ali, *Human Rights and the Dalits*, Uppal Publishing House, New Delhi, 1995.
15. V.T. Patil, *Human Rights Developments in South Asia*, Authors Press Publishers, Delhi 2003.
16. S.K. Gupta, *State-wise Comprehensive Information on Human Right Violation*, ALP Books, Delhi. 2009
17. B.C. Acharya, *A Handbook of Women's Human Rights*, Wisdom Press, New Delhi, 2011.
18. South Asia Human Rights Documentation Centre, *Introducing Human Rights*, Oxford, New Delhi, 2006.
19. Lillich, R. *International Human Rights: Law Policy and Practice*, Boston: Little Brown and Co., 1991
20. ಅರ್ಜುನ್ ದೇವ್, ಇಂದಿರಾ ಅರ್ಜುನ್ ದೇವ್, ಸುಪ್ರಾ ದಾಸ್ ಸಂಪಾದಕರು, ಅನುವಾದಕರು ಕೆ. ಎಚ್. ಶ್ರೀನಿವಾಸ್, ಮಾನವ ಹಕ್ಕುಗಳು: ಒಂದು ಆಕರ ಗ್ರಂಥ, ನ್ಯಾಷನಲ್ ಬುಕ್ ಟ್ರಸ್ಟ್, ಇಂಡಿಯಾ.
21. ಡಾ. ಕಮಲಾಕ್ಷಿ ತಡಸದ, ಮಾನವ ಹಕ್ಕುಗಳ ಚಾರಿತ್ರಿಕ ದರ್ಶನ ಹಾಗೂ ಸಿದ್ಧಾಂತಗಳು, ಪ್ರಸಾರಾಂಗ, ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಧಾರವಾಡ 2015.

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| Course Title: WESTERN POLITICAL THOUGHT |                                                |
| Course Code: DSC-3                      | Course Credits: 3                              |
| No. of Teaching Hours/Week: 3           | Duration of End Sem. Exam: 3Hours              |
| Total Contact Hours: 45                 | Assessment (Marks): 60 (Theory) + 40 (IA) =100 |

### **DSC-3: WESTERN POLITICAL THOUGHT**

#### **Course Objectives:**

1. To familiarise students with western foundations of political thought and critically engage with the rational and/or material universe of the west.
2. To identify and evaluate the changes and continuity in western political thought
3. T  
o expose students to the divergent perspectives on politics, state and its arrangements within the western political tradition
4. T  
o create an understanding among students on western engagements with issues of governance and political order

#### **Learning Outcomes:**

At the end of the course, the students will –

1. Have an understanding of the distinct features and diverse intellectual traditions of the west.
2. Identify the main currents in western political thought and their impact on the shaping of western political values
3. Grasp the society-state-politics interface and institutional arrangements in western political tradition and its implications.
4. Develop a critical perspective on the western political thought on governance and political order

**Pedagogy:** Lectures/Tutorials/Interactive sessions/Open Educational Resources (as reference materials), practical exercises/Assignments/Seminars/Group discussions and counselling.



**DSC-3: WESTERN POLITICAL THOUGHT****Unit 1****15 Hours**

- 1.1 Salient Features of the Greek Political Thought; Plato: Theory of Justice, Philosopher King; Aristotle: State and Its Classification, Citizenship
- 1.2 Salient Features of Medieval - Political Thought
- 1.3 St. Thomas Aquinas: Church v/s State; St. Augustine: Theory of Two Swords; Machiavelli: On Politics and State Craft

**Unit 2****15 Hours**

- 2.1 Hobbes: Social contract and State Sovereignty; Locke: Social Contract and Theory of Government, Tolerance; Rousseau: Social Contract and General Will
- 2.2 Bentham: Theory of Utilitarianism
- 2.3 J.S. Mill: Views on Liberty and representative government

**Unit 3****15 Hours**

- 3.1 Hegel –Dialectical Materialism; Karl Marx- Capitalism and Communism
- 3.2 Jurgen Habermas- Communicative action, Public Sphere, Theory of truth and knowledge
- 3.3 Hannah Arendt- Theory of Action, Modernity, Conception of Citizenship

**Exercise:**

- ✓ Compare Greek State with the Roman state and makepoints
- ✓ Reflect on separation of religion and politics
- ✓ Analyse the relevance of social contract theory in contemporary times
- ✓ Can we have a classless society in the modern world? Comment

**Essential Readings:**

1. G.H. Sabine. *A History of Political Theory*, 4<sup>th</sup> edn., New Delhi: Oxford and IBH, 2019.
2. William Ebenstein, *Great Political Thinkers Plato to the Present*, New Delhi: Oxford, 1970
3. Subrato Mukherjee and Susheela Ramaswamy, *History of Political Thought: Plato to Marx*, PHI Publishers, New Delhi, 2014
4. Sukhbir Singh, *History of Political Thought*, Vol 1 & 2, Meerut; Rastogi Pub., 2006
5. Boucher, D., and Kely, P., ed., *Political Thinkers From Socrates to the Present*, Oxford: Oxford University Press, 2009
6. Coleman J., *A History of Political Thought*, Oxford: Blackwell, 2000
7. <https://plato.stanford.edu/>

**Suggested Readings:**

1. A. Hacker, *Political Theory: Philosophy, Ideology, Science* New York, Macmillan, 1961.
2. C.L. Wayper. *Political Thought*, Bombay: B.I. Publications, 1977.
3. Quentin Skinner, *The Foundations of Modern Political Thought*, Cambridge: OUP, 1978
4. Ernest Barker, *Greek Political Theory: Plato and his Predecessors*. London: Methuen & Co., 1970.
5. M.J. Vinod and Meena Deshpande, *Contemporary Political Theory*, Delhi: PHI Learning, 2013
6. M. Butterfield, *The State Craft of Machiavelli*, New York: The Macmillan Company, 1956.
7. O.P. Bakshi; *Politics and Prejudice: Notes on Aristotle's Political Theory*. Delhi: The Delhi University Press, 1975.
8. M.A. Shepard, "Sovereignty at the Crossroads: A Study of Bodin", *Political Science Quarterly* XLV, pp. 580-603.
9. L. Colleti. *From Rousseau to Lenin*, New Delhi: Oxford University Press, 1969.
10. Colin Farrelly, *Introduction to Contemporary Political Theory*, London, Sage, 2004
11. Robert E. Goodin, Philip Pettit and Thomas Pogge, eds., *Companion to Contemporary Political Philosophy*, Oxford, Blackwell, 2007
12. J. Coleman, *A History of Political Thought: From Ancient Greece to Early Christianity*, Oxford, Blackwell Publishers, 2000.

**DSC-4: INDIAN NATIONAL MOVEMENT AND CONSTITUTIONAL DEVELOPMENT**

|                                                                       |                                                |
|-----------------------------------------------------------------------|------------------------------------------------|
| Course Title: INDIAN NATIONAL MOVEMENT AND CONSTITUTIONAL DEVELOPMENT |                                                |
| Course Code: DSC-4                                                    | Course Credits: 3                              |
| No. of Teaching Hours/Week: 3                                         | Duration of End Sem. Exam: 3 Hours             |
| Total Contact Hours: 45                                               | Assessment (Marks): 60 (Theory) + 40 (IA) =100 |

**Course Objectives**

1. To endow students with a historical perspective on the rise and growth of nationalism and the making of the Indian Constitution.
2. To enable students to comprehend the influence of diverse perspectives and values articulated during the national movement that influenced the making of the Indian political system.
3. To enable students to understand the milestones, contestations and settings that shaped the Indian political system.
4. To help students to understand the motives and visions of Constitution-makers in the incorporation of novel aspects in the Indian Constitution.

**Learning outcomes**

At the end of the course, the students will –

1. Be able to reflect on the nature of Indian nationalism and the Constitution with historical perspectives and insights
2. Understand and appreciate the values and design of the Indian Constitution resulting from the diverse intellectual traditions, ideas, and concerns of freedom fighters
3. Have a nuanced understanding of the stages and settings in which Constitutional measures and reforms were initiated, contested and modified culminating in the making of the Indian Constitution
4. Have a lucid understanding of the intentions and visions of Constitution makers in the design and inclusion of distinct aspects in the Indian Constitution

**Pedagogy:** Lectures/Tutorials/Interactive sessions/Open Educational Resources (as reference materials), practical exercises/Assignments/Seminars/Group discussions and counselling.

## **DSC-4: INDIAN NATIONAL MOVEMENT AND CONSTITUTIONAL DEVELOPMENT**

|                                                                                      |                                                                                                                                               |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Unit 1                                                                               | 15 Hours                                                                                                                                      |
| 1.1                                                                                  | Indian National Movement- Features; The Liberal, The Extremist and Revolutionary Phase                                                        |
| 1.2                                                                                  | The Gandhian Phase: Non-Cooperation movement                                                                                                  |
| 1.3                                                                                  | Civil Disobedience Movement and the Quit India movement                                                                                       |
| Unit 2                                                                               | 15 Hours                                                                                                                                      |
| 2.1                                                                                  | Morley-Minto Reform Act of 1909; Montague Chelmsford Act of 1919: Main provisions and Dyarchy; The Nehru Report and Jinnah's 14-point Formula |
| 2.2                                                                                  | Simon Commission, Round Table Conferences; Government of India Act of 1935- Main provisions, Provincial Autonomy and federal system           |
| 2.3                                                                                  | Cabinet Mission Plan; Indian Independence Act of 1947- Main provisions                                                                        |
| Unit 3                                                                               | 15 Hours                                                                                                                                      |
| Constituent Assembly Debates on -                                                    |                                                                                                                                               |
| 3.1                                                                                  | Citizenship, State Structure                                                                                                                  |
| 3.2                                                                                  | Minority Rights, Uniform Civil Code (UCC) v/s Personal Law                                                                                    |
| 3.3                                                                                  | Language and Union of States                                                                                                                  |
| (The above three should be discussed in the context of Constituent Assembly Debates) |                                                                                                                                               |

**Exercise:**

- ✓ Identify any two political and socio-economic conditions in India that are present and two that are not present in Indian democracy
- ✓ List out in a table giving some democratic roles of a citizen, explore yourself how democratic you are.
- ✓ Identify the good qualities of a citizen

**Essential Reading**

1. Peter Heehs, *India's Freedom Struggle 1857-1947 A Short History*, New Delhi: OUP, 1988
2. Udit Bhatia, *The Indian Constituent Assembly Deliberations on Democracy*, Oxfordshire: Taylor & Francis, 2019
3. Bipin Chandra et al., *India's Struggle for Independence 1857-1947*, New Delhi; Penguin, 2016
4. Bipin Chandra, *Nationalism and Colonialism in Modern India*, Hyderabad: Orient Blackswan, 1984
5. Austin Granville, *The Indian Constitution: Cornerstone of a nation*, New Delhi; OUP, 2014
6. S. Sarkar, *Modern India (1885-1947)*. New Delhi: Macmillan, 1983.
7. S. Bandopadhyay, *From Plassey to Partition: A History of Modern India*. New Delhi: Orient Longman, 2004

**Suggested Reading**

1. [https://www.constitutionofindia.net/constitution\\_assembly\\_debates](https://www.constitutionofindia.net/constitution_assembly_debates)
2. Parliament of India, Lok Sabha Digital Library, *Constituent Assembly Draft making debates*, <https://eparlib.nic.in/handle/123456789/760448>
3. Romila Thapar, *India Another Millennium*, New Delhi; Penguin, 2000
4. Rajiv Bhargava, *Politics and Ethics of the Indian Constitution*, New Delhi; OUP, 2015
5. Durga Das Basu, *Introduction to the Constitution of India*, Nagpur; LexisNexis, 2015
6. R. Thapar, 'Interpretations of Colonial History: Colonial, Nationalist, Post-colonial', in P.R. DeSouza, (ed.) *Contemporary India: Transitions*. New Delhi: Sage Publications, 2000.
7. A. Jalal and S. Bose, *Modern South Asia: History, Culture, and Political Economy*. New Delhi: Oxford University Press, 1997.
8. A.D. Smith, *Nationalism*. Cambridge: Polity Press, 2001.
9. M.P. Jain, *Outlines of Indian Legal and Constitutional History*, Nagpur; LexisNexis, 2014
10. S. Islam, 'The Origins of Indian Nationalism', in *Religious Dimensions of Indian Nationalism*. New Delhi: Media House, 2004.
11. P. Chatterjee, 'A Brief History of Subaltern Studies', in Partha Chatterjee, *Empire & Nation: Essential Writings (1985-2005)*. New Delhi: Permanent Black, 2010.

12. Mani, B.R. *Debrahmanising History, Dominance and Resistance in Indian Society*. New Delhi: Manohar, 2005.

**OE-2: INDIAN POLITY: ISSUES AND CONCERNS**(Open  
Electi  
ve)

|                                                  |                                                |
|--------------------------------------------------|------------------------------------------------|
| Course Title: INDIAN POLITY: ISSUES AND CONCERNS |                                                |
| Course Code: OE-2                                | Course Credits: 3                              |
| No. of Teaching Hours/Week: 3                    | Duration of End Sem. Exam: 3 Hours             |
| Total Contact Hours: 45                          | Assessment (Marks): 60 (Theory) + 40 (IA) =100 |

**Course Objectives**

1. To enable students to grasp the complex relationship/ linkages between politics and society.
2. To comprehend the dynamics and forces at work in shaping the political process.
3. To enable students to recognize the nature and trends in Indian politics.
4. To enable students to identify and critically reflect on the major issues confronting Indian politics.

**Learning outcomes**

At the end of the course, the students will –

1. Have perceptive thinking on the interconnectedness between politics and society, and its larger implications.
2. Grasp the dynamics and forces that influence the polity.
3. Be able to identify and critically reflect on the nature and trends in Indian politics.
4. Have a concerned and critical understanding of the major issues of Indian polity with insights for solutions.

**Pedagogy:** Lectures/Tutorials/Interactive sessions/Open Educational Resources (as reference materials), practical exercises/Assignments/Seminars/Group discussions and counselling.

## **OE-2: INDIAN POLITY: ISSUES AND CONCERNS**

|                                                                                                                                                                           |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Unit 1                                                                                                                                                                    | 15 Hours |
| 1.1 National Integration and Social Harmony- Meaning and Need; Suggesting for securing National Integration.                                                              |          |
| 1.2 Society and Politics in India: Caste and its social impact; Problems in understanding caste system as a social system; Role of caste and its impact on Indian Polity. |          |
| 1.3 Language – Role and Constitutional provisions, Issues.                                                                                                                |          |
| Unit 2                                                                                                                                                                    | 15 Hours |
| 2.1 Religion and Local Traditions – Role and Constitutional provisions.                                                                                                   |          |
| 2.2 Development and Inclusiveness: Issues and concerns.                                                                                                                   |          |
| 2.3 Regionalism – Forms and Reasons for its growth.                                                                                                                       |          |
| Unit 3                                                                                                                                                                    | 15 Hours |
| 3.1 Corruption – Causes and Measures.                                                                                                                                     |          |
| 3.2 Terrorism- Types, Causes and Measures.                                                                                                                                |          |
| 3.3 Celebrating Diversity – Consensus and Challenges.                                                                                                                     |          |



**Exercise:**

- ✓ Classify the major factors which impede National Integration and give your suggestions.
- ✓ Analyse the forms and impact of Terrorism.
- ✓ Make a point on the 2011 Anti-Corruption movement in India.

**Essential Readings:**

1. Atul Kohli, ed., *The Success of India's Democracy*, Cambridge: CUP, 2001.
2. Atul Kohli, *Democracy and Discontent: India's growing crisis of governability*, Cambridge: CUP, 1991.
3. Nirja Gopal Jayal and Pratap Bhanu Mehta, *The Oxford Companion to Politics in India*, New Delhi; OUP, 2012
4. T.V. Sathiyamurthy, *Social Change and Political Discourse in India: Structures of Power, Movements of Resistance*, Vol. 4, Oxford: OUP, 1996.
5. Myron Weiner, *The Indian Paradox: Essays in Indian Politics*, New Delhi: Sage, 1989.
6. Partha.Chatterjee, (ed.) *State and Politics in India*, New Delhi: OUP, 1998.
7. James Manor, *Politics and State-society Relations in India*, London: Hurst, 2017
8. M.P. Singh, & R. Saxena, *Indian Politics: Contemporary Issues and Concerns*. New Delhi: PHI Learning, 2008.

**Suggested Readings**

1. M. Galanter, 'The Long Half-Life of Reservations', in Z. Hasan, E. Sridharan and R. Sudarshan (eds.) *India's Living Constitution: Ideas, Practices, Controversies*, New Delhi: Permanent Black, 2002.
2. Marc Gallanter, *Competing Equalities, Law and Backward classes in India*, New Delhi: OUP, 1984
3. Atul Kohli, and Prema Singh, ed., *Routledge Handbook of Indian Politics*, London: Routledge, 2013
4. Paul Brass R., *Routledge Handbook of South Asian Politics, India, Pakistan, Bangladesh, Sri Lanka and Nepal*, New York: Routledge, 2010.
5. Dipankar Gupta, *Political Sociology in India Contemporary trends*, New Delhi: Orient Longman, 1996
6. T.K Oommen, *Nation, Civil Society and Social Movements, Essays in Political Sociology*, New Delhi: Sage, 2004
7. S. Khilnani, *The Idea of India*, London: Hamish Hamilton, 1997.
8. Shashi Tharoor, *The Battle of Belonging: On Nationalism, Patriotism, And What it Means to be Indian*, New Delhi; Aleph Book Company, 2020

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25.

## **MANGALORE UNIVERSITY**

~~(Question paper pattern)~~

First/ Second Semester BA Degree Examination, (Month, Year)

### **POLITICAL SCIENCE**

(TITLE OF THE PAPER)

Time: 3 Hours

Max. Marks: 60

SECTION – A

(5 x 3 =15)

**Instructions:** Answer **any three** of the following, each **not exceeding two** pages

- 1.
- 2.
- 3.
- 4.
- 5.

SECTION – B

(15 x 3 =45)

**Instructions:** Answer **any three** of the following questions, each not exceeding **four** pages

- 6.
- 7.
- 8.
- 9.
- 10.
- 11.

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