



PERIYAR UNIVERSITY

(NAAC A++ Grade - State University - NIRF Rank 94, State Public University Rank 40, SDG Institutions Rank Band: 11-50)

Salem - 636011, Tamil Nadu, India

Naan Mudhalvan Paper - Arrear Students - Re-Exam - Skill Enhancement Course Title & Syllabus

For the academic years 2023-2024, 2024-2025 & 2025-2026

(Semesters – II, III, IV, V & VI)

**Naan Mudhalvan Paper - Arrear Students – Re-Exam - Skill
Enhancement Course Title & Syllabus**

**For the academic years 2023-2024, 2024-2025 & 2025-2026
(Semesters – II, III, IV, V & VI)**

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B.Com

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER –II

CONSUMER AWARENESS

UNIT - I

Conceptual Framework Concept of Consumer- rights of consumers -Consumer goods, defect in goods, spurious goods and services, service, deficiency in service, unfair trade practice, restrictive trade practices

UNIT - II

Organizational set-up under the Consumer Protection Act Consumer Protection Councils at the Central, State and District Levels; Adjudicatory Bodies: District Forums, State Commissions, and National Commission: Their Composition, Powers, and Jurisdiction

UNIT - III

Grievance Redressal Mechanism under the Indian Consumer Protection Law Who can file a complaint? Grounds for filing a complaint; Period of Limitation Procedure for filing and hearing of a complaint; Disposal of cases, Relief/Remedy available; Appeal, frivolous and vexatious complaints; Offences and penalties

UNIT-IV

Role of Industry Regulators in Consumer Protection Banking: RBI and Banking Ombudsman Insurance: IRDA and Insurance Ombudsman, Telecommunication: TRAI, FSSAI, Electricity Supply Electricity Regulatory Commission Real Estate Regulatory Authority

UNIT – V

Contemporary Issues in Consumer Affairs Formation of consumer organizations and their role in consumer protection, Misleading Advertisements -National Consumer Helpline

TEXT BOOKS

Sl.No. Author Name Title of the Book Publisher Year and Edition

1. Meenu Agarwal Consumer Behaviour & Consumer protection in India New Century Publications, New Delhi 2006
2. Sherlakar SA Trade Practices & Consumerism Himalaya Publishing House, Bombay 1977

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B.Com
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER –III

CO-OPERATIVE FINANCE AND BANKING

UNIT – I

Agricultural Credit: Evolution and Structure of Co-operative Credit Movement in India.

UNIT – II

Primary Agricultural Cooperative Credit Society: Objectives and Functions of Primary Agriculture Credit Societies in India

UNIT – III

DCCB & SCB: Functions of District Central Co-operative Banks and State Co-operation Banks

UNIT – IV

Long Term Credit: Long Term Loans by Co-operative Land Development Banks (Primary Cooperative Agriculture and Rural Development Banks)

UNIT – V

Non Agricultural Credit: Functions of Urban Co-operative Banks and Employees Co-operative Thrift and Credit Societies.

REFERENCE BOOKS

1. Hejela.T.N., Principles, problems and Practice of Co-operation, Konark Publishers, New Delhi, 2000.
2. Mathur B,S. Co-operation in India, Sahithya Bhavan Publishers, Agra 1989 3. Bedi, R.D, Theory, History and practice of Co-operation. R.Lal Book Depot, Meerut, 2001

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B.Com
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER -IV
ADVERTISING AND SALESMANSHIP

UNIT-I

Advertising: Introduction- definition- meaning- objectives and significance Advantages of advertising.

UNIT-II

Advertising Media: Importance- Selection of media –kinds of media-merits and demerits

UNIT-III

Salesmanship- meaning- objectives- importance

UNIT-IV

Sales organizations- Functions , duties and responsibilities of sales manager.

UNIT-V

Sales Promotion-definition- objectives- importance –kinds of promotion- advantages and limitations

REFERENCE BOOKS:

1. Pillai, R.S.N., & Bhagavathi, Marketing, S.Chand and Co. 1996.
2. Chunawala and Reddy, Advertising and Marketing Research, Himalaya Publications, New Delhi.1996.
3. Sinha, J.C.,Principles of Marketing and salesmanship, S.Chand and Co.New Delhi, 1980
4. Richard R. Still& Edward W. Cundiff, Sales Management, Prentice Hall of India Pvt. Ltd., New Delhi, 1999.

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B.Com

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester V

SERVICE MARKETING

UNIT I

Introduction to Services – Service Marketing – Meaning and Definition- Nature and Scope Characteristics – Challenges and issues of service marketing- Service marketing in India – Classifications of services.

UNIT II

Marketing Mix in Service Marketing: The Seven Ps: Product Decision, Pricing, Strategies and Tactics, Promotion of Service – additional dimension in Services Marketing – People, Physical Evidence and Process.

UNIT III

Positioning of services – Designing service delivery System – Pricing of services – objectives – methods – Services on retail sector – Service Level Agreements (SLA) – Service marketing triangle.

UNIT IV

Managing service operations- Participants in services- Employees and customer's role in service delivery- Mass production and delivery- Importance of quality in services - Delivering Quality Service.

UNIT V

Service Marketing Strategies for health – Hospitality – Tourism – Financial & Information technique Services – Applying technology to service settings – e-services.

Textbooks

- 1 S.M. Jha, Services marketing, Himalaya Publishers, India
- 2 Baron, Services Marketing , Second Edition. PalgraveMacmillan

Reference Books

- 1 Dr. B. Balaji , Services Marketing and Management ,S. Chand & Co , New Delhi.
- 2 Dr. L. Natarajan Services Marketing, Margham Publications, Chennai.
- 3 Thakur .G.S. Sandhu supreet& Dogra Babzan , Services marketing , kalyanni Publishers, Ludhianna.
4. Zeithaml Valerie A, & Bitner Mary Jo., Gremler Dwayne D., Pandit Ajay; Services Marketing, McGraw Hill.
5. Wirtz Jochen, Lovelock Christopher H, Chatterjee Jayanta.: Services Marketing, 8e Edition, Pearson.

B.Com

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER - VI

FUNDAMENTAL OF ACCOUNTING

UNIT- I

Introduction to Accounting: Definition of Accounting, needs of accounting, objectives, advantages- types of Accounting- double entry system and its advantages- single- entry system and its limitation.

UNIT-II

Recording of Transactions Kinds of Accounts- Rules for recording transactions- Books of accounts- Subsidiary Books- Journal, Petty Cash Book, Cash Book (Problems), bank Reconciliation Statement (Problems) , Purchase Book, Sales Book, Purchase returns book, Sales returns book, bills payables books.

UNIT-III

Ledger Accounts : Balancing ledger Accounts- Trail Balance, meaning, objectives, scope and preparation- Errors and their rectifications. UNIT-IV Final Accounts: Trading, Profit and loss accounts and balance sheet objects, Adjusting entries, Depreciation: Meaning - Reasons and Methods.

Unit-V

Accounts of Non-Profit organizations: Receipts and Payments of Accounts Income and Expenditure Accounts- Balance Sheet, Capital and Revenue expenditure- Accounts current Average due date (Problems).

References

1. Financial Accounting- R.L.Gupta and V.K.Gupta - Sultan Chand & Sons, New Delhi.
2. Financial Accounting - S.P.Jain and K.L.Narang – Kalyani Publishers, Ludhia
3. Financial Accounting - Reddy and Murthy- Margham Publications,Chennai-17.
4. Advanced Accounting I - Dr.Chandra Bose PHI Learning (P) Ltd 3.Advanc
5. Accounting I - Dr.S.Peer Mohamed Dr.S.A.N.Shezuli Ibrahim Pass Publication, Madurai.

B.Com Cooperation**(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)****SEMESTER –II****CONSUMER AWARENESS****UNIT - I**

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UNIT-IV

Role of Industry Regulators in Consumer Protection Banking: RBI and Banking Ombudsman Insurance: IRDA and Insurance Ombudsman, Telecommunication: TRAI, FSSAI, Electricity Supply Electricity Regulatory Commission Real Estate Regulatory Authority

UNIT – V

Contemporary Issues in Consumer Affairs Formation of consumer organizations and their role in consumer protection, Misleading Advertisements -National Consumer Helpline

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| 1. | Meenu Agarwal | Consumer Behaviour & Consumer protection in India | New Century Publications, New Delhi | 2006 |
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B.Com Cooperation
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER –III

CO-OPERATIVE FINANCE AND BANKING

UNIT – I

Agricultural Credit: Evolution and Structure of Co-operative Credit Movement in India.

UNIT – II

Primary Agricultural Cooperative Credit Society: Objectives and Functions of Primary Agriculture Credit Societies in India

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DCCB & SCB: Functions of District Central Co-operative Banks and State Co-operation Banks

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B.Com Corporate
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER -IV
ADVERTISING AND SALESMANSHIP

UNIT-I

Advertising: Introduction- definition- meaning- objectives and significance Advantages of advertising.

UNIT-II

Advertising Media: Importance- Selection of media –kinds of media-merits and demerits

UNIT-III

Salesmanship- meaning- objectives- importance

UNIT-IV

Sales organizations- Functions , duties and responsibilities of sales manager.

UNIT-V

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B.Com Cooperation
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-V

ENTREPRENEURSHIP DEVELOPMENT

Unit –I Introduction to Entrepreneur Meaning of Entrepreneurship – Characteristics of Entrepreneurship – Types of Entrepreneurship – Self Employment – Difference between Entrepreneurship and Employment – Meaning of Entrepreneur – Traits – Classification – Functions – Entrepreneurial Scenario in India.

UNIT -II Design Thinking Idea Generation – Identification of Business Opportunities – Design Thinking Process – Creativity – Invention – Innovation – Differences – Value Addition – Concept and Types – Tools and Techniques of Generating an Idea – Turning Idea into Business Opportunity

UNIT -III Setting up of an Enterprise Process of Setting Up an Enterprise – Forms of an Enterprise – Sole Proprietorship – Partnership – Limited Liability Partnership Firm – Joint Stock Company – One Man partnership – Choice of Form of an Enterprise – Feasibility Study – Marketing, Technical, Financial, Commercial and Economical.

UNIT IV Business Model Canvas and Formulation of Project Report Introduction – Contents of Project Report – Project Description – Market Survey – Fund Requirement – Legal Compliance of setting Up of an Enterprise – Registration – Source of Funds – Modern Sources of Funds.

UNIT V MSME's and Support Institutions Government Schemes and Women Entrepreneurship – Importance of MSME for Economic Growth – MSME – Definition – Role of Government Organizations in Entrepreneurship Development – MSME DI – DIC – Khadi and Village Industries Commission – NSIC – NABARD, SICVI, SFC, SDC, EDII, EPCCB. Industrial Estates – Government Schemes – Prime Minister Employment Generation Programme – Women Entrepreneurship in India.

Textbooks

- 1 Jayashree Suresh, (Reprint 2017) Entrepreneurial Development, Margham Publications. Chennai.
- 2 Dr. C.B. Gupta & Dr. S.S. Khanka (Reprint 2014). Entrepreneurship And Small Business Management, Sultan Chand & Sons, New Delhi.
- 3 Charantimath Poornima, (Reprint 2014.), Entrepreneurship development-Small, Pearson Education, India.
4. Raj Shankar, (Reprint 2016), Entrepreneurship Theory and Practice, Vijay Nicole and Imprints Pvt. Ltd, Chennai.
- 5 Vasant Desai, (Reprint 2017). Dynamics of Entrepreneurial Development & Management Twenty Fourth Edition. Himalaya Publishing House. Mumbai.

Reference Books

- 1 Anil kumar, Poornima, Principles of Entrepreneurial development, Newage publication, Chennai.
- 2 Dr. A.K. Singh, Entrepreneurial development and management, Laxmi publications, Chennai.
- 3 Dr. R.K. Singal, Entrepreneurial development and management, S.K. Kataria publishers, New Delhi.
- 4 Dr. M.C. Garg, Entrepreneurial Development, New Delhi.
- 5 E. Gordon, K. Natrajan, Entrepreneurial development, Himalaya publishing, Mumbai.

B.Com Cooperation

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER - VI

FUNDAMENTAL OF ACCOUNTING

UNIT- I

Introduction to Accounting: Definition of Accounting, needs of accounting, objectives, advantages- types of Accounting- double entry system and its advantages- single- entry system and its limitation.

UNIT-II

Recording of Transactions Kinds of Accounts- Rules for recording transactions- Books of accounts- Subsidiary Books- Journal, Petty Cash Book, Cash Book (Problems), bank Reconciliation Statement (Problems) , Purchase Book, Sales Book, Purchase returns book, Sales returns book, bills payables books.

UNIT-III

Ledger Accounts : Balancing ledger Accounts- Trail Balance, meaning, objectives, scope and preparation- Errors and their rectifications. UNIT-IV Final Accounts: Trading, Profit and loss accounts and balance sheet objects, Adjusting entries, Depreciation: Meaning - Reasons and Methods.

Unit-V

Accounts of Non-Profit organizations: Receipts and Payments of Accounts Income and Expenditure Accounts- Balance Sheet, Capital and Revenue expenditure- Accounts current Average due date (Problems).

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5. Accounting I - Dr.S.Peer Mohamed Dr.S.A.N.Shezuli Ibrahim Pass Publication, Madurai.

B.Com Corporate Secretaryship

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER –II

CONSUMER AWARENESS

UNIT - I

Conceptual Framework Concept of Consumer- rights of consumers -Consumer goods, defect in goods, spurious goods and services, service, deficiency in service, unfair trade practice, restrictive trade practices

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B.Com Corporate Secretaryship
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER –III

CO-OPERATIVE FINANCE AND BANKING

UNIT – I

Agricultural Credit: Evolution and Structure of Co-operative Credit Movement in India.

UNIT – II

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Corporate Secretarship
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER -IV
ADVERTISING AND SALESMANSHIP

UNIT-I

Advertising: Introduction- definition- meaning- objectives and significance Advantages of advertising.

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Corporate Secretarship
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

INSURANCE

UNIT - I

Insurance: Meaning, functions, nature and principles of insurance, need and importance of insurance to individuals and business – Insurance as a social security Tool

UNIT - II

Life Insurance: Features of a life insurance contract – classification of policies – investment of funds – surrender value – bonus option – policy condition – annuity contracts.

UNIT - III

Marine Insurance: Contract of marine insurance – elements of marine insurance – classes of policies – policy conditions – clause in a marine insurance policy – marine losses.

UNIT - IV

Fire Insurance: Features of a fire insurance – kinds of policies – policy conditions – payment of claims – reinsurance

UNIT - V

Miscellaneous Insurance: Motor insurance – Burglary – Personal accident insurance – Health Insurance – Liability Insurance- Bancassurance.

REFERENCE BOOKS:

1. M. N. Mishra, Insurance Principles And Practice, S. Chand & Co, New Delhi, 2000
2. M.N.Mishra, Modern concepts of Insurance, S.Chand&Co., 2000 P.S Palandi,
3. Insurance in India, Response Books – Sagar Publications, 2000

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Corporate Secretarship
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER - VI

FUNDAMENTAL OF ACCOUNTING

UNIT- I

Introduction to Accounting: Definition of Accounting, needs of accounting, objectives, advantages- types of Accounting- double entry system and its advantages- single- entry system and its limitation.

UNIT-II

Recording of Transactions Kinds of Accounts- Rules for recording transactions- Books of accounts- Subsidiary Books- Journal, Petty Cash Book, Cash Book (Problems), bank Reconciliation Statement (Problems) , Purchase Book, Sales Book, Purchase returns book, Sales returns book, bills payables books.

UNIT-III

Ledger Accounts : Balancing ledger Accounts- Trail Balance, meaning, objectives, scope and preparation- Errors and their rectifications. UNIT-IV Final Accounts: Trading, Profit and loss accounts and balance sheet objects, Adjusting entries, Depreciation: Meaning - Reasons and Methods.

Unit-V

Accounts of Non-Profit organizations: Receipts and Payments of Accounts Income and Expenditure Accounts- Balance Sheet, Capital and Revenue expenditure- Accounts current Average due date (Problems).

References

1. Financial Accounting- R.L.Gupta and V.K.Gupta - Sultan Chand & Sons, New Delhi.
2. Financial Accounting - S.P.Jain and K.L.Narang – Kalyani Publishers, Ludhia
3. Financial Accounting - Reddy and Murthy- Margham Publications,Chennai-
4. Advanced Accounting I - Dr.Chandra Bose PHI Learning (P) Ltd 3. Advanc
5. Accounting I - Dr.S.Peer Mohamed Dr.S.A.N.Shezuli Ibrahim Pass
Publication, Madurai.

Computer Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-II
UNIFIED MODELING LANGUAGE

UNIT – I

Introduction : Role of Analysis and Design in Software Development - Object Orientation - Overview of various OOAD Methodologies - Goals of UML. Use Case Modeling: Actors and Use Cases - Use Case Relationships - Writing Use Cases Formality -Choosing the System Boundary - Finding Actors - Finding Use Cases -Use of Use Cases for Validation and Verification - Use case Realization.

UNIT - II

Static Modelling Using Class Diagrams: Classes and Objects - Attributes and Operations - Visibility of Attributes and Operations - Class Scope Attribute - Mapping Class to Java Code - Attributes with Default Values - Association - Role Names -Qualified Association - Association Class - Ternary Association - Recursive Association - Multiple Association between Two Classes - Aggregation - Generalization - Abstract Class - Subclass Partitioning - Generalization Set - Interfaces - Packages and Grouping of Classes into Packages -Parameterized Classes.

UNIT- III

Interaction Diagrams: Introduction to Interaction Diagram - Creating New objects - Combining Fragments - Communication Diagrams.

UNIT - IV

Dynamic Modelling Using State and Activity Diagrams: State Machines - Events - States and Transitions - Formal Syntax for Specifying a State Transition - Substates - Modelling Complex Transitions - The History Indicator - The Junction State- The Synch State - The Submachine Reference and the Stub States -Activity Diagrams - Swimlanes - Dynamic Concurrency - Decomposing an Activity - Activity diagrams for Career Guidance Portal. The unified Process of Software Development: The Unified Process of Software Development - Phases of the Unified Software Development Process - Best Practices in the Unified Process - Workflows of the UP.

UNIT - V

Architectural Modelling: Subsystem - Broker Architecture for Distributed Systems- Model View Controller Architecture - Component Diagrams - Deployment Diagrams. Case Study: Simulation of Cell Phone - Social Networking Site.

TEXT BOOK

1. Mahesh P.Matha, "Object Oriented Analysis and Design Using UML", PHI Learning Private Ltd. NewDelhi, 2010.

REFERENCE BOOK

1. Jason T. Roff, "UML -A Beginner's Guide", 1st Edition, Tata McGraw - Hill, 2003.

Computer Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-III
OFFICE AUTOMATION TOOLS

UNIT- I

Introduction to Computers - Five Generations of Modern Computers - Classification of Digital Computer Systems - Anatomy of a Digital Computer - Memory units - Input and Output Devices - Auxiliary Storage Devices.

UNIT- II

Getting Started: Starting a Program - Identifying Common Screen Elements - Choosing Commands - Finding Common Ways to Work - Getting Help with Office

UNIT- III

MS-WORD: Learning Word Basics - Formatting a Word Document - Working with Longer Document.

UNIT- IV

MS-EXCEL: Creating a Simple Spreadsheet - Editing a Spreadsheet - Working with Functions and Formula - Formatting Worksheets - Completing Your Spreadsheet – Creating Charts

UNIT- V

MS-POWERPOINT: Creating and Viewing Presentations - Editing a Presentation - Working with Presentation Special Effects.

TEXT BOOK

1. Alex Leon, Mathew Leon, "Introduction to Computers", Vikas Publishing, 2008.
2. Diane Koers, "Microsoft Office XP - fast & easy", Prentice Hall of India Private Limited, New Delhi, 2001

REFERENCE BOOKS

1. Joyce Cox & Team, "Step by Step 2007 Microsoft Office System", PHI Learning Private limited, New Delhi, 2009.
2. Peter Weverka, "MS Office 2013 All-in-One for Dummies", 1st Edition, Wiley Publications, 2013

Computer Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-IV
PARALLEL PROCESSING

UNIT - I

Parallel Computer Models: The State of Computing - Computer development milestones- Elements of modern computers-Evolution of computer architecture- System attributes to performance. Multiprocessors and Multicomputer: shared-memory and multiprocessors-Distributed-memory multicomputer- A Taxonomy of MIMD computers. Multi-vector and SIMD Computers: Vector super computers-SIMD super computers. PRAM and VLSI Models: Parallel Random-access machines VLSI complexity model. Architectural Development Tracks: Multiple-processor tracks- Multi-vector and SIMD tracks.

UNIT-II

Program and Network Properties: Conditions of Parallelism - Data and resource dependences-Hardware and software parallelism-The role of compilers. Program Partitioning and Scheduling: Grain sizes and latency-Grain packing and scheduling-Static multiprocessor scheduling- Program Flow Mechanisms: Control flow versus data flow-Demand-driven mechanisms- System Interconnect Architectures: Network properties and routing- Static connection networks- Dynamic connection networks.

UNIT -III

Principles Of Scalable Performance: Performance Metrics and Measures - Parallelism profile in programs-Harmonic mean performance-Efficiency, utilization, and quality-Standard performance measures. Parallel Processing Applications: Massive parallelism for grand challenges-Application models of parallel computers. Speedup Performance Laws: Amdahl's law for a fixed workload. Scalability Analysis and Approaches: Scalability metrics and goals-Evolution of scalable computers.

UNIT -IV

Processors and Memory Hierarchy: Advanced Processor Technology - Design space of processors – Instruction set architectures. Superscalar and Vector Processors: Superscalar processor. Memory Hierarchy Technology: Hierarchical memory technology. Virtual Memory Technology: Virtual memory models- TLB, paging and segmentation.

UNIT -V

Pipelining: Linear Pipeline Processors - Asynchronous and synchronous models - Clocking and timing control-speedup, efficiency and throughput Nonlinear Pipeline Processors: Reservation and latency analysis-Collision-Free scheduling-Pipeline schedule optimization. Instruction Pipeline Design: Instruction execution phases-Mechanisms for instruction pipelining-Dynamic instruction scheduling Branch handling techniques. Arithmetic Pipeline Design: Computer arithmetic principles- Static arithmetic pipelines-Multifunctional arithmetic pipelines.

TEXT BOOK

1. Kai Hwang, — Advanced Computer Architecture, TMGH, India, 2008.

REFERENCE BOOK

1. Behrooz Parhami, —Introduction to Parallel Processing – Algorithms and Architectures, Plenum series, 2002

Computer Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-V
IMAGE EDITING TOOL

UNIT-1

Getting Started with Photoshop CS5: Launching Photoshop CS5 - Exploring the Interface - Using Screen Modes - Opening an Existing Image - Opening an Image Using Adobe Bridge - Exploring Commonly Used Tools in the Tools Panel - Creating a New Document - Saving a Document - Reverting a Document- Selecting a Workspace - Creating a New Workspace - Deleting a Workspace - Working with Panels in Photoshop CS5 - Keyboard Shortcuts and Menu Settings - Customizing Preferences.

UNIT-2

Working with Images: Differences between Bitmap and Vector Images - Understanding Image Resolution Editing Images - Different Color Modes in Photoshop CS5 - Making Color Adjustments - File Formats in Photoshop CS5 -Creating a PDF File in Photoshop CS5 - Importing a PDF File into Photoshop CS5 - Making a Selection with Selections Tools - Modifying a Selection- Transforming a Selection - Transforming Pixels

UNIT-3

Mastering Layers in Photoshop CS5: Exploring LAYERS Panel - Working with Layers -Organizing Layers Working with Opacity and Blend Modes - Working with Adjustment Layers - Masking in Photoshop CS5 - Setting the Current Foreground and Background Colors - Filling a Selection with the Current Foreground Color - Using the Content-Aware Feature - Exploring Drawing Tools - Exploring Painting Tools - Exploring Retouching Tools.

UNIT-4

Working with Layer Styles and Filter Effects: Understanding Layer Styles - Working with Smart Objects - Understanding Filters

UNIT-5

Animation, 3D, and Printing in Photoshop CS5: Working with Actions - Working with Automate Commands - Exploring 3D in Photoshop - Working with Animation in Photoshop CS5 - Printing in Photoshop Cs5.

TEXT BOOK

1. Kogent Learning Solutions Inc, "Photoshop CS5 in Simple Steps",Dreamtech Press, New Delhi, 2012.

REFERENCE BOOKS

1. Brie Gyncild, "Adobe Photoshop CS6 Classroom in a Book", Adobe Press / Peachpit, 2012
2. Lisa Danae Dayley, Brad Dayley , "Adobe Photoshop Cs6 Bible", Wiley India Pvt Ltd.
3. Edward Bailey, "Photoshop: 7 Ways to Use Adobe Photoshop Like a Pro", Create space Independent Publishing Platform

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Computer Science

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-VI

SHELL PROGRAMMING

UNIT-I

Shell - comparison of Shells - working in the shell - Learning Basic Commands - Compiler and interpreter differences - Various directories

UNIT-II

Drilling deep into process management, job control and Automation

UNIT-III

Text processing - Text filtering Tools - working with commands. - Logical operators. - local variables and its scope - working with arrays

UNIT-IV

Tricks with shell scripting - interactive shell scripts - The here document and << operator - sort command - WC command - file handling - Debugging

UNIT-V

Automating Decision - Making in scripts - Automating repetitive tasks - working with Functions.

Text Books

- 1.The Complete Reference LINUX - Richard L. Petersen, McGraw Hill,
2. LINUX shell scripting by Ganesh Naik, Packt Publishing Ltd.,

Reference Books

- 1.Yashwanth Kanetkar, — Unix Shell Programming, B.P.B Publications 1st Edition Reprint 2012

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B.SC. CHEMISTRY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II

DYE STUFFS AND TREATMENT OF EFFLUENTS

UNIT-I

- 1.1 Introduction, Definition- Dye, colour, chromophore, auxochrome, bathochromic effect and hypso chromic effect
- 1.2 Classification- acid, base, azo, vat and reactive dyes.

UNIT-II

- 2.1. Various methods of dyeing- Direct, vat, mordant and disperse.
- 2.2. Anthroquinone and Mordant Dyes- synthesis and applications of Alizarin.

UNIT III

- 3.1. Diphenylmethane Dyes- synthesis and application of Auramine
- 3.2. Triphenylmethane Dyes- Malachite Green, Crystal Violet, Pararosaniline-Preparation and applications.
- 3.3. Indigo Dyes-Preparation and application of Indigo. Derivatives of Indigo-Synthesis and uses of Indigosol and tetrabromo indigo-(Ciba blue)

UNIT-IV

- 4.1. Phthalein Dyes-Phenolphthalein- Preparation and applications
- 4.2. Xanthein Dyes-Rhodamine B, Fluorescein – Preparation and applications.
- 4.3. Acridine dyes- synthesis and application of Acridine orange NO
- 4.4. Reactive dyes – synthesis and applications of Procion Blue HB.

UNIT-V

- 5.1. Textile Effluent-Characteristics, effect of untreated effluent, degradability of wastes. Effluent treatment plants-Aerated lagoon, photo oxidation process

References:

1. B.K.Sharma, Industrial Chemistry ,Goel Publishing co,1997
2. R.Chatwal ,Synthetic Dyes -Himalayan Publishing House,1995
3. R.S.Prayag, Dyeing of wool, Silk and man made fibres.
4. V.A.Shenai, Chemistry of Dyes and Principles of Dyeing

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B.SC. CHEMISTRY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-III
FOOD AND NUTRITION

UNIT -I FOOD SOURCES

- 1.1. Sources of foods, types, constituents of foods-carbohydrate, protein, fats.Oils, colours, flavours and natural toxicants.

UNIT -II NUTRITION

- 2.1. Definition of nutrition, nutrients, functions. Nutritional status – Definition, signs of good and poor nutritional status .
- 2.2. Mal nutrition- Definition, forms, causes and remedy.
- 2.3. Health –Definition, guidelines for good health.

UNIT-III FOOD POISONING AND ADULTERATION

- 3.1. Food poisoning- Sources, causes and remedy.
- 3.2. Causes and remedies for acidity, gastritis, indigestion and constipation
- 3.3. Food adulteration- Types of adulterants- intentional and incidental, effects and detection.

UNIT-IV FOOD PRESERVATION AND PROCESSING

- 4.1. Food spoilage, causes of food spoilage, types of Food spoilage
- 4.2. Food preservation-preservation and processing by heating - sterilization, pasteurization.

UNIT-V VITAMINS AND MINERALS

- 5.1. Sources, requirement and deficiency diseases of A, C, K, E1 and B1, B2.
- 5.2. Mineral elements in food-source, function, deficiency diseases and daily requirements of Na, K, Mg, Fe, S and P

REFERENCE BOOKS:

1. Seema Yadav : —Food Chemistry , Anmol publishing (P) Ltd, New Delhi
2. Car H. Synder : — The Extraordinary Chemistry for ordinary thing, John Wiley & sons inc., New York,1992.
3. B.Sivasankar - — Food Processing and Preservation – PHI Learning (P) Ltd, New Delhi – 11001.
4. B.Srilakshmi- Nutrition science. Third edition, New age International (P) Ltd. New Delhi, Chennai.

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B.SC. Chemistry
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-IV
FORENSIC SCIENCE

UNIT-I

Poisons

Poisons - types and classification - diagnosis of poisons in the living and the dead - clinical symptoms - Heavy metal contamination (Hg, Pb, Cd) of sea foods - use of neutron activation analysis in detecting arsenic in human hair.

UNIT-II

Crime Detection

Accidental explosion during manufacture of matches and fireworks (as in Sivakasi). Human bombs - possible explosives (gelatin sticks and RDX) - metal detector devices and other security measures for VVIP-composition of bullets and detecting powder burns.

UNIT-III

Forgery and Counterfeiting

Documents - different types of forged signatures - writing deliberately modified - uses of ultraviolet rays - comparison of type written letters - checking silver line water mark in currency notes - alloy analysis using AAS to detect counterfeit coins - detection of gold purity in 22 carat ornaments - detecting gold plated jewels - authenticity of diamond.

UNIT-IV

Tracks and Traces

Tracks and traces - small tracks and police dogs - foot prints - costing of foot prints - residue prints, walking pattern or tyre marks - miscellaneous traces and tracks - glass fracture - tool marks - paints - fibres - Analysis of biological substances - blood, semen, saliva, urine and hair - detecting steroid consumption in athletes and racehorses.

UNIT-V

Medical Aspects

Metabolite analysis using mass spectrum - Gas chromatography - Arson - natural fires and arson - burning characteristics and chemistry of combustible materials - nature of combustion. Ballistics - classification - internal and terminal ballistics - laboratory examination of barrel washing and detection of powder residue by chemical tests.

Recommended Text

1. SA Iqbal, M Liviu, Textbook of forensic chemistry, Discovery publishing house private limited, 2011.
2. Kelly M. Elkins, Introduction to Forensic Chemistry, CRC Press, Taylor & Francis Group, 2019.
3. Javed I. Khan, Thomas J. Kennedy, Donnell R. Christian, Jr., Basic principles of Forensic chemistry, Humana Press, first edition, 2012.
4. Bapuly AK, (2006) Forensic Science – Its application in crime investigation, Paras Medical Publisher, Hyderabad.
5. Sharma B.R., (2006) Scientific Criminal Investigation, Universal Law Publishing Co. Pvt. Ltd, New Delhi.

Reference Books

1. Richard Saferst in and Criminalistics-An Introduction to Forensic Science (College Version), Sopfestein, Printice hall, eighth edition,2003
2. Suzanne Bell, Forensic Chemistry, Pearson, second international edition, 2014.
3. Jay Siegel, Forensic chemistry: Fundamentals and applications, Wiley- Blackwell, first edition, 2015.
4. Max M. Houck & Jay A. Segal, (2006) Fundamentals of Forensic Science, Elsevier Academic press.
5. Henry C. Lee, Timothy Palmbach, Marilyn T. Miller, (2006) Henry Lee's Crime Scene Book Elsevier Academic press.

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Chemistry

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-V

Agricultural Chemistry

UNIT-I Fertilizers

- 1.1 Fertilizers-Primary, Secondary and micro nutrients on plant growth and development. Commercial method of Nitrogenous fertilizers-preparation and uses of urea, ammonium nitrate and ammonium sulphate.
- 1.2 Phosphate Fertilizers-Preparation and uses of mono and diammonium phosphate, superphosphate and triple superphosphate.
- 1.3 Potassium Fertilizers-Preparation and uses of potassium nitrate, potassium chloride and potassium sulphate. Complex fertilizers and mixed fertilizers-their manufacture and composition.

UNIT-II Manures

- 2.1 Manures:Organicmanures-Bulkyorganicmanures-Farmyardmanure-Difference between fertilizers and manures-
- 2.2 Handling and storage practices-freshmanure, fermentation and liquid treatment-Aerobicand Anaerobic-Enriched organic manures-oil cakes, bloodmeal and fishmanures.

UNIT-III Pesticides And Insecticides

- 3.1 Pesticides: classification of Insecticides, fungicides, herbicides as organic and inorganic-general methods of application and toxicity. Safety measures when using pesticides.
- 3.2 Insecticides:Plant products-Nicotine, pyrethrin-Inorganic pesticides-borates. Organic pesticides- D.D.T. and BHC.

UNIT-IV Fungicides And Herbicides

- 4.1 Fungicide: Sulphur compounds, Copper compounds, Bordeaux mixture.
- 4.2 Herbicides: Acaricides -Rodenticides. Attractants-Repellants. Preservation of seeds.

UNIT-V Soils

- 5.1 Soils-Composition of soil- organic and inorganic constituents-Classification- Properties of soils-physical and chemical-Important functions of water in plant growth-Biological system of the soil- Role of soil organisms.
- 5.2 Soil analysis-pH, Electrical conductivity, Estimation of macronutrients and micronutrients.

References

1. Plant Ecology and Soil Science, R.S. Shukla and P.S. Chandel.
2. Shreve's Chemical Process Industries, G.T. Austin
3. Agricultural Chemistry, B.A. Yagodin.

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Chemistry
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-VI
Textile Chemistry

Unit 1. Fibre Science Definition of textile fibres; Essential and desirable properties of textile fibres; Textile fibre classifications. Natural fibres: Cotton, Wool, Silk, Flax (Linen), Jute; Physical & chemical properties, fine structure, Chemical structure and applications. Brief idea of Regenerated cellulosic fibres: Viscose, Lyocell, Cuprammonium rayon. Introduction to Manmade fibres: Raw materials, manufacturing process, physical and chemical properties and applications of polyester, polyamides, Acrylic & Polyolefins.

Unit 2. Chemical preparatory process: Fabric preparatory processes: Grey inspection, Shearing, Cropping, Singeing & its types, Introduction to desizing, technology of acid and enzymatic desizing methods. Chemistry and technology of hypochlorite, peroxide and chlorite bleaching, Wool scouring, bleaching; silk degumming and bleaching. Introduction to Mercerisation, its chemistry and technology; Textile auxiliaries for scouring and bleaching.

Unit 3. Dyes & Coloration of textiles Introduction to dyeing: Theory of Colour, chromophore, auxochrome, chromogen. Primary and Secondary colour. Classification of dyes based on method of application, Properties & Application of different dyes on textiles like Direct, Reactive, Vat, Azoic, Sulphur, Acid, Basic dyes, disperse dyes. Printing Basics: Introduction to printing; Different methods & styles of Printing; Printing paste ingredients & types of thickeners; Concepts of Ageing, Steaming & Curing. Dyeing and printing auxiliaries.

Unit 4. Finishing of Textiles Introduction to Finishing: Importance of textile finishing, classification of finishing, Concept about different type of softeners-anionic, cationic, non-ionic, amphoteric, reactive softeners, silicone softeners. Functional finishes: Its properties and agents in water repellent and water proof finishes, antcreasing agents, Soil release finish, Antistatic finish, UV protection finish, antimicrobial finish, flame retardants, anti-odour finish. Concept of enzymatic finishing in cotton (Bio polishing)

Unit 5. Technical Textiles and Textile Effluent: Basic introduction about technical textiles. Fibres that are used for technical textiles. Production of high performance fibres like Kevlar and aramid. Different types of Technical textiles; Filtration, Automotive, Home, Packaging & Medical. Textile Effluent: Characteristics and determination of BOD, COD, TDS, pH and Toxicity Modern Textile Effluent Treatment process -Primary, Secondary, Tertiary & Membrane technology. Concept of Zero Discharge and its importance.

References:

1. Shenai, V.A., 1983. Chemistry of dyes and principles of dyeing.
2. Prayag RS. Textile finishing. 1994.
3. Shenai VA. Toxicity of dyes and intermediates. 1995;
4. Mishra SP. A text book of fibre science and technology. New Age International; 2000
5. R.S. Bhagwat, Handbook of Textile Processing Machinery, Color Publication, 1999
6. Textile Effluents by Padma Varkar, NCUTE Publications, IIT, Delhi.
7. Environmental Chemistry and pollution Control, S.S. Dhara, S. Chand & Co., Delhi.
8. N. Manivasakam, Treatment of Textile Processing Effluents, Sakhi Publications, 1995.

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B.Sc. NUTRITION AND DIETETICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER – II
FOOD PROCESSING

UNIT-I

Scope and importance of food processing Cereal – processing of raw and parboiled rice and rice products- Puffing and flaking. Wheat and corn processing, feed for livestock from wheat bran and germ. Potato processing – potato chip, flakes and powder.

UNIT-II

Decortication processing of legumes, effect of processing of legumes on their nutrient composition and quantity and quality, quick cooking legumes, instant legume powders, legume protein concentrates, by-products utilisation of legume processing and storage of legumes.

UNIT III

Processing of oil seeds, packing and storage of fats and oils, change during storage of oils. Oil speciality products-margarine, mayonnaise, salad dressing and fat substitutes, Nutritional food mixes from oilseeds – processing oil seeds for food use, protein enriched foods

UNIT IV

Storage and handling of fresh fruits and vegetables, processing of fruits and vegetables juice concentrates and powders, by- products from fruits and vegetables waste. Canning process of fruits and vegetables. Cultivation of mushroom and its processed products.

UNIT V

Processing of milk, manufacture of butter, paneer and cheese. Fish processing –canning, freezing, drying, salting, smoking and curing, uses of by-products. Meat processing - curing and smoking, Poultry and egg powder – processing and storage

REFERENCES

1. Norman N. P. and Joseph H.H, Food science, CBS Publishing New Delhi, 1997.
2. Stadelman W.J., Olson V.M, Shemwell G.A and Parch S., Egg and poultry meat processing, Elliwood Ltd, 1998..
3. Subbulakshmi G., Shobha A. Udipi, Food processing and preservation, New age international publisher, New Delhi, 2008.
4. Sivasankar B., Food Processing and Preservation, PHI Learning private limited, New Delhi, 2015.
5. Sumati R. Mudambi,M.V. Rajagopal., Fundamental of food, nutrition and diet therapy. New age international publishers, New Delhi, 2015.

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B.Sc. NUTRITION AND DIETETICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-III
FOOD PACKAGING

UNIT-I

Food packaging- Definition, functions and levels of packaging. Packaging materials: Introduction, purpose, requirements and characteristics of packaging materials. Packaging materials for processed foods: Metal cans- Types and their recommended uses. Glass containers- Characteristics, advantages and surface treatments.

UNIT-II

Plastics: General properties, pack requirements, applications, types of packaging plastics- PET, HDPE, PVC, LDPE, PP and PS; plastic films- types and applications; advantages of usage of plastic in food packaging; shrink and stretch films- properties, advantages and disadvantages. Papers: Types, uses in packaging; corrugated board and solid fiber board- introduction. Aseptic packaging: Introduction and heating systems involved.

UNIT-III

Modified atmosphere packaging (MAP): Definition, gases used in MAP, types and active packaging. Microwave or enable packages: Meaning and advantages. Retortable packages: Types and advantages.

UNIT-IV

Packaging of cereals: Storage of wheat, rice, breakfast cereals and pasta. Packaging of dairy products: Packaging materials used in dairy industries. Packaging of fruits and vegetables: Packaging of fresh produce and packaging of minimally processed fruits and vegetables. Packaging of meat: Packaging of fresh meat, poultry and eggs.

UNIT-V

Application of nanotechnology in food packaging and its benefits. Future of food packaging: Smart packaging and activated packaging; RFID tags in packaging, intelligent packaging, self heating and self chilling packages. Labeling: Definition, purpose, types, materials used, regulations, recent trends, thermo chromic labeling.

REFERENCES

1. NIIR Board of consultants and engineers, Food packaging technology, Hand book, NIIR, Delhi.
2. Neelam Khetarpaul and Darshan Punia, Food Packaging, Daya publishing house, New Delhi. 2012.
3. Vijaya Khader, Text book of food science and technology, Indian council of agricultural research, New Delhi, 2001.

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B.Sc. NUTRITION AND DIETETICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV
FOOD BIOTECHNOLOGY

UNIT-I

Biotechnology- Meaning and importance, history of biotechnology- traditional and modern biotechnology. Genetically modified foods- Definition and examples, advantages, disadvantages and safety aspects of foods produced by genetic engineering.

UNIT-II

Food biotechnology- Single cell protein, algae and spirulina: production and uses; Mushroom-production and processing. Genomics and proteomics- Meaning, types and future; bioinformatics- meaning, sequences and nomenclature; information sources; uses

UNIT-III

Enzymes- Role in food processing, importance; applications- industrial application of microbial enzymes; production of amylase, lipase and pectinase; immobilized enzymes and their applications

UNIT-IV

Fermentation- Types, advantages, factors controlling; batch fermentation and continuous fermentation; Fermented products- citric acid, lactic acid, vinegar, wine, beer, oriental fermented foods- tempeh and tofu.

UNIT-V

Biotechnology and biosafety- Introduction to intellectual property rights; intellectual property laws; Trade Related Aspects of Intellectual Property Rights. Forms of IPR like patent, design and copyright trademark; Bioethics: Necessity of bioethics, different paradigms of bioethics- national and international.

REFERENCES

1. R.C. Dubey, A text book of Biotechnology, S.Chand and company, New Delhi, 2005.
2. S.N. Tripathy, Food biotechnology, Dominant publishers and distributors, 2006.
3. Kumar, H.D., A text book of Biotechnology, Affiliated East-West Press pvt Ltd., New Delhi, Second edition, 2004.
4. Kumaresan.V., Biotechnology, Saras Publication, 2005.

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NUTRITION AND DIETETICS

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-V

SANITATION AND HYGIENE IN FOOD INDUSTRIES

UNIT-I

Sanitation: Definition and meaning, deteriorative effects of micro organisms- physical and chemical changes; methods of killing micro organism- heat, chemicals and radiation; methods of inhibiting microbial growth- refrigeration, chemicals, dehydration and fermentation.

UNIT-II

Contamination of food products: Contamination of red meat, poultry and sea food during processing, contamination of dairy products and other food; contamination of ingredients; other sources of contamination- equipment, employees, air and water, sewage, insects and rodents; protection against contamination- protection against environment, protection during storage, protection against contamination from litter and garbage, protection against toxic substances.

UNIT-III

Cleaning compounds: Characteristics of good cleaning compound, classification- alkaline cleaning compound and acid cleaning compound, synthetic detergents, soaps, solvent cleaners; detergent auxiliaries- protection and cleaning auxiliaries; scouring compounds; selection of effective cleaning compound. Sanitizers: Meaning, Types: thermal sanitizing, radiation sanitizing and chemical sanitizing.

UNIT-IV

Cleaning steps in dairy industry; sanitation practices and procedures in meat processing industry; cleaning steps in sea food plants; cleaning procedure for vegetable and fruit processing industry; cleaning steps of a food service facility.

UNIT-V

Waste disposal: Solid waste disposal; waste water handling- pre treatment, primary treatment, secondary treatment, tertiary treatment and disinfection. Personal hygiene: Definition, need, personal hygiene and contamination of food products; requirements for hygienic practices; sanitary handling of food.

REFERENCES

1. Norman G. Marriott, Principles of sanitation, Van Nostrand Reinhold company, Newyork. 1985.
2. Mario Stanga, Sanitation: Cleaning and Disinfection in the Food Industry, Wiley, 2010. 3. Y. H. Hui, L. Bernard Bruinsma, J. Richard Gorham, Wai-Kit Nip, Phillip S. Tong, Phil Ventresca, Food plant sanitation, CRC Press, 2002.
4. Y. H. Hui, Plant sanitation for food processing and food service, CRC Press, 2014.

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NUTRITION AND DIETETICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-VI

FAMILY FINANCE AND HOUSING

UNIT - I Introduction to Home Economic: Indian standard of living - ways to improve the standard of living in India. Human wants: Nature and classification, the concept of marginal utility, principles of equi-marginal utility, law of diminishing marginal utility.

UNIT - II Family income and expenditure: Types of Income, Methods of handling family income, Family budget, Engle's laws of consumption, Home account maintenance, Institutions for family saving. Household purchases: Functions of money, Rise in prices and methods used to curb it in India, when and how to purchase.

UNIT - III Consumer Protection: Consumerism - Need for consumer protection, Right of a consumer, Methods adopted to provide consumer protections. The main Indian Taxes: The influence of taxes on willingness to work and save.

UNIT -IV House Planning: Selection of a site, Principles involved in planning a good house, plans for different income groups namely low, middle and high. Housing finance - Financial consideration in housing, Source of finance Government and other agencies Co-operative Banks, Nationalized Banks, Housing Board and NGO

UNIT - V House and its services: Lighting in home, importance, types of lights, lighting requirements for various rooms, selection of lamp shades. Major Labour Saving devices: Selection, use and care of washing machines - Vacuum cleaner, refrigerator and mixer.

REFERENCES:

1. Deshpande K.S. - "Modern Ideal Homes for India", United Book Corporation, Pune, 1983.
2. Nickell P and Dorsey, J.M. "Management on Family Living", John Wiley and sons, 1978.
3. Despande, R.S. "Build your own home", United Book Corporation, Pune, 1983.
4. Agan, J. "The house and its plan and use" J.P. Lippen Cott and Co, New York, 1970.
5. Mitra K.J, "Economic Micro-Macro" the Work Press Private Ltd., Calcutta, 1975.

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B.B.A
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II
BUSINESS PROCESS OUTSOURCING

UNIT – I

BPO – Meaning – Definition – Evaluation Recent Development – Insourcing – Outsourcing – Needs – Technical requirement – Eligibility

UNIT – II

Call Centers – Functions – Processes – Classifications – Telemarketing – Tele Selling – Preparing for a Job – Approach – Preparation – Training – Selection Process.

UNIT – III

Improving Efficiency – Handling Calls – Team Player – Pleasing the Customers Converse efficiently – Reducing stress.

UNIT – IV

Numerical aptitude – Basic Computer Skills – Type Master – Written Test Interviews – Telephonic Interviews

UNIT – V

Good Communicator – Ability to lead – Pleasing personality – Physical fitness – Dress Consciousness – Other Personality Development.

REFERENCE BOOK

1. Fundamentals of Computer Science & Communication Engineering by Alexis Leon, Mathew Leon.
2. Quantitative Aptitude by R. S. Agarwal
3. English Conversation Practice by Grand Tailor
4. English Course by Lingua Phone
5. Adult Faculty by Kev Nair

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B.B.A
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-III
PRACTICE OF BUSINESS RELATIONS

UNIT – I

Public Relations – definition – essentials of good public relations – public relations for commercial organization

UNIT – II

Public Relations officer's (PRO'S) role – responsibilities –press relation – preparation of material for the media – news and news reporting – editorial reviews – articles – public relations department.

UNIT – III

Training of public relations officers – PR society of India – Indian institute of mass communication – Indian press – Trade fair authority of India

UNIT – IV

Book Publications in India – Role of publishers, distributors and booksellers – electronic media – radio – television – house journals – documentary films – mobile film shows – film censorship – guidelines.

UNIT – V

Exhibition and trade fair – consumer and marketing fair – photography – folk dance – sponsorship programme – music festivals.

TEXT BOOK

1. Management of Public relations – S. Senguptha , vikas publishing house

REFERENCE BOOKS

1. Lecture on applied public relations – Prof.K.R. Balan, Sulthanchand&sons Delhi.
2. Public relations problems and prospects with case studies – Anil baby, Space age publications, New Delhi.
3. Hand book of PR in India – D.S. Menta, allied publisher (p) Ltd New Delhi.
4. The practice of public relations – Frason p. Seital,Charler E Merial Publishing Company , Columbus.

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B.B.A
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-IV
PROJECT METHODOLOGY

UNIT – I

Introduction: Project – Meaning – Features – Objectives of project – Difference between dissertation and Thesis.

UNIT – II

Identification of project problems – Problems related to Finance, Marketing, HRM, EDP, Banking.

UNIT – III

Review of Literature – Sampling – Selection of sample – Collection of data.

UNIT – IV

Data analysis – Percentage and trend analysis – Numerical evaluation – Justification and interpretation.

UNIT – V

Project Report Writing.

TEXT BOOK:

1. Project Methodology – Senthilkumar.K & Sasikumar.G, Himalaya Publishing House, Mumbai.
2. Research Methodology – Methods and Techniques, C.R.Kothari, Gourav Garg – New age international publishers, New Delhi.

REFERENCE BOOKS:

1. Project Management – K.Nagarajan, New age international publishers, New Delhi.
2. Elements of project management - K.Nagarajan, New age international publishers, New Delhi.
3. A Guide to projects – Dr. R. Ravilochanan, Margham publications, Chennai.

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B.B.A
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-V
LIFE SKILL EDUCATION

UNIT I

Definition and Importance of Life Skills, Livelihood Skills, Survival Skills and Life Skills. Life Skills Education, Life Skills Approach, Life Skills Based Education

UNIT II

Self awareness: Definition, types of self. Self concept, body image, self esteem. Techniques used for self awareness: Johari window, SWOT analysis. Empathy, sympathy & Altruism

UNIT III

Interpersonal relationship: Definition, factors affecting relationship. Listening: Definition & Tips for Effective listening. Thinking: Nature, Elements of thought. Types of thinking, concept formation, reasoning. Critical thinking: Definition, nature & stages.

UNIT IV

Goal setting. Coping with stress: Definition, stressors, source of stress. Coping skills.

UNIT V

Coping with emotions: Definition, Characteristics and types. Coping strategies.

PRESCRIBED BOOKS

1. Delors, Jacques (1997). Learning: The Treasure Within, UNESCO, Paris..
2. UNESCO (1997). Adult Education: The Hamburg Declaration, UNESCO, Paris.
3. UNESCO (2005). Quality Education and Life Skills: Dakar Goals, UNESCO, Paris.
4. WHO (1999). Partners in Life Skills Education: Conclusions from a United Nations – Agency Meeting, WHO, Geneva.
5. Santrock W. John (2006). Educational Psychology. (2nd Edn.) New Delhi: Tata McGraw-Hill Publishing Company Ltd.

REFERENCES

1. Dakar Framework for Action, (2000). Education for All: Meeting our Collective Commitments, Dakar, Senegal.
2. Kumar .J. Keval, (2008). Mass Communication in India, JAICO Publication India Pvt. Ltd
3. Morgan and King, (1993). Introduction to Psychology, Tata McGraw-Hill Publishing Company Ltd, New Delhi.
4. Rao P.L. (2008). Enriching Human Capital through Training and Development, Excel Books, Delhi.
5. Singh Madhu, (2003). Understanding Life Skills, Background paper prepared for Education for All: The Leap to Equality

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B.B.A

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-VI

CAPITAL MARKET

UNIT-I

Indian capital market: Primary Market (New Issue Market) – methods of floating new issues – parties involved in new issue market – Secondary Market (Stock Exchange) – definition of Stock Exchange – BSE, NSE & OTCEI.

UNIT-II

Mutual Fund: Features & Characteristics – Mechanism of mutual fund operation – benefits of mutual fund – types & various schemes of mutual fund.

UNIT-III

Depository System: Meaning & definition of Depository system – process of dematerialization – NSDC – CDSL.

UNIT-IV

Securities Exchange Board of India (SEBI) – objectives & Functions – powers of SEBI – SEBI guidelines for primary market & Secondary market – measures for investor protection.

UNIT-V

Derivatives – characteristics for derivatives – participants in derivative market – types of financial derivatives – forwards, futures, options & Swaps.

TEXT BOOKS

1. Capital Markets: Institutions and Instruments by Fabozzi and Frank J

REFERENCE BOOKS

1. Financial Market & Services – E. Gardon&Natrajan, Himalaya Publishing House.
2. Financial Services – D. Santhanam, Margham Publication.

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B.A. ENGLISH & B.A.ENGLISH (CA)

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II

JOURNALISM – BASICS

UNIT-I

What is news?
The Reporter
News Editor

UNIT-II

Anatomy of Editing

UNIT-III

Language and Style

UNIT-IV

Headlines

UNIT-V

Design and make-up
Picture Editing and Captions

PRESCRIBED BOOK:

Rangasamy Parthasarathy : *Basic Journalism, Macmillan*

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B.A. ENGLISH & B.A.ENGLISH (CA)
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-III
PUBLIC SPEAKING SKILLS

UNIT I

What is Public Speaking?

UNIT II

Need for Public Speaking.

UNIT III

Significance and essentials of public speaking skills

UNIT IV

Techniques in acquiring the skill

UNIT V

Speaking any common topic in front of the class

TEXT BOOKS (LATEST EDITIONS)

1. Beebe, S. A., & Beebe, S. J. (2006). Public Speaking: An audience -centred approach (6th ed.). New York: Pearson
2. Fraleigh, D.M., & Tuman, J.S.(2009). Speak up! An illustrated guide to public speaking. New York: Bedford/St. Martins

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B.A.ENGLISH & B.A.ENGLISH (CA)
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-IV
ENGLISH FOR CAREERS

UNIT-I: Definition of English Language-Characteristic Features

UNIT-II: Purposes of English Language

UNIT-III Major Roles played by English Language in Education and various career Choices

UNIT-IV English language as a identity to popular culture

UNIT-V The major developments happening in the contemporary world by using English language.

Text Books (Latest Editions)

1. The Waterfall. The English Writings of Rabindranath Tagore. Ed. Sisir Kumar Das. Vol. II. New Delhi: Sahitya Academy, 1966. 163-208. Print
2. Geddes, Patrick. The Life and Work of J. C. Bose. London: Longman's Green and Co., 1920. Print

References Books

(Latest editions, and the style as given below must be strictly adhered to)

1. Bose, D.M. "J.C. Bose." Dr. D. M. Bose Centenary Celebration Commemoration Volume 1885- 1985. Kolkata: Bose Institute, 1995. Print

ENGLISH & ENGLISH (CA)

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

PRESENTATION SKILLS

UNIT-I

Powerful Presentation (1-15)

UNIT-II

Reinforcement (16-30)

UNIT-III

Using visual aids (31-46)

UNIT-IV

Types and Methods of Presentations (47-59)

UNIT-V

Obstacles to Presentation (61-75)

PRESCRIBED BOOK:

Roz Townsend : Presentation Skills for the Upwardly Mobile, Emerald, Chennai

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ENGLISH & ENGLISH (CA)

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

Professional Competency Skill - INTERVIEW SKILLS

UNIT-I

Definition of Interview-Essentials of Interview Skill

UNIT-I

Needs and Requirements of Interview skills

UNIT-I

Resume Preparation- Do's and Don'ts of an interview

UNIT-I

Body language-gesture-attitude-facial expression-sound knowledge

UNIT-I

Mock Interview-Conducting a role play for students to understand the skills learnt as an interviewee.

Text Books (Latest Editions)

1. Ros Jay(2002), Brilliant Interview, Prentice Hall
2. David Beckham (2013), The illustrated Book, Headline Publications

References Books

1. Elizabeth Harrin, ebook, Overcoming Imposter Syndrome: Ten strategies to stop feeling like a fraud at work.

B.Sc. MICROBIOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER II
MICROBIAL DIVERSITY

UNIT-I

Prokaryotic and Eukaryotic microorganisms. Classification of microorganisms. General principles and nomenclature - Hackel three kingdom and Whittaker's five kingdom concept.

UNIT- II

Classification and characterization of bacteria (Bergey's manual), structure of bacterial cell. Economic importance of bacteria. General characters of Actinomycetes and their importance.

UNIT- III

Taxonomy and General characteristics of Fungus. Fungal cell structure, composition. Mucor, Rhizopus, Aspergillus and Penicillium. Economic importance of fungi. Unit-IV Algae - morphology and general characters - Algal cell structure. Cyanobacteria - salient features and its importance, Heterocyst.

UNIT- V

Virus - morphology, general characters, structure of animal virus (Adena virus), plant v1rus (TMV), bacteriophage (T4), insect virus (PV). Protozoa - general characters, structure of Euglena, Paramecium.

REFERENCES

1. Prescott L M, J P Harley and D A Klein (2005). Microbiology. Sixth edition, International edition, McGraw Hill.
2. Dubey RC and Maheswari DK (2012). A text of Microbiology (Revised edition). S.Chand and Company Ltd., New Delhi.
3. GeetaSumbali and Mehrotra RS (2009). Principles of Microbiology. First edition, Tata McGraw Hill P.Ltd., New Delhi.
4. PelczarTR M J Chan ECS and Kreig N R (2006). Microbiology. Fifth edition, Tata McGraw-Hill INC. New York.
5. Robert F Boyd (1984). General microbiology. Times mirror/Mosby college publishers.
6. JagadishChander (1996). A text book of Medical Mycology. Interprint, New Delhi.
7. Atlas and Atlas. Microbiology. Pearson publications. 4TH edition.

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B.SC. MICROBIOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER III
NUTRITION & HEALTH HYGINE

UNIT I

Nutrition – definition, importance, Good nutrition, and mal nutrition; Balanced Diet: Basics of Meal Planning. Carbohydrates, Lipids, Proteins and Vitamins –functions, dietary sources, effects of deficiency. Macro and micro minerals –functions, effects of deficiency; food sources of Calcium, Potassium, and Sodium; food sources of Iron, Iodine, and Zinc. Importance of water– functions, sources, requirements and effects of deficiency.

UNIT II

Nutrition for Life Cycle: Balanced diet - Normal, Pregnant, lactating women, Infancy, young children Adolescents, Adults, and the Elderly;Diet Chart; Nutritive value of Indian foods.

UNIT III

Improper diets: Definition, Identification, Signs and Symptoms - malnutrition, under-nutrition, over-nutrition, Protein Energy Malnutrition, obesity; Nutritional Disease and Disorder - hypertension, diabetes, anemia, osteomalacia, cardiovascular disease.

UNIT IV

Health - Determinants of health, Key Health Indicators, Environment health & Public health; Health-Education: Principles and Strategies. Health Policy & Health Organizations: Health Indicators and National Health Policy of Govt. of India; Functioning of various nutrition and health organizations in India.

UNIT V

Hygiene – Definition; Personal, Community, Medical and Culinary hygiene; WASH (Water, Sanitation and Hygiene) programme. Rural Community Health: Village health sanitation & Nutritional committee.Community & Personal Hygiene: Environmental Sanitation and Sanitation in Public places

TEXT BOOKS

1. Bamji, M.S., K. Krishnaswamy& G.N.V. Brahmam (2009) Textbook of Human Nutrition(3rd edition) Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi
2. Swaminathan (1995) Food &Nutrition (Vol I, Second Edition) The Bangalore Printing & Publishing Co Ltd., Bangalore
3. SK. Haldar(2022). Occupational Health and Hygiene in Industry. CBS Publishers.
4. Acharya, Sankar Kr, Rama Das, Minati Sen (2021). Health Hygiene and Nutrition Perceptionand Practices.Satish Serial Publishing House
5. Dass (2021).Public Health and Hygiene, Notion Press

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B.SC. MICROBIOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV

APICULTURE

Unit

- I Biology of Bees: Honeybee – Systematic position – Species of Honey bees – Life history of Honey bee – behaviour – swarming – Pheromone.
- II Social life in Bees: Bee colony – Castes – natural colonies and their yield – Types of bee hives – Structure – location, care and management.
- III Bee Rearing: Apiary – Care and Management – Artificial bee hives – types – construction of space frames – Selection of sites – Handling – Maintenance – Instruments employed in Apiary – Extraction instruments.
- IV Bee Economy: Honey – Composition – uses – Bee wax and its uses – yield in national and international market – Diseases of honey bees and their control methods. Economics of bee culture.
- V Entrepreneurship: venture – Preparing proposals for financial assistance and funding agencies – Bee Keeping Industry – Recent Efforts, Modern Methods in employing artificial Beehives for cross pollination in horticultural gardens.

Text Books

- 1. Dewey M. Caron. (2013). Honey Bee Biology and Beekeeping. Revised Edition. Wicwas Press, Kalamazoo. ISBN 10: 1878075292
- 2. R. A. Morse. (1993). Rearing queen honey bees. Wicwas press, NY. ISBN-10 : 5505701711
- 3. Ted Hooper. (2010). Guide to Bees & Honey: The World's Best Selling Guide to Beekeeping. Northern Bee Books. Oxford. ISBN 10: 1904846513
- 4. Jayashree K. V., Tharadevi C.S. and Arumugam N. (2014) Apiculture. Saras Publication
- 5. Raj H. (2020). Vinesh Text Book of Apiculture. S. Vinesh and Co.

References Books

- 1 Dewey M. Caron. (2020). The Complete Bee Handbook: History, Recipes, Beekeeping Basics, and More, Rockridge Press. ISBN-10 : **1989116161**
- 2 Joachim Petterson. (2016). Beekeeping: A Handbook on Honey, Hives & Helping the Bees, Weldon Owen.
- 3 Eva Crane. (1999). The World History of Beekeeping and Honey Hunting. Routledge. India. ISBN-10 : 7551295100
- 4 Pagar B. S. (2016). Textbook Of Apiculture. Sahitya Sagar.

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MICROBIOLOGY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

Mushroom Technology

Unit- I

Introduction-History-Scope and importance of mushroom cultivation. Present status of mushroom industry in India - Mushroom research and development - Pure Culture- Media Preparation and maintenance of mother culture. Spawn production - types- methods storage and transportation.

Unit- II

Cultivation Technology - Infrastructures- substrates - inoculation methods. Mushroom bed preparation. Preservation technology- long term storage - short term storage. Post-harvest handling. Types and importance of edible mushroom in India-Agaricusbisporus, Pleurotussps, Mushroom contamination. Poisonous Mushroom.

Unit -III

Nutritional and Medicinal values of Mushroom - protein - carbohydrates - vitamins - minerals – fiber content. Preparation of low calorie foods – soups curry. Marketing values in India- export value. Course outcome ∞ Able to get basic idea about mushroom cultivation ∞ For to learn techniques about spawn multiplication ∞ Capable to identify the diseases of edible mushrooms ∞ Able to make the students ideally skilled for self employment .

REFERENCE

1. Paul StametsJS and Chilton JS. Mushroom Cultivator: A practical guide to growing mushrooms athome,AgarikonPress.2004.
2. Suman BC andSharmaVP. Mushroom Cultivation, Processing and Uses. Agribios(India) Publishers, Jodhpur.2005.
3. Marimuthu, et al., (1991). Oyster Mushroom, Dept. of Plant Pathology,TNAU, Coimbatore.
4. NitaBahl(1988).HandbookofMushroom,2ndEdition,Vol.I&II.
5. TewariandPankajKapoor, S.C. (1988). Mushroom Cultivation. Mittal Publication,Delhi.

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MICROBIOLOGY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

AQUACULTURE

UNIT-I

Aquaculture Systems and Methods - Scope and definition. Traditional, extensive, semi - intensive and intensive culture. Monoculture, polyculture, composite culture, mixed culture, mono-sex culture, cage culture, pen culture, raft culture, race way culture.

UNIT-II

Aquaculture Engineering - Design and construction of pond, layout and design of aquaculture farm, construction, water intake system, drainage system - aeration and aerators. Ponds - Types of ponds

UNIT-III

Selection of Species - Biological characteristics of aquaculture species; economic and market considerations; seed resources, collection and transportation. Pre-Stocking Management-Sun drying, ploughing / tilling, desilting, liming and fertilization, eradication of weed fishes. Stocking - Acclimatization of seed and release - species combinations - stocking density and ratio.

UNIT-IV

Post Stocking Management - Water and soil quality parameters required for optimum production, control of aquatic weeds and aquatic insects, algal blooms and microorganisms. Food conversion ratio (FCR). Growth - Measurement of growth, length - weight relationship.

UNIT-V

Major cultivable species for aquaculture –Culture of Indian Major Carps. Culture of Giant fresh water prawn, *Macrobrachium rosenbergii* - seed collection formation sources. Hatchery management. Culture of tiger shrimp, *Penaeus monodon* and *Litopenaeus Vannamei*. Culture of pearl oysters. Culture of sea weeds. Methods of Crab culture. Culture of ornamental fishes. Culture of Molluscs

Text Books

1. Santhanam, R. Velayutham, P. Jegatheesan, G. A (2019).Manual of Freshwater Ecology: An Aspect of Fishery Environment. Daya Publishing House, New Delhi.
2. Stickney, R.R. (2016). Aquaculture: An Introductory Text. 3rd Edition. Centre for Agriculture and Bioscience International Publishing.
3. Ackefors H., Huner J and Konikoff M. (2009). Introduction to the General Principles of Aquaculture. CRC Press.
4. Mushlisin Z. A. (2012). Aquaculture. In Tech.
5. Akpaniteaku R.C. (2018).Basic Handbook of Fisheries and Aquaculture. AkiNik Publications

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B.A. Tamil / B.Lit. Tamil
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester II
ஊடகவியல்

அலகு - 1

ஊடகம் அறிமுகம் - ஊடக வகைகள் - வரலாறு - ஊடகங்களில் தமிழ் - தொழில் நுட்பம்.

அலகு - 2

அச்ச ஊடகங்கள் - நாள், வார, மாத இதழ்கள்

அலகு - 3

வானொலி - தொலைக்காட்சி - தோற்றம் வளர்ச்சி - நிகழ்ச்சிகள் - செய்திப்பிரிவு

அலகு - 4

திரைப்படம் - அறிமுகம் - வரலாறு, மேற்குலக கிழக்குலக சினிமாக்கள் - இந்தியக் கலைத் திரைப்படங்கள் - சிறந்த கலைஞர்கள் - தொழில் நுட்ப வல்லுநர்கள் - திரைப்பட விமர்சனம் - இன்றைய படங்கள்.

அலகு - 5

திரைக்கதை அமைப்பு - திரி - ஆக்ட் ஸ்ட்ரக்சர் - திரைக்கதை உள் அமைப்புகள் - எமோசன் என்னும் உணர்ச்சிகள் - காட்சி உருவாக்குதல். இணையம் - வளர்ச்சி - வரலாறு - தமிழ் இணை இதழ்கள் - தமிழ் இணைக் கல்விக் கழகம் செயல்பாடுகள் - இணைய தளங்கள் - முகநூல் சமூக வலைதளங்கள் - வலைப்பூக்கள் - மின்னஞ்சல்

பார்வை நூல்கள்

1. இதழியல் கலை - மா. பா. குருசாமி
2. தகவல் தொடர்பியல் - வே. கிருஷ்ணசாமி
3. உலகத் திரைப்படங்கள் - எஸ். ராமகிருஷ்ணன்
4. எம் தமிழர் செய்த டபங்கள் - சு. தியோடர் பாஸ்கரன் பார்வை நூல்கள்
5. தமிழ் சினிமாவின் கதை - அறந்தை நாராயணன்
6. உலக சினிமா - செழியன் (மூன்று தொகுதிகள்)
7. திரைக்கதை எழுதுவது எப்படி - சுஜாதா
8. திரைக்கதை எழுதும் கலை - சங்கர்தாஸ்

B.A. Tamil / B.Lit. Tamil
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester III

தொழில் முனைவுத்தமிழ்

UNIT I

தொழில் முனைவோர் - தொழில் முனைவு - பன்னாட்டுத் தொழில் முனைவோர் - பெண் தொழில் முனைவோர் - இந்தியாவில் தொழில் முனைவு வளர்ச்சி.

UNIT II

சிறு, குறு, நடுத்தர தொழிலகம் ஒரு பார்வை - சிறு, குறு, நடுத்தர தொழில் தொடங்குவது, - திட்டப்பணியை அடையாளம் காணல், - திட்ட அறிக்கை - தொழில் தொடக்க நிலை.

UNIT-III

திட்ட மதிப்பீடு - தொழிலுரிமை - தொழில் முனைவோருக்கு நிறுவனங்களின் துணையிருப்பு - தொழில் முனைவோருக்கு உதவும் நிதி நிறுவனங்கள் .

UNIT-IV

எம்.எஸ்,எம்,எமி இலிருந்து கிடைக்கும் நிதி. - தொகுப்பு வளர்ச்சி செயல் திட்டம் - எஸ்.எம்.இ தரச் சேவை.

UNIT-V

கிளை நிறுவனங்கள் - தொழில் முனைவோரின் பங்கு - சிறு, குறு, நடுத்தர நிறுவனங்களின் தொடர் வளர்ச்சி இன்மை. மேம்படுத்துவதற்கான திட்டங்கள்

REFERENCE BOOKS

1. Entrepreneurship Development- E.GORDON & K.NATARAJAN (HIMALAYA PUBLISHING HOUSE).
2. Entrepreneurship Development in India – DR.C.B.GUPTA&DR.N.P.SRINIVASAN (SULTAN CHAND&SONS)

B.A.TAMIL & B.LIT TAMIL
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV

பணி வாய்ப்புத் தமிழ்

- Unit -I** சங்க காலம் சங்கம்- மருவிய காலம்
- Unit -II** பக்தி இயக்கம்- சமயங்கள் வளர்த்த தமிழ்
- Unit -III** காப்பியங்கள்- புராணங்கள்- இலக்கண நூல்கள் - நிகண்டுகள்- சிற்றிலக்கியங்கள்.
- Unit -IV** மரபுக் கவிதை- புதுக்கவிதை- ஹைக்கூ -நாடகம்- புதினம்- சிறுகதை
- Unit -V** உரைநடை- பத்துறை வளர்ச்சி

Text Books

1. தமிழ் இலக்கிய வரலாறு, மு வரதராசன், சாகித்ய அகாடமி

Reference Books

- புதிய நோக்கில் தமிழ் இலக்கிய வரலாறு, தமிழ் அண்ணல், மீனாட்சி புத்தக நிலையம், மதுரை
- தமிழ் இலக்கிய வரலாறு, எம்மார் அடைக்கல சாமி, சென்னை.
- முனைவர் ச.வே. சுப்பிரமணியன் தமிழ் இலக்கிய வரலாறு,, மணிவாசகர் பதிப்பகம், சென்னை -18. 2010.
- புதிய தமிழ் இலக்கிய வரலாறு தொகுதி 3 (நவீன இலக்கியம்) சிற்றி.பாலசுப்பிரமணியம் நீல.பத்மநாபன் (பதிப்பாசிரியர்), சாகித்திய அகாதெமி , 2013.
- தமிழ் இனி 2000 மாநாட்டுக் கட்டுரைகள், .பா.மதிவாணன், உ.சேரன்(ப.ஆ), காலச்சுவடு அறக்கட்டளை, நாகர் கோவில் 629001, 2007
- புதுக்கவிதைவரலாறு, ராஜமார்த்தாண்டன்,, யுனைடெட்டரேட்டர்ஸ், கோபாலபுரம், சென்னை 600086, 2003
- தமிழ்நாடகத்தின்தோற்றமும்வளர்ச்சியும், ஆறு. அழகப்பன் பாரிநிலையம், சென்னை 600108, 2011
- பத்தொன்பதாம் நூற்றாண்டின் சமுதாய மாற்றங்களும் தமிழ் இலக்கியப் போக்குகளும் , ஈசுவரபிள்ளை, தமிழ்ப் பல்கலைக்கழகம் வெள்ளி விழா ஆண்டு வெளியீடு 23 , த. தஞ்சாவூர் 613 005, 2006
- பத்தொன்பதாம் நூற்றாண்டில் தமிழ் இலக்கியம் 1800-1900, மயிலை.சீனி.வேங்கடசாமி, பரிசல் புத்தக நிலையம், அரும்பாக்கம் சென்னை 600 106
- தமிழ் வாழ்க்கை வரலாற்றிலக்கியம், ச.சிவகாமி, உலகத் தமிழாராய்ச்சி நிறுவனம், இரண்டாவது முதன்மைச் சாலைகுழந்தை இலக்கிய வரலாறு , பூவண்ணன் மணிவாசகர் பதிப்பகம், சென்னை 600 108, 1999
- வாழ்க்கை வரலாற்று இலக்கியம், சாலினி இளந்திரையன் தமிழாய்வகம், சிதம்பரம் 608 001, 2002

Tamil

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

நூலகவியல்

பாட நோக்கம்:

நூலக வரலாறு, நூலகத்தின் அக ஒழுங்கு முறை, நூலை வகைப்படுத்தல், பாதுகாத்தலின் அவசியத்தை மாணவர்களுக்குக் கற்பித்தல்.

பயன்கள்:

1. நூலகம் பற்றி அறிந்து கொள்ளுதல்.
2. நூலகத்தை வடிவமைக்கும் முறை குறித்துப் புரிதல்.
3. நூல்களை வகைப்படுத்தும் முறை அறிதல்.
4. நூலகராகும் வேலை வாய்ப்பு குறித்து விழிப்புணர்வு பெறுதல்.

அலகு-1 நூல் என்பதன் பொருள் -தோற்றமும் வளர்ச்சியும் - நூலகத்தை உருவாக்கலும், வடிவமைத்தலும்.

அலகு-2 நூலக ஆட்சிமுறை - வகைகள் - நிர்வாக முக்கியத்துவம் - பல்வேறு பிரிவுகள் - பிரிவுகளின் அன்றாடப் பணிகள் - நூல் தேர்வு - நிலையான விற்பனையாளர்கள் - தொழில் நுட்பப்பிரிவு - பட்டியலிடுதல் - காலமுறை இதழ்கள் பிரிவு - பதிவு அட்டை முறை.

அலகு-3 பயனுடைய வரிசைமுறை விதி - குறியீடுகளின் வகையும், தன்மையும் - நூல் வகைப்படுத்தும் முறை - நூற்பட்டி - நூலகப் பணிகளின் பல்வேறு பிரிவுகள்.

அலகு-4 நோக்கீட்டுப் பணியும் வகைகளும் - நோக்கீட்டு நூல்கள் - நூல் சரிபார்க்கும் முறைகள்.

அலகு-5 நூலக வரவு செலவும், ஆண்டறிக்கையும் - நூலகச் செயல்பாட்டில் மொழி பெயர்ப்பு - இணைய நூலகம்.

பாடநூல்:

முனைவர் மு.ராமச்சந்திரன் - 'நூலகவியல்' தாமரை பப்ளிகேஷன்ஸ் (பி) லிட். 41-பி, சிட்கோ, இண்டஸ்ட்ரியல் எஸ்டேட், அம்பத்தூர், சென்னை-600 098

Tamil
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

தொல்லியல்

பாடநோக்கம்:

மறைந்து போன நாகரிகம் – அகழ்வாராய்ச்சி மூலம் புதை பொருள் கண்டு பிடிப்புகளை மாணவர்களுக்குக் கற்பித்தல்.

பயன்கள்:

1. அகழாய்வு குறித்து அறிந்து கொள்ளுதல்.
2. தொல்லியலின் பயன்களைத் தெரிந்து கொள்ளுதல்.
3. கீழடி அகழாய்வு குறித்து அறிதல்.
4. சங்க கால மக்களின் வாழ்வியலை அகழாய்வு வழி உணர்தல்.
5. போட்டித் தேர்வுகளில் கலந்து கொள்ளும் திறன் பெறுதல்.

அலகு-1

தொல்லியல் பொருள் விளக்கமும் தன்மைகளும் – தொல்லியலின் பிரிவுகளும், வகைகளும் – தொல்லியலின் பயன்கள் – தொல்லியலின் வரலாறு.

அலகு-2

அகழாய்வுப் பணியாளர்கள் – அகழாய்வுக்கான கருவிகள் – அகழாய்வு நெறிமுறைகள் – அகழாய்வு முறைகள் – காலக்கணிப்பு முறைகள் – அகழாய்வும் பிற அறிவியல்களும்.

அலகு-3

இந்திய தொல்லியல் துறை அறிமுகம் – மதுரைத் தொன்மை வரலாறு – மதுரையில் சமணம் – தொல்லியல் கள ஆய்வுகள் – தொல்லியல் அகழாய்வுகள் – கீழடியில் தொல்லியல் அகழாய்வுகள் – கீழடி அகழாய்வின் முதன்மைத் தரவுகள்.

அலகு-4

தமிழகத்தில் நிலவிய சங்க கால பண்பாட்டு வரலாற்றாய்வில் ஒரு திருப்புமுனை –2600 ஆண்டுகள் பழமை வாய்ந்த கீழடி பண்பாடு – கட்டுமானப் பொருட்களின் பகுப்பாய்வு – கட்டடத் தொழில் நுட்பம் – தமிழ் பிராமி – சங்க கால மக்களின் எழுத்தறிவு.

அலகு-5

கைவினைத் தொழில்கள் – நெசவு – வாழ்க்கைமுறை – அணிகலன்கள் – விளையாட்டு மற்றும் பொழுதுபோக்குகள் – வணிகம் – சுடுமண் உருவங்கள்.

பாடநூல்:

முனைவர் கே.தியாகராயன் – ‘தொல்லியல்’

பாவை பதிப்பகம் 37.சி வடக்காணி மூல வீதி, மதுரை-1.

தமிழ்நாடு தொல்லியல் துறை – கீழடி

https://telegram.me/tamil_books_world

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B.SC. PHYSICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-II

SPACE SCIENCE

UNIT I:

Universe Planets - interior planets - exterior planets - crust, mantle and core of the earth - different - region of earth's atmosphere - rotation of the earth - magnetosphere - Van Allen belts - Aurora.

UNIT II:

Comets, Meteors, Asteroids Composition and structure of comets - periodic comets – salient features of asteroids, meteors and its use UNIT III : Sun Structure of photosphere, chromosphere, corona - sunspots – solar flares - solar prominences - solar piages - satellites of planets -structure, phases and their features of moon.

UNIT IV :

Stars Constellations - binary stars - their origin and types star clusters –globular clusters - types of variable stars - types of galaxies

UNIT V :

Origin of Universe Big bang theory - pulsating theory - steady state theory – composition of universe expansion

REFERENCE :

1. K.D. Abyankar, Astrophysics of the solar system, University press, India (1999)
2. BaidyanathBasu, Sudhindra Nath Biswas And Tanuka Chattopadhyay, An Introduction To Astrophysics, Prentice Hall OfIndia, New Delhi (2010)
3. Prof. P.Devadas, The fascinatingAstronomy, Devadas Telescopies, Chennai
4. R.P. Singhal, Elements of Space Physics, PHI, (2009)

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B.SC. PHYSICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-III
CAREER COMPETENCY SKILLS – I

UNIT I RESUME FORMATS

Biodata – Resume – Curriculum vitae (CV) - Tips to create an effective resume – Resume format for various professions.

UNIT II GROUP DISCUSSION

Group discussion – Definition – Types of group discussion – Importance – Elements of group discussion – Skills for group discussion – preparation of group discussion.

UNIT III TECHNICAL APTITUDE

Basic aptitudes – Steps to prepare technical test – Critical reasoning skills – Common aptitude types - technical aptitudes for different professions

UNIT IV INTERVIEW SKILLS

Types of Interviews – Best skills for an Interview – Preparation for an Interview

UNIT V PERSONALITY

Four personality types – Personality traits – Body language – Dress code – Ways to improve personality.

BOOK FOR STUDY AND REFERENCE

1. Ajai B. Kher, Group discussion, Vohra Publisher, Allahabad, India,
2. Ela Kashyap Sharma, Technical Aptitude for Interviews, PHI Learning Private Limited, Delhi, 2015
3. T.S. Jain and Gupta, UPKAR'S Interviews and group discussions, E-Books

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B.SC. PHYSICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV
CAREER COMPETENCY SKILLS – II

UNIT I

Operations on numbers – H.C.F & L.C.M of numbers – Decimal fractions – Simplifications – Square roots and Cube roots – Averages.

UNIT II

Problems of ages - Surds & Indices – Percentage – Profit & Loss – Ratio & Proportions – Time & Work – Pipes & Cisterns.

UNIT III

Time & Distance - Problems on Trains - Boats & Streams – Allegation & Mixtures – Logarithms – Simple interest & Compound interest.

UNIT IV

Area, Volumes and Surface areas – Calendar – Clocks – permutations & combinations – probability – Heights & Distances

UNIT V

Logical Reasoning – Puzzles – Dice – Visual Reasoning – Alphanumeric Reasoning – Number series

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Physics & Forensics Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V
Instrumentation

UNIT I PERFORMANCE CHARACTERISTICS OF AN INSTRUMENTATION SYSTEM

Introduction – System configuration – Problem Analysis – Basic Characteristics of measuring devices – Calibration - Generalized measurement – Zero-order system – Second order system – Dead time element – Specification and testing of dynamic response.

UNIT II SENSORS AND TRANSDUCERS

Basic principles of sensors - pressure sensor (Strain Gauge) – IR sensor - Characteristics of transducers - variable resistance transducer -variable capacitance transducer – Voltage and current transducer.

UNIT III DIGITAL INSTRUMENTS

Introduction – Digital Multimeter – Digital panel meter – Digital frequency meter – Digital measurement of time – Universal counter – Digital tachometer – Digital PH meter.

UNIT IV MEDICAL INSTRUMENTATION

ECG - EEG - Lead systems and recording methods -typical waveforms - X-ray machine – Digital Stethoscope - Computer tomography - MRI – Ultrasonography - Thermography - Pacemakers –Ventilators - Dialyzers.

UNIT V GAS ANALYSERS AND POLLUTION MONITORING INSTRUMENTS

Types of gas analysers - Oxygen, NO₂ and H₂S types - IR analyser - Air pollution standards Air pollution detector - Dust and smoke detector- Radiation monitoring instruments –Area radiation dosimeter- personal radiation dosimeter - radiation warning alarm.

BOOKS FOR STUDY AND REFERENCE

1. E.A.Doebelin, Measurement Systems-Applications and Design, Tata McGraw Hill, (1990)
2. C S Rangan, G R Sharma, V.S.V. Mani, Instrumentation Devices and Systems, Second Edition, Tata McGraw Hill, (2011)
3. R.S.Khandpur, Handbook of Analytical Instruments, Tata McGraw Hill (2003).
4. D.Patranabis, Sensors and Transducers, Prentice Hall of India, (1999)
5. M. Arumugam, Bio-medical Instrumentation, Anuradha Agencies, (2002)
6. John G. Webster, Medical Instrumentation: Application and Design, John Wiley & Sons Inc (2009)
7. John P. Bentley Principles of Measurement Systems, Third Edition, Pearson Education, (2000)

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Physics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI
Professional Competency Skills -
QUANTITATIVE APTITUDE FOR COMPETITIVE EXAMINATIONS

UNIT-I

Operations on numbers – H.C.F & L.C.M of numbers – Decimal fractions – Simplifications - Square roots and Cube roots – Averages.

UNIT-II

Problems of ages - Surds & Indices – Percentage – Profit & Loss – Ratio & Proportions – Time & Work – Pipes & Cisterns.

UNIT-III

Time & Distance - Problems on Trains -Boats & Streams – Allegation & Mixtures – Logarithms – Simple interest & Compound interest.

UNIT-IV

Area, Volumes and Surface areas – Calendar – Clocks – permutations & combinations – probability – Heights & Distances.

UNIT-V

Logical Reasoning – Puzzles – Dice – Visual Reasoning – Alphanumeric Reasoning – Number series.

TEXT BOOKS

1. Quantitative aptitude for competitive exams, R.S. Aggarwal, S. Chand publications, edition 2018 New Delhi.

REFERENCE BOOKS

1. Fast Track Objective Arithmetic Paperback, edition 2018, Rajesh Varma, Arihant publications
2. Abhijith Guha, Quantitative Aptitude for Competitive Examination, Tata McGraw Hill. 5th edition, New Delhi.

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B.Sc., BIOCHEMISTRY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER – II

GOOD LABORATORY PRACTICES

UNIT – I

Fundamentals of GLP, Overview of OECD - GLP principles and WHO GLP in brief

UNIT – II

General Science Laboratory facilities, glass wares, chemicals and common science lab equipments

UNIT – III

Safety practice in the laboratory - Laboratory safety rules – general good laboratory safety practices, personnel protection, chemical safety instructions, Do's and Don'ts in laboratory, Laboratory safety symbols.

UNIT – IV

History of biosafety, Risk assessment, Biosafety levels, Personal protective equipment, Disinfection, decontamination, and sterilization, Regulatory compliance, Laboratory security and emergency response.

UNIT – V

Collection of existing information and Inspection of the workplace for safety hazards, Identification of health hazards associated with emergency and non-routine situations, Characterization and control measures.

REFERENCES

1. Handbook Good Laboratory Practices-World health organization (WHO)
2. Life science protocol manual (2018)-DBT star college scheme
3. Guidelines for good laboratory practices-Indian council of medical research, New Delhi (2008)

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B.Sc., BIOCHEMISTRY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER – III
HEALTH AND HYGIENE

UNIT - I

Introduction: Scope and importance of public health. Concept of energy, Calories, daily food intake, balanced diet and diet control, malnutrition and over nutrition,

UNIT - II

Individual Health parameters, Determinants of health and key health indicators. Ill effects of smoking, alcoholism and drug abuse. Stress reduction and management

UNIT - III

Health Education: - principles and strategies. Health Policy and Health Organizations of India National Health Mission, Women and Child Care Schemes.

UNIT - IV

Hygiene: - Definition, scope and importance of hygiene. Personal, social, medical and culinary hygiene, WASH (Water, Sanitation and Hygiene) programmes.

UNIT - V

Awareness programs for Public Health and Hygiene: - awareness on control prevention of epidemics and pandemics. Mobile Apps of Government of India.

REFERENCES:

1. Jatin V. Modi and Renjith S. Chawan, Essentials of Public Health and Sanitation.
2. Mary-jane Schneider, Introduction to Public Health (4thEdn.) Joes & Barelet Publications. Swaminathan S, Principles of Nutrition and Dietetics.

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B.Sc., BIOCHEMISTRY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER – IV
LIFESTYLE DISEASES

UNIT I:

Lifestyle diseases: Definition, Factors contributing to lifestyle diseases – Physical inactivity, Poor food habits, disturbed biological clock, sleep deprivation.

UNIT II:

Top lifestyle diseases, Impact of Lifestyle diseases on family, society and economy of country.

UNIT III:

Causes, symptoms, types, preventive measures and treatment of Obesity, cardiovascular diseases, diabetes and cancer

UNIT IV:

Women's lifestyle diseases: Polycystic Ovarian Disease, Infertility, Breast and cervical cancer and Osteoporosis.

UNIT V:

Prevention of lifestyle diseases: Balanced diet, sufficient intake of water, physical activity, sleep-wake cycle, stress management and meditation.

REFERENCES

1. Steyn K, Lifestyle and related risk factors for chronic diseases
2. Willett WC, Prevention of chronic disease by means of diet and lifestyle.
3. Kumar M & R. Kumar, Guide to prevention of lifestyle diseases. Deep & Deep publications

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Biochemistry
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V
BIOCHEMISTRY AND HEALTH

UNIT – I

Carbohydrate: Sources of carbohydrates, importance of carbohydrates in living organisms, Normal level of sugar in blood, factors influencing blood glucose, renal threshold value, Diabetes mellitus:- Types, Complications, management-monitoring methods of blood glucose level and GTT.

UNIT – II

Proteins: Sources of proteins and amino acids, essential and non-essential amino acids, Importance of proteins in living organisms, normal level of serum proteins, protein deficiency disorders:-Kwashiorkor and Marasmus.

UNIT – III

Lipids: Sources of lipids, essential and non-essential fatty acids, importance of fats and lipids in living organism, role of lipoproteins in human body. Normal levels of cholesterol and TG. Disorders:- Hypertension and Atherosclerosis.

UNIT – IV

Vitamins: Sources, RDA, importance, deficiency disorders of water soluble and fat soluble vitamins in humans.

UNIT – V

Minerals: - Sources, Biological importance and deficiency disorders of Na, K, Ca, Mg, P, Fe, Zn, Se and Iodine in humans.

REFERENCES

1. Textbook of medical physiology by C. Guyton, John E. Hall.—12th ed, 2011, Saunders, an imprint of Elsevier Inc.
2. Medical Biochemistry by MN Chatterjee, Rana Shinde, 8th edition, 2013, Jaypee publications.
3. Deb.A.C., Fundamentals of Biochemistry, 10th edition, 2011, New central book agency Pvt Ltd.
4. Biochemistry (2013) by U.Satyanarayana and U. Chakrapani, 4th edition, Elsevier.

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Biochemistry

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

DIET THERAPY

Unit I – Principles of Diet Therapy & Nutrition Care

Definitions and scope of diet therapy, Types of therapeutic diets: Clear liquid, Soft diet, High/low protein, Calorie-restricted diets, Nutrition Care Process (NCP): Assessment, Diagnosis, Intervention

Unit II – Energy & Weight Management

Energy modifications in diet, Diet and management of: Obesity, Overweight, Underweight, Eating disorders: Anorexia nervosa, Bulimia nervosa

Unit III – Gastrointestinal & Cardiovascular Disorders

Dietary management for: Constipation, Diarrhea, Peptic ulcers, Ulcerative colitis
Cardiovascular system diets: Hypertension, Atherosclerosis, Congestive heart failure

Unit IV – Metabolic & Renal Disorders

Nutrition therapy for: Diabetes Mellitus (Type I & II), Thyroid dysfunction, Inborn errors of metabolism, Renal diseases: Nephritis, Nephrotic syndrome, Acute & chronic renal failure (dialysis diets)

Unit V – Special Conditions & Practical Applications

Febrile conditions & surgery: Diet for fevers, infections, HIV.
Pre-operative & post-operative nutrition, Nutritional management for Anemia & blood disorders
Practical application: Planning and preparation of therapeutic diets (e.g., liquid diets, low-sodium diets)

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B.Sc. Mathematics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-II

Title of the Course		MATHEMATICAL APTITUDE – I					
Paper Number		SKILL ENHANCEMENT COURSE SEC-01 (NAAN MUTHALVAN Arrear – Semester II)					
Category	SEC	Year	I	Credits	2	Course Code	
		Semester	II				
Instructional Hours Per week		Lecture	Tutorial		Lab Practice	Total	
		2	-		-	2	
Pre- requisite		12 th Standard Mathematics					
Objective of the Course		<ul style="list-style-type: none"> • To prepare the students for competitive examinations. 					
Course Outline		UNIT – I Operations on Numbers.					
		UNIT – II HCF and LCM.					
		UNIT – III Decimal Fractions.					
		UNIT – IV Square Roots and Cube Roots.					
		UNIT – V Average.					
Skills acquired from this course		Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill.					
Recommended Text		R.S. Aggarwal, Quantitative Aptitude for Competitive Examinations, S.Chand co Ltd., 152. Anna Salai, Chennai,2010					
Reference Books		Quantitative Aptitude ‘by Abhijit Guha, Tata McGraw Hill Publishing Company Limited, New Delhi (2005)					

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B.Sc. Mathematics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-II

Title of the Course		MATHEMATICAL APTITUDE – II					
Paper Number		SKILL ENHANCEMENT COURSE SEC-02 (NAAN MUTHALVAN Arrear – Semester III)					
Category	SEC	Year	II	Credits	2	Course Code	
		Semester	III				
Instructional Hours Per week		Lecture	Tutorial		Lab Practice	Total	
		2	-		-	2	
Pre- requisite		12 th Standard Mathematics					
Objective of the Course		<ul style="list-style-type: none"> • To prepare the students for competitive examinations. 					
Course Outline		UNIT – I Surds and Indices.					
		UNIT – II Logarithms.					
		UNIT – III Permutations and Combinations.					
		UNIT – IV Probability.					
		UNIT – V Tabulation.					
Skills acquired from this course		Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill.					
Recommended Text		R.S. Aggarwal, Quantitative Aptitude for Competitive Examinations, S.Chand co Ltd., 152. Anna Salai, Chennai,2010					
Reference Books		Quantitative Aptitude ‘by Abhijit Guha, Tata McGraw Hill Publishing Company Limited, New Delhi (2005)					

B.Sc. Mathematics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-IV

Title of the Course		MATHEMATICAL APTITUDE – III					
Paper Number		SKILL ENHANCEMENT COURSE SEC-02 (NAAN MUTHALVAN Arrear – Semester IV)					
Category	SEC	Year	II	Credits	2	Course Code	
		Semester	IV				
Instructional Hours Per week		Lecture	Tutorial		Lab Practice	Total	
		2	-		-	2	
Pre- requisite		12 th Standard Mathematics					
Objective of the Course		<ul style="list-style-type: none"> • To prepare the students for competitive examinations. 					
Course Outline		UNIT – I Chain Rule – Time and Work.					
		UNIT – II Time and Distance.					
		UNIT – III Problems on Trains.					
		UNIT – IV Boats and Streams.					
		UNIT – V Calendar and Clocks.					
Skills acquired from this course		Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill.					
Recommended Text		R.S. Aggarwal, Quantitative Aptitude for Competitive Examinations, S.Chand co Ltd., 152. Anna Salai, Chennai,2010					
Reference Books		Quantitative Aptitude ‘by Abhijit Guha, Tata McGraw Hill Publishing Company Limited, New Delhi (2005)					

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Mathematics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

Mathematical Aptitude – IV

Title of the Course	MATHEMATICAL APTITUDE – IV
Course Outline	UNIT – I Problems on Ages.
	UNIT – II Ratio and Proportion.
	UNIT – III Simple Interest.
	UNIT – IV Compound Interest
	UNIT – V Odd man out and Series.
Recommended Text	R.S. Aggarwal, Quantitative Aptitude for Competitive Examinations, S.Chand co Ltd., 152. Anna Salai, Chennai,2010
Reference Books	Quantitative Aptitude ‘ by Abhijit Guha, Tata McGraw Hill Publishing Company Limited, New Delhi (2005)

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Mathematics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

Title of the Course	MATHEMATICAL APTITUDE – V
Course Outline	UNIT – I Percentage.
	UNIT – II Profit and Loss.
	UNIT – III Partnership.
	UNIT – IV True Discount.
	UNIT – V Bankers Discount.
Recommended Text	R.S. Aggarwal, Quantitative Aptitude for Competitive Examinations, S.Chand co Ltd., 152. Anna Salai, Chennai,2010
Reference Books	Quantitative Aptitude ‘by Abhijit Guha, Tata McGraw Hill Publishing Company Limited, New Delhi (2005)

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B.Sc. BIOTECHNOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER II

BIOTECHNOLOGY FOR SOCIETY

UNIT I

Sericulture. Aquaculture, Apiculture. Vermiculture. Mushroom technology

UNIT II

Biofertilizers. Biopesticides. Biorepellants. Pest control and management. Biomass (SCP). Bioplastics. Bioweapons

UNIT III

Bio dyes, Bio fuels – Biodiesel & Biogas. Bioindicators. Biodegradation- Role of GMO's

UNIT IV

Production of Penicillin, Recombinant Vaccines (HBV). Recombinant Insulin. Plantibodies. Vaccines in animal cells, Gene therapy

UNIT V

Transgenic animals and their applications- Mice, Sheep and Fish. Transgenic plants and their applications- BT Cotton, Flavr-Savr tomato and Golden rice

REFERENCES:

1. Animal Biotechnology ,M .M. Ranga, (2000) , Agrobios (India),
2. Introduction to Plant Biotechnology Chawla,(2003) (2nd edn) Oxford and IBH publishers
3. Biotechnology, Satyanarayana. U, (2008), Books and Allied (p) Ltd.
4. Industrial Microbiology – A.H. Patel, MacMillan Publishers, 2005
5. A text book of Biotechnology, R. C. Dubey, (2001), Rajendra Printer. New Delhi.
6. Environmental Biotechnology. A.K.Chatterji. Third edition. PHI Learning Pvt Ltd. New Delhi.

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B.Sc. BIOTECHNOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER III
MEDICINAL HERBS

UNIT I

Ethnomedicine – definition, history and its scope – Inter disciplinary approaches in ethnobotany – Collection of ethnic information.

UNIT II

Importance of medicinal plants – role in human health care – health and balanced diet (Role of proteins, carbohydrates, lipids and vitamins).

UNIT III

Tribal medicine – methods of disease diagnosis and treatment – Plants in folk religion – *Aegle marmelos*, *Ficus benghalensis*, *Curcuma domestica*,

UNIT IV

Traditional knowledge and utility of some medicinal plants in Tamil Nadu *Solanum trilobatum*, *Cardiospermum halicacabum*, *Vitex negundo*, *Adathoda vasica*, *Azadirachta indica*, *Gloriosa superba*, *Eclipta alba*, *Aristolochia indica* and *Phyllanthus fraternus*.

UNIT V

Plants in day today life – *Ocimum sanctum*, *Centella asiatica*, *Cassia auriculata*, *Aloevera*. Nutritive and medicinal value of some fruits (*Guava*, *Sapota*, *Orange*, *Mango*, *Banana*, *Lemon*, *Pomegranate*) and Vegetables - Greens (*Moringa*, *Solanum nigrum* Cabbage).

TEXT BOOKS

1. R.K.Sinha & ShwetaSinha (2001), Ethnobiology. Surabhe Publications – Jaipur.
2. D.C. Pal & S.K. Jain NayaPrakash, (1998), Tribal medicine, BidhanSarani, Calcutta.
3. S.K. Jain (2001) Contribution to Indian Ethnobotany – S.K. Jain, 3rd edition, scientific publishers, B.No.91, Jodhpur, India.
4. Andrew Chevallie, (2000) Encyclopedia of Herbal Medicine
5. James Green (2000). The Herbal Medicine-Maker's Handbook: A Home Manual
Microbiology

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B.SC. BIOTECHNOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV
CRYOGENICS AND CRYOBIOLOGY

UNIT

- I Introduction to Cryobiology, cryopreservation - natural cryopreservation, temperature, risks, slow, permeable freezing, vitrification, uses freezable tissues, equipment, limitations.
- II Liquid nitrogen – uses, safety, production; glass transition- introduction, transition temperature T_g , Kauzmann's paradox, the glass transition, specific materials, silica, polymers, mechanism of vitrification, electronic structures; ex-situ conservation; cryoprotectants; cryostasis; neuro preservation.
- III Cryopreservation in nature – antifreeze protein, antifreeze, psychrophile, insect winter ecology, cryogenic treatment, cryogenic seal, cryogenic fuel, energy storage, crystal, cryotank, absolute zero, target temperature management.
- IV Hibernation, heterothermy, hibernaculum, hypothermia, chilblains, frost bite, trench feet, thermoregulation.
- V Application of Cryobiology - cloning, molecular cloning, organ transplantation, sperm bank, semen extender, in-vitro fertilization, embryo transfer, cryosurgery, cryoablation.

Reference book

- 1 Colby Gunn, A comprehensive introduction to Cryobiology, 2017 library press publishing, New York.

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Biotechnology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V
Endocrinology

UNIT I : Hormones: definition, classification, biosynthesis and degradation. Mechanism of hormone action, class I and II hormone receptors, steroids. Feedback regulation of hormones.

UNIT II: Hypothalamus and pituitary hormones: Hypothalamic releasing factors vasopressin, oxytocin; biosynthesis, secretion, transport, regulation and biological effects of growth hormones. FSH, LH, TSH, ACTH and prolactin.

UNIT III: Thyroid hormones: biosynthesis, secretion, transport, regulation and biological actions. Hypo and hyper thyroidism, antithyroid agents, role of parathyroid hormones, calcitriol, calcium and phosphorous homeostasis. Hypo and hyperparathyroidism.

UNIT IV: Pancreatic hormones: Islets of Langerhans, cell types. Insulin and glucagon: biosynthesis, mechanism of action and biological effects. Hormonal action of somatostatin and pancreatic polypeptide. Adrenal hormones: biosynthesis, secretion, transport, mechanism of action and excretion of glucocorticoids, mineralocorticoids, adrenal medullary hormones – epinephrine and nor epinephrine, steroid hormones – androgens and estrogens.

UNIT V: Structure and function of the brain, central nervous system, peripheral and autonomic nervous system. Cells of nervous system: Neurons, Glial cells, Oligoendocytes and Schwann cells. Neurotransmitters – synthesis, storage, release, uptake, degradation and action of neurotransmitters. Acetyl choline, GABA serotonin, dopamine, glutamate, aspartate, nitrous oxide. Mechanism of action of anesthetics, analgesics, hallucinogens, depressants, stimulants and toxins on the nervous system, addiction and drug abuse.

REFERENCE

1. Donald Voet , Judith G. Voet , Charlott W. Pratt. Fundamentals of Biochemistry, upgrade edition. John Willey & Sons. Inc,
2. Edward Staunton West, Wilbert R. Todd, Howard S. Mason, John T. Van Bruggen,1996. Textbook of Biochemistry, 4 th edition , Oxford & IBH publishing Co.Pvt.Ltd.,
3. J.L. Jain, 2004. Fundamentals of Biochemistry, S. Chand publications.
4. Agarwal, 1999. Biochemistry, GOBL publications.
5. David L. Nelson , Michael M.Cox, Lehninger Principles of Biochemistry, 4th edition, W.H. Freeman and company.
6. Lubert Stryer, 1995. Biochemistry, 4th edition, W.H. Freeman & Co.,
7. Concepts in Experimental Biochemistry , 1999, Brooks / Cole Publishing company.
8. White Handler Smith, Mammalian Biochemistry . 9. Francis Sreenspan, Gordon J. Strewler Prentice, 1997. Basic & Clinical Endocrinology – Hall International Inc. 5.th ed.

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Biotechnology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER VI
PROTEOMICS AND GENOMICS

UNIT I

Studying the Genome: Genetic Mapping-Markers for Genetic Mapping; RFLP, SSLP - VNTR's, STR's, SNP's; Physical Mapping - In situ hybridization, Sequence Tagged Sites Mapping. DNA data bases.

UNIT II

Determination of nucleotide sequence: Chemical degradation method, Sanger's dideoxynucleotide synthetic method. Direct DNA sequencing using PCR, Sequencing by conventional shotgun method, Whole genome shotgun method, Clone contig method.

UNIT III

ORF scanning – Codon bias, Exon-Intron boundaries - Exon trapping, CpG island, Gene location – Southern and Northern blotting hybridization, Zoo blotting. Studying a transcriptome – Microarray or chip analysis, SAGE.

UNIT IV

Proteomics - ID-SDS-PAGE, 2D-PAGE. Detection and quantitation of proteins in gels. Protein staining techniques. Affinity purification of proteins.

UNIT V

Basics of Mass Spectroscopy- MALDI-TOF and ESI and their applications in proteomics. Tandem MS/MS spectrometry.

REFERENCES:

1. Ajoy Paul., 2011. Text Book of Genetics- from Genes to Genomes- Books and Allied (P) Ltd, Kolkata. Third Edition,.
2. Keith Wilson and John Walker, 2010. Principles and techniques of practical biochemistry-, Cambridge University Press, 7th edition.
3. U.Sathayanarayana, Biotechnology, Books and allied (p) ltd., India, 2008.
4. Hubert Rehn, 2006 Protein Biochemistry and Proteomics -, Academic press.
5. Liebler, Humana W., 2002. Introduction to proteomics: Tools for new Biology CBS pub.

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B.A. HISTORY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II

PRINCIPLES OF PUBLIC ADMINISTRATION

UNIT - I

Nature, Scope and Importance of Public Administration–Different Approaches – Relations with Other Social Sciences–Public and Private Administration

UNIT – II

Organization–Theories: Classical Theory –Human Relations Theory –Principles of Organization: Hierarchy–Span of Control–Unity of Command–Centralization Vs Decentralization – Co-ordination, Delegation – Field headquarters relationship.

UNIT - III

Chief Executive–Line, Staff and Auxiliary Agencies–Departments–Public Corporations– Independent Regulatory Commissions

UNIT - IV

Personnel Administration –Recruitment and Training–Classification of Services– Promotion– Retirement–Association

UNIT – V

Financial Administration –Budget and its Principles –Process of Budget Making in India – Parliamentary Control Over Finances–Accounting and Auditing.

Text Books:

1. Vishnoo Bhagwan & Vidya Bhushan–Public Administration, S.Chand & Co. New Delhi, 2006.
 2. Chandran E. Public Administration, Cosmos Bookhive (P) Ltd., Gurgaon, 1999.
 3. G. Venkatesan, Public Administration, V.C. Publications, Rajapalayam, 2009
- Books for

REFERENCE:

1. Avasthi A. and Maheswari S.R., Public Administration, Lakshmi Narain Agarwal, Agra 1996.
2. Bidyut Chakrabarty and Prakash Chand –Public Administration in a Globalizing World, Sage Publications, New Delhi, 2012.
3. Felix A., Nigro & Lloyd G.Nigro –Modern Public Administration, Harper and Row, London, 1973.
4. Pandey A.K., Handbook of Public Administration, Dominant pub, New Delhi, 2005.
5. Rumki Basu, Public Administration: Concept and Theories. New Delhi: Sterling Publications, 1990.

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B.A. HISTORY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-III
JOURNALISM

UNIT-I

Journalism - Introduction to Journalism- Definitions – History of Journalism – Fourth Estate - Journalism and it's growth 1876 -1947 – Journalism in Tamil Nadu.

UNIT-II

Reporting–Meaning—Kinds of News – Functions of Reporter –Important News Agencies in India – Asian News International – Hindustan Samachar – Indo Asian News Service – Press Trust of India – Samachar Bharathi – United News of India

UNIT-III

Editing – Macro Editing- Micro Editing – Kinds and Techniques of Editing - Functions of Editor – Role of Sub Editors - Page make up – Headlines –Editorial Board – Letters to the Editor.

UNIT-IV

Printing – Kinds of Printing – News Paper – Books – Magazines – Structure Function – Advertisement

UNIT-V

Role of Press in National Movement – Marathi Press –Press and the Indian National Congress – Revolutionary Movements and The Press.

References:

1. A.M. Samy, Origin and Growth of Tamil Press, (Tamil), Navamani Pathipagam, Chennai,1987.
2. A.N.Ahuja, Theory and Practice of Journalism, Surjeet Publication, Delhi,1984.
3. DavidWainWright,JournalismMadeSimple,Rupa&Co,London,1981.
4. K.Kulathuran,TamilPress(Tamil),JeyakumariStore,Nagarcoil,1975.
5. M.P.Gurusamy,Journalism,(Tamil),Guru- ThenmozhiPublication,Dindigul,2009.
6. Mehta.D.S.-Mass-Communication and Journalism in India
7. RangaswamyParthasarathy-Journalism in India.

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B.A.HISTORY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV
HOTEL MANAGEMENT

- Unit I Introduction to hotels - History of Hotels – Types of Hotels– Traditional and Supplementary Accommodation- Classification - Grading and Categorization
- Unit II Major International Hotel Chains and Hotel chains of India - Federation of Hotel and Restaurant Association of India (FHRAI) International Hotel and Restaurant Association (IH and RA)
- Unit III Menu Patterns and Food Services -Types of Menus - Banquet – Transport catering – Industrial catering– Welfare catering -Beverage Services
- Unit IV Front Office - Definition -Functions and importance of Front Office- Lobby- Reception counter- Help Desk -Etiquette - Guest Handling - Guest Cycle- Reservation-Types - Methods - – Registration Procedure -Guest arrival – Pre - registration – Receiving Guests - Bell desk function – Departure Procedure - Night Auditing
- Unit V Computers in Hotels – Computer Reservation System – Global Distribution System Transformation of Hospitality Industry – Future of Hotel Industry

Recommended Books

1. Bhatnagar, S.K., Front Office Management, Frank Bros & Co, 2005.
2. Bhatia A.K., International Tourism Fundamentals and Practices, Sterling Publication Private Limited, 2002
3. Chakravarti, B.K, Concepts of Front Office Management, APH Publishing Corporation, 2008.
4. Mohammed Zulfiker, Tourism and Hotel Industry, Vikas Publishing House Pvt Limited, 1998
5. Sudhir Andrews, Hotel Tourism and Hospitality Management, Tata McGraw-Hill Education, 2000.

References

1. Andrews, Sudhir, Food and Beverage Service, New Delhi, 1991.
2. Chanda Ashik C, Hotel Tourism and Catering Management, New Delhi, 2009.
3. Dhawan, Vijay, Food and Beverage Service, Noida, 2010.
4. Graham Bruce, Hotel and Catering Management, New Delhi, 1991.
5. Zulfiker Mohammed., Tourism and Hotel Industry, New Delhi, 1998.

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History
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

International Current Affairs

UNIT – I

Political sphere – UNO, SAARC, NAM, ASEAN, Common Wealth – Recent Developments – Major Summits and Conferences

UNIT – II

Social Front – Programme of Social Awakening – Health Related Issues, - Drug, AIDS, Issues of Women, Children, Minorities and Refugees.

UNIT – III

Economic Front – Era of LPG - Economic Recession - Issue of Unemployment – Intellectual Property Rights – Right to Information.

UNIT – IV

Liberalization – Privatization – Globalization UNIT-V Disastrous Management – Natural and Human Disaster – Tsunami, Earthquakes, Cyclones, Global Terrorism, Drive against Nuclear proliferation.

Reference Books

1. Gopal Singh, Geography of India Manorama Year Book (Tamil & English), 2016. India, A Reference Annual, Latest Edition, Publication Division, Govt. of India. Chronicle Year Book, Latest Edition.
2. Atlas, India, Oxford University Publications
3. The Pearson Concise General Knowledge Manual, 2011.
4. General Studies Manual, Tata Mc grew Hill Education Private Limited, 2011. 23 B A HISTORY
5. Manohar Pandey, Mid Year Book (Junior Science Refersher).
6. Bright – General Studies Digest, Bright Careers Institutes, New Delhi
7. Chopra J.K.– General Studies, Unique Publishers.
8. Spectrum's Hand Book of General Studies, Editor- Kalpana Rajaram, Spectrum India, New Delhi.
9. Achin Vanaik and Rajeev Bhargava – Understanding Contemporary India Critical Perspectives, Orient Black Swan, India, 2010

History

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

GENERAL STUDIES FOR COMPETITIVE EXAMINATIONS

UNIT I

Competitive Examinations at the National and State UPSC and TNPSC-qualifications - Plan and nature of competitive examinations- Indian Heritage and Indian Culture

UNIT II

Indian History from the middle of the 18th century to the present-significant events, personalities, issues - The Freedom struggle - its various stages- issues

UNIT III

Indian Constitution: Salient Features – Important Articles-Amendments-Important Acts - Political system, Panchayat Raj, Economic and social development

UNIT IV

Geography of India –Physical, Social, Economic–General issues on Environmental ecology, Biodiversity, and Climate Change - effects of Globalization

UNIT V

Current Events of National and international importance- Role of women and women organisations-Ethics, Attitude, Aptitude, Awareness

Recommended Books

- 1.Bipan Chandra, *India Since Independence*, Penguin Random House, India,2008
- 2.Bipan Chandra, *Modern India: A History Text Book for Class XII*,NCERT, Delhi,1990 *India YearBook*, Publications Division, Government of India Laxmikanth, M., *Indian Polity*, McGraw Hill, Noida, 2021
- 3.Leong, G.C., *Certificate Physical and Human Geography*, Oxford University Press, New Delhi,2021
- 4.NitinSinghania, *Indian Economy*, McGraw Hill, Noida,2022

Reference

Bipan Chandra., *India's Struggle for Independence*, Penguin Random House, India,2016 Ram Ahuja., *Social problems in India*,(3rd edn,) Rawat Publications 2014 Ram Sharan Sharma, *Ancient India: A History Text book for class XI*, NCERT, 1999 Satish Chandra, *Medieval India: Text book in History for Class XI*, NCERT,2005

B.Sc. BOTANY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II
NURSERY AND LANDSCAPING

UNIT-I

Introduction, prospects and scope of nursery and landscaping

UNIT-II

Methods of Propagation – cutting, layering, grafting, budding, Floriculture – Rose, Chrysanthemum, Jasmine – cultivation.

UNIT-III

Gardening – formal garden, informal garden, vegetable garden, landscaped layout designing – formation and maintenance of lawn

UNIT-IV

Nursery structures – Green house – Shade house, Mist chamber – Topiary, Bonaiculture

UNIT-V

Manures, composting – vermicomposting.

TEXT BOOKS

1. Edmond Musser and Andres, Fundamentals of Horticulture, McGrawHill Book Co. New Delhi.
2. Agrawal, P.K. 1993. Hand Book of Seed Technology, Dept. of Agriculture and Cooperation, National Seed Corporation Ltd., New Delhi.
3. Janick Jules. 1979. Horticultural Science. (3rd Ed.), W.H. Freeman and Co., San Francisco, USA.
4. Singh, J. 2018. Fundamentals of Horticulture. Kalyani Publishers.
Sharma V. K. 1999. Encyclopaedia of Practical Horticulture, Vol I –IV, Deep And Deep Publ. Pvt. Ltd.

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B.Sc. BOTANY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-III
ENVIRONMENT IMPACT ANALYSIS

UNIT - I

Origin and Development Purpose and aim, core values and principles, History of EIA development, Environmental Management Plan, Environmental Impact Statement, Scope of EIA in Project planning and Implementation

UNIT –II

EIA Process Components of EIA, EIA Methodology- Screening, Scoping, Baseline data, Impact Identification, Prediction, Evaluation and Mitigation, Appendices and Forms of Application

UNIT-III

Techniques of Assessment-Cost-benefit Analysis, Matrices, Checklist, Overlays, Impact on Environmental component: air, noise, water, land, biological, social and environmental factors. EIA Document

UNIT-IV

Main participants in EIA Process Role of Project proponent, environmental consultant, PCBs, PCCs, public and IAA Public participation

UNIT -V

Environmental Appraisal and Procedures in India and EIA Methodology, indicators and mitigation, Environmental Audit of different environmental resources, Risk Analysis, Strategic environmental assessment, ecological impact assessment: legislation.

REFERENCE BOOKS

1. Kulkarni, V. and Ramachandra, T.V. 2006. Environmental Management, Capital Pub. Co. New Delhi.
2. Petts, J. 2005. Handbook of Environmental Impact Assessment- Volume 1 and 2. Blackwell Publishers, UK.
3. Glasson, J. Therivel, R. and Chadwick. 2006. A. Introduction to Environmental Impact Assessment. Routledge, London.
4. Canter, W.L. 1995. Environmental Impact Assessment, McGraw-Hill Science/ Engineering/ Math, New York.
5. Jain, R.K., Urban, L.V., Stracy, G.S., Environmental Impact Analysis, Van Nostrand Reinhold Co., New York, 1991.

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B.Sc. BOTANY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-IV

PLANT TISSUE CULTURE

UNIT I

Introduction to Plant Tissue culture- Historical background.Principle – Polarity, Symmetry and Totipotency, Morphogenetic Centres of origin and organization–differentiation–dedifferentiation and re-differentiation; vascular differentiations. Laboratory organization, Tools and techniques, methods of sterilization. Laboratory contaminants- it's control and measures.

UNIT II

Media and Culture Preparation: Role of Micro and Macro nutrients, Vitamins and carbon source in tissue culture, Media preparation- pH, Temperature, Solidifying agents.Maintenance of cultures. Environmental Conditions. Explants selection.

UNIT III

Types of culture - Cell, tissue and organ culture – Callus induction, subculture and maintenance. Isolation of single cells, selection and types of cells. Cell suspension cultures -Batch, continuous. Synchronization of suspension culture.

UNIT IV

Somatic hybridization and cybridization. Organogenesis -anther culture and production of haploids- somatic embryogenesis –synthetic seed production-cryopreservation – Gene conservation Bank.

UNIT V

Application of tissues and Cell culture: Micro propagation, Clonal propagation. Production of genetically variable plants – Resistance to herbicides, insecticides, virus and other diseases. Production of secondary metabolites – Alkaloids.

TEXT BOOKS

Dubey, R.C., (2001). A text book of biotechnology. S. Chand & Co., New Delhi.Gupta, P.K. (1994). Elements of Biotechnology. Rastogi Publications, Meerut.
Ignacimuthu, S.J.(2003). Plant Biotechnology. Oxford & IBH Publishing, New Delhi. John Jothi Prakash, E. (2005). Outlines of Plant Biotechnology. EmkayPb., New Delhi. Kalyankumar De,(2008). Plant tissue culture.New Central Book Agency, Calcutta. Sathyanarayana BN and Vergheese DB (2007). Plant tissue culture- Practices and newexperimental protocols, ILK Publ. New Delhi.

REFERENCES

Bhojwani, S.S. &Razdan, M.K. (2004). Plant Tissue Culture, Read Elsevier India Pvt.Ltd. Dix, P.J. (1990). Plant cell line and selection. VCH Publ.Islam, A.S. (1996). Plant tissue culture. Oxford & IBH Publ.Purohit S.S.(2010). Planttissue culture , Student edition, Jodhpur.
Hammond, J.C. McGarvey and V. Yusibov, (2009). Plant Biotechnology, Springer Verlag. New York.

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Botany
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

ENVIRONMENTAL BIOTECHNOLOGY

UNIT I Introduction:

The environment-soil, water and air, Pollution and its causes (outline only)

UNIT II Source and treatment of polluted waters and effluents:

Pollution of water bodies by heavy metals and pesticides – removal of heavy metals and pesticides by Biosorption. Removal of oil spills by using microbes. Biological treatment of sewage – characteristics of sewage and objectives in sewage treatment – Anaerobic digestion.

UNIT III Soil and air pollution and their treatment:

Soil pollution by Xenobiotics. Degradation of Xenobiotics – pathways of phenol, pentachlorophenol and polychlorinated biphenyl degradation.

UNIT IV Bioremediation:

Introduction to bioremediation, *ex situ* and *in situ* bioremediation.

UNIT V Biometallurgy and related topics:

Biomineralization – bioleaching - Biofilms and biocorrosion.

Recommended Texts

1. Alan Scragg. 1999. Environmental Biotechnology. Pearson Education Limited.
2. Dubey R.C. 2004. A text book of Biotechnology aspects of microbiology, British Sun Publication.
3. Joseph C. Deniel. 1996. Environmental aspects of microbiology, British Sun Publication.
4. Keeshav Thehan. 1997. Biotechnology, New age international)P) Limited, New Delhi.
5. Chandra, A.M and Ghosh, S.K. 2010. Remote sensing and Geographical Information System, Narosa Publishing House Pvt. Ltd. New Delhi.

Reference Books:

1. Sharma, P.D. 2005. Environmental Microbiology, Narosa Publishing House Pvt. Ltd., New Delhi.
2. Raina Maier M. Iran Pepper L., Charles P. Gerba, 2000, Environmental Microbiology, Academic press, U.K.
3. Alexander N. Glazer and Hiroshi Nikaido. 1994. Microbial Biotechnology.
4. Special issue on Bioremediation and biodegradation. Indian Journal of Experimental Biology, September 2003. Vol. 41(9). National Institute of Science Communication and Information Resources, CSIR New Delhi.
5. Keddy, P.A. 2017. Plant Ecology: Origins, processes, consequences. 2nd ed. Cambridge University Press. ISBN. 978-1107114234.

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Botany

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

ORGANIC FARMING

UNIT-I

Soil – physical, chemical properties. Soil pollution – oil, chemicals –fertilizers, pesticide and herbicide, non-degradable solids, biomagnification, consequences of land pollution – damage to soil and crops.

UNIT II

Organic farming – definition, basic concept of organic farming, integrated plant nutrient supply management, integrated insect pest and disease management, integrated soil and water management. Sustainable agriculture practices-crop rotation, mixed cropping.

UNIT III

Management of organic wastes and green manures: Farm manures, Composts, Mulches and pest control, importance of organic manure, importance of green manure, crops of green manure, oil cake. Animal based organic manure–cow dung, vermicompost-methods, production and utilization.

UNITIV

Biofertilizers–classification, nitrogen fixers–Rhizobium, Cyanobacteria, Azolla and Vesicular Arbuscular Mycorrhiza.

UNIT V

Recycling of bio-degradable municipal, agricultural and Industrial wastes – biocompost making methods

Recommended Text.

- 1.NIIR Board. 2012. The complete Technology Book on Biofertilizer and organic farming. 2nd Edition. NIIR Project Consultancy Services.
2. Sathe, T.V. 2004. Vermiculture and Organic Farming. Daya publishers.
3. Subba Rao N.S. 2017. Biofertilizers in Agriculture and Forestry. Fourth Edition.Medtech.
4. Vayas,S.C, Vayas, S. and Modi, H.A. 1998. Bio-fertilizers and organic Farming Akta Prakashan, Nadiad.
5. Dongarjal, R.P and Zade, S.B. 2019. Insect Ecology and Integrated Pest Management Akinik Publications, New Delhi.

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B.A. ECONOMICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER – II
ECONOMICS OF INSURANCE

UNIT I (NATURE AND IMPORTANCE OF INSURANCE) Definition Origin – Principles and Nature of Insurance Primary and Secondary Functions Characteristics Importance to individual, Business and Society

UNIT II (INSURANCE CONTRACT AND RISK MANAGEMENT) Meaning of Contract Insurable Interest Utmost Good Faith Principle of Indemnity and other Principles Risk Management: Definition and types management of Risk through Identification analysis and control

UNIT III (PERSONAL LIFE INSURANCE AND INDUSTRIAL LIFE INSURANCE) Features of Life insurance Proximate Cause Assignment and Nomination Rate of Premium Endowment Policies Accident Benefit Disability Benefits Industrial Life Insurance: Purpose Group Life Insurance Benefits.

UNIT IV (PROCEDURE TO BECOME AN INSURANCE AGENT) Agency Regulation – Perquisites Characteristics – Disqualification Kinds of agents- Duties & Functions Rights working systems Remuneration of Agents other benefits positions of Insurance agent in india.

UNIT V INSURANCE BUSINESS IN INDIA Major Insurance Legislation growth of industry – Agricultural insurance Health insurance Reinsurance Entry of Private Insurance Companies Insurance Act, LIC Act, GIC act, IRDA Act.

TEXTBOOKS:

1. Mishra M.N, Insurance : Principles & Practices.
2. Murthy.A, Elements of Insurance.

REFERENCEBOOKS:

1. Srivatsava D.C & Shashank Srivastava, Indian Insurance Industris Transition & Prospect
2. Holyoake, Julia & William Weipers, Insurance
3. Sharma. R.S, Insurance, Principles and Practice
4. Arifkhan.M, Theory and Practice of Insurance.

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B.A. ECONOMICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER – III
PRINCIPALS OF MARKETING

UNIT I INTRODUCTION TO MARKETING Marketing – Meaning and Definition – Features – Objectives of Modern Marketing – Global Marketing – Role of Marketing in Economic Development

UNIT II FUNCTIONS OF MARKETING Functions of Marketing – Classification of Marketing Functions – Buying – Assembling – Selling – Transportation – Storage

UNIT III PRODUCT PLANNING Meaning Definition of the Product Features of the Product Importance of Product mix – Various Factors determining Product mix.

UNIT IV PRODUCT LIFE CYCLE Meaning – Benefits of Product Life Cycle – Consumer Behaviour – Factors influencing Consumer behavior.

UNIT V MARKET SEGMENTATION Meaning and need for Market Segmentation – Criteria for Market Segmentation – Salesman – Qualities of Salesman – E – Marketing.

TEXT BOOKS:

1. R. S. N. Pillai & Bhagavathi, Modern Marketing.

REFERENCE BOOKS:

1. Philip Kotler, Principles of Marketing.

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B.A.ECONOMICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV
MODERN BANKING AND INSURANCE

UNIT-I

Banking

Commercial Banks- Functions of Commercial Banks- Private and Public Sector Banks- Credit Creation - Commercial Banks"s role- Payment Banks- functions- Digital Banking- Tools – Methods.

UNIT-II

Central Banks

Functions of a Central Bank – Objectives of Monetary Policy – Effects and Limitations – Narasimhan Committee Report.

UNIT-III

Introduction to Insurance

Insurance: Meaning and Types- Role of Insurance in Economic Development -Saving and Investment Aspects – Social Vs Private Insurance: Life Vs Non-Life Insurance. Classification of Life, Health and General Insurance Policies.

UNIT-IV

Insurance Contract and Risk Management

Meaning of contract- Insurable Interest- Utmost good faith- Principle of Indemnity and other Principles-Risk Management: Definition and Types- Management of Risk through Identification Analysis and Control.

UNIT-V

Insurance Business in India

Major Insurance Legislation- Growth of Industry- Agricultural Insurance- Health Insurance- Reinsurance- Entry of Private Insurance Companies- Insurance Act. LIC Act, GIC Act. IRDA Act.

Textbooks

- 1 Srivastava P.K. (2013), Banking Theory and Practice, Himalaya Publishing House, New Delhi
- 2 Heffernan, S. (2005). Modern Banking. John Wiley & Sons
- 3 Tyagi, C. L., & Tyagi, M. (2007). Insurance Law and Practice. Atlantic Publishers & Dist.
- 4 J. N. Jain, "Modern Banking and Insurance : Principles and Techniques", Regal publications, 2008
- 5 Prasada & Radhika Rao, "Trends of Modern Banking", BSP Publication, 2016

Reference Books

1. Finsinger J. and M.V. Pauly (Eds.) (1986), The Economics of Insurance Regulation: A Cross National Study, Macmillan London.
2. Sethi, J., & Bhatia, N. (2012). Elements of Banking and Insurance. PHI Learning Pvt. Ltd..
3. Lewis, M. K. (1992). Modern Banking in Theory and Practice. Revue Economique, 203-227.
4. Tripathy, N. P., & Pal, P. (2005). Insurance: Theory and practice. PHI Learning Pvt. Ltd.

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ECONOMICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

Environmental Economics

UNIT – I FUNDAMENTAL CONCEPTS Environmental Economics – Meaning -Nature of Environmental Economics –Scope of Environmental Economics –Renewable and non-renewable

UNIT – II COST BENEFIT ANALYSIS Economic analysis of Environment – Cost and Benefit analysis –Environmental Impact analysis - Pollution cost analysis –Water pollution, Air Pollution, Soil Pollution- Efficacy of pollution control.

UNIT –III ECONOMICS OF WELFARE Public good and Environment — Population growth and Environment- Impact on Life Expectancy -2. Rajam Nair. N &Sanjith R. Nair, Marketing. 3. Ramasamy and NamanaKumari, Principles of Marketing. Demographic transition and its impact on environment

UNIT –IV ENVIRONMENT AND ECONOMIC DEVELOPMENT Economic growth and environmental quality – Sustainable agricultural development - Fiscal Measures to control pollution - TGreen Marketing

UNIT – V EMERGING ENVIRONMENTAL POLICIES Environmental Protection Policies - Role of Government in protecting environment –Role of Non-Governmental Organization in conservation of Environment - Environmental awareness- Environmental Education.

REFERENCE BOOKS

1. Sankaran, S. (2004), Environmental Economics, Margham Publications, Chennai 2.
2. Baumol, W.J. "The Theory of Environmental Policy", Cambridge University Press.
3. Karpagam, M. (2001), Environmental Economics, Sterling Publications Pvt Ltd, New Delhi.

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B.A.ECONOMICS

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

WOMEN EMPOWERMENT IN INDIA

UNIT I INTRODUCTION Concept of Empowerment Process and Determination of Women Empowerment Need for Women Empowerment in India Status of women in Modern India

UNIT II CONCEPTUAL FRAMEWORK Sex and Gender Meaning and Role of Gender Gender Stratification in Historical Perspective Gender Socialization Gender Inequality and Gender injustice

UNIT III WOMEN EMPOWERMENT IN INDIA PROBLEMS AND CHALLENGES Women and Education Women and Health Women and Economy Women and Polity.

UNIT IV LAWS RELATED TO WOMEN EMPOWERMENT IN INDIA Fundamental Rights for Women –Constitutional Provisions Personal laws Need for Uniform Civil code Special laws Labour laws Laws related to Crimes Against Women.

UNIT V INSTITUTIONAL FRAMEWORK FOR WOMEN EMPOWERMENT Role of International Bodies National and State commission for women Role of UGC in Women Empowerment Role of NGO's in Women Empowerment.

REFERENCE BOOKS :

1. Kumar.K, Women Empowerment and Social Change.
2. Gandhi,Anjali,Womens work, health and empowerment.
3. Goel, Aruna, Education and socio-economic perspectives of women and empowerment.
4. Kumar, C. Raj and Chockalingam, K. ed.Human rights, justice, and constitutional Empowerment.
5. Mitra, Joyati, ed. Women and society: equality and empowerment.
6. Rathnaswamy, P. Empowerment for sustainable development.

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B.Sc. ZOOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-II
FISH PRESERVATION AND ECONOMIC IMPORTANCE

UNIT I

Principles and importance of fish preservation – Sun drying, Smoking, Salt curing, Chilling Pickling, Frying and Canning

UNIT II

Application of economic principle of fisheries – Traditional and Economical Commercial fishing operations in marine fisheries .

UNIT III

Economics of fish markets, marketing and resources managements. Fisheries projects and fish resources .

UNIT IV

Preparation of value added products - fish pickle, fish cutlet, fish waters, fish biscuits, fish fingers –Methods and applications.

UNIT V

Extension education – Objectives and principles –Role of extension in community development .

REFERFNCES:

Freezing preservation of foods. Vol 3. Commercial food freezing operations of fresh foods. Trawlers .D.K. and Others (Edn) VI Connecticut.

Canning technology. Howard, A .J. Churchill, London

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B.Sc. ZOOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-III
HUMAN HEALTH AND HYGIENE

UNIT I

Introduction to food. Composition and nutritive value of Cereals (Rice, Wheat, Millets, Ragi, Pearl millet) Nutritional deficiency disease – Anaemia, Scurvy

UNIT II

Composition and medical value of Ginger, Black pepper and Turmeric. Dental Care and eye care

UNIT III

Communicable diseases – Dengue fever, Malaria, Amoebiasis, Viral fever and AIDS.

UNIT IV

Non-communicable diseases – Stroke, Diabetes, Obesity and Cancer

UNIT V

Awareness on Diarrhea, Alcoholism, Smoking, Tobacco chewing, Ulcer and Jaundice

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B.Sc. ZOOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV
WILDLIFE MANAGEMENT

UNIT I

Wildlife management – Definition and Aim – Himalayan mountain system – Peninsular region – Western Ghats

UNIT II

Wildlife values and benefits – causes of wildlife depletion – Necessary for conservation – Mode of conservation

UNIT III

Sanctuaries and National parks in India – Wildlife census

UNIT IV

Indian endangered fauna, Special projects for endangered species (Tiger, Lion and Elephant)

UNIT V

Indian Board of wildlife (IBWL) – Biosphere – Nilgiri, Wildlife Protection act

REFERENCES:

1. Veer Bala Rastogi and Jayaraj. Animal ecology and distribution of Animals. Kedarnath Ramnath, New Delhi.
2. Saharia V.B. Wildlife in India. Nataraj Publications, Dehradun 2009.
3. Verma P.S. & Agarwal V.K. Environmental Biology, Rastogi Publication, Meerut 2011.
4. Agarwal V.K. Simplified course in B.Sc., Zoology – Ecology and Ethology. 2002.

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Zoology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

Apiculture

UNIT – I:

History of Bee keeping – Scope and importance – Classification of honey bee species – Apiculture development in India – Institutions involved – Role of Central Honey Bee Research and Training Institute.

UNIT – II:

Basic concepts of morphology, mouth parts and sting of Honey bees – Social organization in honey bees: Colony life – Queen, drone, worker – Life cycle of the honey bee.

UNIT – III:

Bee hives – Traditional bee hives – Modern bee hive: Newton hive. Bee dances, Flora for apiculture – selection of bees for apiculture – tools and extraction of honey.

UNIT – IV:

Modern appliances for Apiaries, Products: Honey, Bee wax, Bee venom, Pollen, Royal jelly, Propolis – Chemical composition, nutritional and medical value of honey.

UNIT – V:

Diseases of Honey bee – Symptoms and control measures - Bacterial: American foul brood, European Foul brood – Viral: Thai sac brood, Sac brood virus – Fungal: Chalk brood, Stone brood and Nosemosis,– Bee enemies: Wax moth, Ants, Wasp and birds.

Text Books:

1. Apiculture – Sunithira. C, 2016, DivyaJothi Publication, Kanyakumari, Tamil Nadu.
2. Fundamentals of Bee keeping – Sathe. T.V., 2006, Daya Publishing House Pvt. Ltd., New Delhi.

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Zoology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI
SERICULTURE

UNIT -I:

Types of silk worms – Tasar, Muga, and Eri. Morphology and life cycle of silk worm (*Bombyx mori*).

UNIT -II:

Mulberry cultivation in India - Selection of land and cultivation of mulberry –Mulberry varietie Different methods of planting –Organic and in organic manure application.

UNIT –III:

Disinfection of rearing houses and appliances - Egg transportation and incubation –Egg handling – Hatching –Brushing –Silk worm rearing techniques.

UNIT –IV:

Pest and diseases of silk worm and preventive measures. Harvesting of cocoon and quality assessment.

UNIT –V:

Reeling methods – Reeling and Re-reeling –Silk examination, cleaning, lacing, bookmaking and grading of silk.

Text Books:

1. Ganga G., Sulochanachetty. J. An Introduction of Sericulture. Oxford, New Delhi – 1977.
2. Johnson M., and Kesary M., Sericulture, CSI Press, Marthandam, 2008.

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B. Sc., STATISTICS
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-II
STATISTICAL METHODS AND THEIR APPLICATIONS

UNIT – I

Correlation – Types of Correlation – Measures of Correlation – Scatter diagram - Karl Pearson's co-efficient of correlation – Spearman's rank correlations co-efficient.

UNIT – II

Simple regression analysis – Regression equation, Fitting of Regression equation – Relationship between Regression Co-efficient and Correlation co-efficient.

UNIT – III

Index Number - Definition of Index Numbers -Uses –Methods to construction of Simple & Weighted Index numbers – Cost of living index numbers

UNIT – IV

Concept of time series – Component of time series – Methods of measuring trend – Semi average method – Method of moving average – Method of least squares.

UNIT – IV

Seasonal variation – Seasonal index – Methods of measuring seasonal index – Simple average method only– Cyclical variation(concept only), Random variation (concept only).

REFERENCE BOOKS:

A.M.GoonM.K.Gupta and d B.Das Gupta (1994), Fundamentals of Statistics V-II, The world press Ltd., Culcutta. Croxton : Applied General Statistics. Gupta S.P, Statistical methods – Sultan Chand. Note: (1) Problems: 80 %; Theory: 20%. This paper has to be taught by a statistics teacher. This paper has to be referred to statistics board for valuation

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B. Sc., Statistics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-III
PROBABILITY THEORY

UNIT – I

Concepts of Random experiment – Trial – Sample point – Sample space, Event, Algebra of Events, Mutually Exclusive – Exhaustive events, definition of probability, Classical, Statistical and Axiomatic approach – Properties of Probability, Addition theorem - Conditional probability – Multiplication theorem – Baye’s theorem – Boole’s inequality.

UNIT – II

Concept of random variables – Discrete random variable, continuous random variables, probability mass function – Probability density function, Distribution function – Properties of distribution function - Independence of random variable.

UNIT – II

Mathematical expectation of random variables - Properties of mathematical expectation - Moments – Raw moments, central moments – Measures of location and dispersion of a random variable – Tchebychev’s inequality and its application.

UNIT – IV

Moment generating function of a random variable – their properties and its uses – cumulants – Characteristic functions – Properties of characteristic function – simple examples – Inversion theorem (statement only) - Statements and Application of weak law of large numbers.

UNIT – V

Bivariate distribution – Distribution functions of bivariate random variable and its properties – probability mass and density function, marginal and conditional distributions – Conditional expectation – Concept of regression lines – covariance and correlation

REFERENCE BOOKS

S.C.Gupta and V.K. Kapoor (2007). Fundamentals of Mathematical Statistics, Sultan Chand and Sons Publications, New Delhi. J.N.Kapur and H.C.Saxena (1999). Mathematical Statistics – S.Chand and Company Ltd., New Delhi. Marek. Fisz, (1961). Probability Theory and Mathematical Statistics, John Wiley and Sons. Hogg. R. V. and Allen T. Craig (1998). Introduction to Mathematical Statistics.

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B. Sc., Statistics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV
DEMOGRAPHY

UNIT – I

Demographic Data Meaning - Sources of Demographic data – Civil Registration - Population Census – Registration Method for Demographic Surveys - Vital Registration - Population Register and other Administrative Records - Registration of Population in India.

UNIT – II

Fertility Measurements Crude Birth Rates - General, Specific and Total Fertility Rates - Gross and Net Reproduction Rates and their Interpretation.

UNIT – III

Mortality Measurements Crude Death rate- Specific Death Rate - Standardized Death Rate - Infant Mortality Rate - Maternal Mortality Rate - Case Fertility Rate.

UNIT – IV

Life Table and Migration Description and construction of various columns of a Life table and their Relationships - Uses of Life Table – Migration – Factors Effecting Migration - Gross and Net Migration Rates.

UNIT – V

Population Growth Population Estimation and Projection - Arithmetic, Geometric and Exponential Growth Rates - Logistic curve fitting and its use for graduating population data - Basic ideas of stationary and stable population.

REFERENCE BOOKS:

1. Agarwala, S.N. (1991), Indian Population Problems, Tata McGraw-Hill, New Delhi.
2. Goon A. M. Gupta. M. K and Das Gupta B (1993), Fundamentals of Statistics, World Press, Kolkata. 3. Gupta S. C and Kapoor V. K (2007), Fundamentals of Applied Statistics, Sultan Chand & Sons, New Delhi.
4. Mishra D. E (1982), An Introduction to the Study of Population, South India Publishers, Madras.
5. Hansraj D. R (1981), Fundamentals of Demography, Surjeet publications, New Delhi.
6. Bhende A. A and Karitkar T (1994), Principles of Population Studies, Himalaya, Mumbai.
7. Benjamin B (1975), Demographic Analysis, George Allen and Unwin Limited.
8. Cox P. R (1978), Demography (Fifth Edition), Cambridge University Press.
9. Gibbs J. P (2012), Urban Research Methods, Literary Licensing, LLC ndia. 10. Bogue Donald J (1976), Principles of Demography, John Wiley, New York.

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Statistics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

QUEUEING THEORY

UNIT – I:

Queueing system – Kendals terminology – Classification of States - Poisson axioms

UNIT – II:

Distribution of arrival and departure under Poisson queues.

UNIT – III:

Pure Birth – Death process – transient state and steady state solution

UNIT – IV:

M/M/1; ∞ /FIFO queueing Model – steady state solution – Averages – Little's formula

UNIT – V:

M/M/1;N/FIFO queueing model – steady state solution – Averages – Simple problems.

REFERENCE BOOKS:

1. Kanti Swarup, P.K.Gupta and Man Mohan (1985) : Operations Research, Sultan Chand & Sons, New Delhi.
2. P.K.Gupta and D.S.Hira : Operations Research .S.Chand and Co, Ltd., New Delhi.

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Statistics
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

NON-PARAMETRIC TESTS

Unit – I

Introduction of non-parametric test – its comparison with parametric test – Advantage and limitations of non-parametric tests

Unit – II

Test for randomness – Run test – Test for rank correlation co-efficient – Sign test.

Unit – III

Comparison of two populations: median test – Mann Whitney U test – Wilcoxon signed rank test for paired observations.

Unit – IV

Comparison of several populations: Median test for several samples – Kruskal Walli's test – Friedman ANOVA.

Unit – V

Testing of goodness of fit by Kolmogorov – Smirnov test – chi-square test for uniformity of data – Distinction between non-parametric and distribution free tests.

References Books:

1. J.D.Gibbons (1976) : Non-parametric methods for quantitative analysis, New York.
2. J.V.Desphande , A.P.Gune, A.Shanubhogur : Statistical Analysis of non normal data.
3. Richard I. Lerin : Statistics for Management, Practice Hall of India, New Delhi. Note: Question paper may be set irrespective of the units

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B.A. PUBLIC ADMINISTRATION
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-II
ECONOMICS OF INSURANCE

UNIT I

(NATURE AND IMPORTANCE OF INSURANCE) Definition Origin – Principles and Nature of Insurance
Primary and Secondary Functions Characteristics Importance to individual, Business and Society

UNIT II

(INSURANCE CONTRACT AND RISK MANAGEMENT Meaning of Contract Insurable Interest Utmost
Good Faith Principle of Indemnity and other Principles Risk Management: Definition and types
management of Risk through Identification analysis and control

UNIT III

(PERSONAL LIFE INSURANCE AND INDUSTRIAL LIFE INSURANCE) Features of Life insurance
Proximate Cause Assignment and Nomination Rate of Premium Endowment Policies Accident Benefit
Disability Benefits Industrial Life Insurance: Purpose Group Life Insurance Benefits.

UNIT

IV (PROCEDURE TO BECOME AN INSURANCE AGENT Agency Regulation – Perquisites
Characteristics – Disqualification Kinds of agents- Duties & Functions Rights working systems
Remuneration of Agents other benefits positions of Insurance agent in india.

UNIT V

INSURANCE BUSINESS IN INDIA Major Insurance Legislation growth of industry – Agricultural
insurance Health insurance Reinsurance Entry of Private Insurance Companies Insurance Act, LIC Act, GIC
act, IRDA Act.

TEXTBOOKS:

1. Mishra M.N, Insurance : Principles & Practices.
2. Murthy.A, Elements of Insurance.

REFERENCEBOOKS:

1. Srivatsava D.C & Shashank Srivastava, Indian Insurance Industris Transition & Prospect
2. Holyoake, Julia & William Weipers, Insurance
3. Sharma. R.S, Insurance, Principles and Practice
4. Arifkhan.M, Theory and Practice of Insurance.

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B.A. PUBLIC ADMINISTRATION
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-III
LOCAL GOVERNANCE IN INDIA

UNIT I INTRODUCTION Nature, Scope and Importance of Local Administration - Evolution of Local Government in Independent India – Community Development Programme Balwant Ray Mehta and Ashok Mehta Committee Reports.

UNIT II RURAL LOCAL GOVERNMENT Rural local Government - Structure and Functions - Village Panchayat - Panchayat - Samithi – Zilla Parizad - Local Finance - 73rd Amendment Act.

UNIT III URBAN LOCAL GOVERNMENT Urban Local Government - Structure and Functions - Municipal Corporation - Municipality - Town Panchayat - Township - Cantonment - Notified Area- 74th Amendment Act.

UNIT IV DEVELOPMENT PROGRAMMES Rural and Urban Development Programmes - Community Development Programmes - Employment and Poverty Alleviation Programmes - Urban Development Schemes - Housing, Water supply and Sanitation Schemes.

UNIT V DISTRICT ADMINISTRATION Role of District Collector in Local Government Administration - Role of DRDA – Control over Supervision Local Bodies.

BOOKS FOR REFERENCE:

1. Pradeep Sachdeva, Local Government in India, Person Education India, 2011
2. Bidjutchakrabarty and Rajendra Kumar Pandey, Local Government in India, Sage publication, 2018
3. Neena.Ms., Local Government and Administration, Alfa Publication, 2008
4. Gajana.R.P.,Sharama.A, Public Administration and Local Government Administration, Crescent Publish Corportation.
5. S.R.Maheswari, Local Government in India, LaxmiNarain Agarwal publication, 2009

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B.A. PUBLIC ADMINISTRATION
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV

SOCIAL ISSUES IN INDIA

UNIT – I

Social Structure in India – Ancient, Medieval and Modern Society – Reforms and Modern Society

UNIT – II

Population Growth – Illiteracy – Unemployment – Poverty – Issue of Social Inclusion and Exclusion – Civil Society and NGOs

UNIT – III

Child Labour – Child Abuse – Violence against Women – Domestic Violence

UNIT – IV

Castism – Communalism –Regional Unrest – Minorities and Reservation - Lingustism

UNIT – V

Alcoholism – Drug Abuse – Digital Divide - Cyber Crime – Social Media and Awareness

BOOKS FOR REFERENCE:

1. G. David Mandelbaum, Society in India, SAGE TEXTS, New Delhi; 2016
2. Veena Das (ed), Oxford Handbook of Indian Sociology, Oxford University Press, New Delhi, 2004
3. T.K. Oommen, Social Inclusion in Independent India Dimensions and Approaches, Orient Black Swan Pvt Ltd, New Delhi, 2016
4. O.P. Goel (ed), Role of NGOs in Development of Social System, ISHA Books, Delhi, 2004

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Public Administration

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

E – GOVERNANCE IN INDIA

UNIT – I: E – Governance – Meaning - Definition – Stages and Development of E-governance – E-governance process.

UNIT II: Public – Private partnership in E-Governance – Difference between government and Governance – Government Database management

UNIT III: Data Warehouse – Government Web Services – State Data Centre

UNIT IV: Digitalization of State and District Administration – Bridging and Digital Divide

UNIT V: Cyber Law and e-governance – Legal Status for Digital Transactions – Information Technology.

Books for Reference:

1. Satyanarayanan.J: e-Government – the science of the possible; Prentice hall of India (PVT), New Delhi
2. Kenneth Kennison and Deepak Kumar (Eds): IT Experience in India; Bridging the Digital Divide, Sage Publication, New Delhi, 2004
3. IT Act, Government of India, www.mit.gov

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Public Administration

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

MEDIA MANAGEMENT

UNIT-I Meaning Nature and Scope of Media Management-Growth of Media Objectives and Functions- Principles and Practices of Media Management – Media Management Department-Media Management Officer – Role and Responsibilities of Media Manager.

UNIT-II Communication in Media – Techniques and Models – Media as communicating medium

UNIT-III Media Management Tools – Advertising – Publicity – Propaganda – Diplomacy – Promotion – Campaigns – Lobbying – Evaluating the effectiveness of Media – Public Opinion Research – Ethical Issues involved in Media Management

UNIT-IV News Agencies – PTI, UNI and BBC – Public Relation Society in India – Press Council in India – Indian Institute of Mass Media and Public Opinion – Social Media.

UNIT-V The Basic Functions of Government in Media Department – Agencies to provide information to the Citizens – Citizen Service Centers – Civic Society and Media – Emerging Trends and Issues in Media

Text Books

- 1 Dr.Saroj Kr. Mishra(2018), Media Management, New Delhi, Gyan Geeta Prakashan.
- 2 Yadav K. P (2020), Media Management, New Delhi, Adhyayan Publishers & Distributors.
- 3 ChaturvediBadrinath (2009), Media Management (1st Ed), New Delhi, Global Vision Publishing House.
- 4 Catherine Zhou, Robert Wollan, Nick Smith (2011), The Social Media Management Hand Book, Wiley Publications.
- 5 B.K. Chaturvedi (2014), Media Management, New Delhi, Global Vision Publishing House.

Reference Books 1 Jan LeBlanc Wicks, George Sylvie, Wilson Lowrey, Ann Hollifield (2015), Media Management: A Casebook Approach, Routledge Communication Series.

2 Karen E. Sutherland (2021), Strategic Social Media Management: Theory and Practice - Springer Publications.

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B.A. Sociology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER II

CHILD RIGHTS AND WELFARE PROGRAMMERS

UNIT I - Child Rights as Human Rights– Rights based approach, Difference between Needs, Welfare and Rights. Child Rights: Meaning, scope, origin and development of child rights in India.

UNIT II - Child Rights and Constitutional Provisions – Concept of Human Rights, United Nations Convention on the Rights of the Child (UNCRC), Overview of Legal Systems in India. Provisions for Child Rights in Indian Constitution.

UNIT III - Ensuring Child Rights - Principles of practice and role of caregivers in promoting Child Rights. Role of Duty bearers in ensuring Child Rights – Role in protection, prevention, intervention and Rehabilitation. Role of Family, Community, Civil Society, Media and the State. Separation of powers between the Executive, Judiciary and Legislature. Important schemes and services for ensuring child rights.

UNIT IV - Legal Measures promoting Child Development – Right of Children to free and compulsory education act 2009, Commission for the protection of Child rights Act 2005, Prohibition of Child Marriage Act 2006, The Immoral Traffic Prevention Amendment Bill 2006, Protection of children from sexual offences Rules 2020, Juvenile Justice Care and Protection Act, 2021. Child Labour Prohibition and Regulation Act, 2016.

UNIT V - Stakeholders in Child Development - Ministry of Women and Child Development, Roles and Functions of the Central and State level Commission for Protection of Child Rights in India, National Institute of Public Cooperation and Child Development, The Child Welfare Committee. Role of Social Work and Civil Society Organisations: Advocacy, Lobbying, Fact-finding.

Text Books:

1. Bajpai, A. 2003. Child Rights in India: Law, Policy and Practice, New Delhi: Oxford University Press.
2. Chandru, K., Geetha, R. & Thanikachalam, C.1998. Child Law in India, Chennai: Indian Council for Child Welfare
3. Chopra, G. 2015. Child Rights in India: Challenges and Social Action. New York: Springer.
4. Ghosh, A. 1998. A Primer of the Convention on The Rights of The Child, Calcutta: IPER.
5. Manoharan, A. & Mehendale, A. 2012. Commissions for Protection of Child Rights: Answers to Common Questions Children May Have, Bangalore: Centre for Child and the Law National Law School of India University.

Books for References:

1. Mehendale, A. 2012. Handbook for Local Authorities: on Commissions for Protection of Child Rights and Grievance Redressal, Bangalore: Centre for Child and the Law National Law School of India University.
2. Verhellen, E. 2006. Convention on the Rights of the Child, London: Garant Publishers. Joachim, T. 2004. Promoting Rights Based Approaches: Experiences and Ideas from Asia and the Pacific, Sweden: Save the Children
3. Upadhyaya Shivendra, 2009. Encyclopedia of Juvenile Rights, Child Rights, and Women Rights, volume 2, Anmol publications, New Delhi.
4. Shrivastave Rekha, 2009 International Encyclopaedia of Women Rights and Children Rights, Anmol Publications, New Delhi.
5. Baxi, Upendra. 2002. Future of Human Rights. Bueren.

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B.A. Sociology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER III
COMMUNICATION SKILLS

UNITS I COMMUNICATION: AN INTRODUCTION

- Definition, Nature and Scope of Communication
- Importance and Purpose of Communication
- Process of Communication
- Types of Communication

UNITS II NON-VERBAL COMMUNICATION

- Personal Appearance
- Gestures
- Postures
- Facial Expression
- Eye Contacts
- Body Language
- Tips for Improving Non-Verbal Communication

UNIT –III EFFECTIVE COMMUNICATION

- Essentials of Effective Communication
- Communication Techniques
- Barriers to Communication

UNIT –IV LISTENING SKILLS

- Purpose of Listening
- Listening to Conversation (Formal and Informal)
- Active Listening- an Effective Listening Skill
- Benefits of Effective Listening
- Barriers to Listening

Units V Communication: An Introduction

- Definition, Nature and Scope of Communication
- Importance and Purpose of Communication
- Process of Communication
- Types of Communication II Non-Verbal Communication
- Personal Appearance
- Gestures
- Postures

- Facial Expression
- Eye Contacts
- Body Language
- Tips for Improving Non-Verbal Communication
- Spirited Communication style
- Systematic Communication style
- Considerate Communication style

RECOMMENDED BOOKS

1. Basic communication skills for Technology, Andreja. J. Ruther Ford, 2nd Edition, Pearson Education, 2011
2. Communication skills, Sanjay Kumar, Pushpalata, 1st Edition, Oxford Press, 2011
3. Brilliant- Communication skills, Gill Hasson, 1st Edition, Pearson Life, 2011
4. The Ace of Soft Skills: Attitude, Communication and Etiquette for success, Gopala Swamy Ramesh, 5th Edition, Pearson, 2013
5. Developing your influencing skills, Deborah Dalley, Lois Burton, Margaret, Greenhall, 1st Edition Universe of Learning LTD, 2010

TEXT BOOKS

1. Communication skills for professionals, Konar nira, 2nd Edition, New arrivals –PHI, 2011
2. Personality development and soft skills, Barun K Mitra, 1st Edition, Oxford Press, 2011
3. Soft skill for everyone, Butter Field, 1st Edition, Cengage Learning indiavpt.ltd, 2011
4. Soft skills and professional communication, Francis Peters SJ, 1st Edition, McGraw Hill Education, 2011
5. Effective communication, John Adair, 4th Edition, Pan Mac Millan, 2009

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B.A. SOCIOLOGY**(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)****SEMESTER-IV****CREATIVE WRITING SKILLS****Units****I Introduction to Creative Writing**

- Understanding the nature and importance of creative writing
- Exploring different forms of creative writing (fiction, poetry, drama, etc.)

Developing the Writing Process**II**

- Brainstorming techniques for generating ideas
- Outlining and organizing thoughts
- Drafting and revising
- Editing and proofreading

Narrative Techniques**III**

- Creating compelling characters
- Developing engaging plots and storylines
- Using dialogue effectively

Descriptive Writing**IV**

- Utilizing sensory details to enhance descriptions
- Creating vivid and evocative imagery
- Describing people, places, and objects in unique ways

Writing for Different Genres and audience**V**

- Exploring genre-specific elements (e.g., mystery, romance, science fiction)
- Adapting writing style for different age groups or demographics
- Understanding audience expectations and preferences
- Considering cultural, social, and historical contexts

Recommended books

- 1 Abrams, M.H (2005). Glossary of Literary Terms. Boston: Wadsworth Publishing Company.
- 2 Atwood, Margaret (2002). Negotiating with the Dead: A Writer on Writing. Cambridge: CUP.
- 3 Bell, James Scott (2014). How to Write Dazzling Dialogue.CA: Compendium Pres.
- 4 Berg, Carly (2015). Writing Flash Fiction: How to Write Very Short Stories and Get Them Published. Then Re-Publish Them All Together as a Book. Houston: Magic Lantern Press, 2015.
- 5 Bell, Julia and Magrs, Paul (2001). The Creative Writing Course- Book. London: Macmillan.
- 6 Berg, Carly (2015). Writing Flash Fiction: How to Write Very Short Stories and Get Them Published. Then Re-Publish Them All Together as a Book. Houston: Magic Lantern Press, 2015.
- 7 Blackstone, Bernard. Practical English Prosody. Mumbai: Orient Longman, 1984.

8 Clark, Roy Peter (2008). Writing Tools.US: Brown and Company

9 Earnshaw, Steven (Ed) (2007). The Handbook of Creative Writing. Edinburgh: EUP.

Text books

1. James Webb Youn (1940). A Technique for Producing Idea.
2. Henry Harvin(2021). Creating The Creative Writers, Henry Harvin, Publisher: Henry Harvin Education,
3. Janet Burroway, Elizabeth Stuckey-French and Ned Stuckey-French (2019). Writing Fiction, Tenth Edition.
4. Janet Burroway (2023). Imaginative Writing.
5. Morley (2012), The Cambridge Companion To Creative Writing South Asian Edition.

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Sociology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

Workplace Behavior and Employability Skills

UNITS I Introduction to Workplace Behavior and Employability Skills

- Meaning and importance of workplace behavior and employability skills
- Developing self-awareness and self-management
- Building positive relationships
- Communication Skills
- Skills required in the modern workplace

UNITS II Teamwork and Collaboration

- Working effectively in teams
- Building positive relationships with colleagues
- Resolving conflicts and managing disagreements

UNITS III Adaptability and Flexibility

- Adapting to change in the workplace
- Embracing new technologies and processes
- Empathy and emotional intelligence in the workplace

UNITS IV Time Management and problem solving

- Setting goals and prioritizing tasks
- Managing time effectively
- Planning and organizing work
- Handling deadlines and managing multiple projects
- Identifying and analyzing problems
- Generating creative solutions
- Decision-making skills
- Applying critical thinking in the workplace

UNIT V Leadership management skills and professional ethics

- Leadership styles and qualities
- Effective delegation and supervision
- Motivating and inspiring others
- Conflict resolution and managing difficult situations
- Understanding professional conduct and ethical behavior
- Maintaining confidentiality and integrity
- Ethical decision-making
- Professional etiquette and workplace norms

Recommended Books

1. Essentials of Organizational Behavior by Stephen Robbins and Timothy Judge, Pearson; 14th edition, 2017
2. Team of Teams: New Rules of Engagement for a Complex World 53 53 by Gen. Stanley McChrystal, Tatum Collins, et al, Portfolio; Illustrated edition, 2015
3. Reframing Organizations: Artistry, Choice, and Leadership by Lee G. Bolman and Terrence E. Deal, 2017.
4. Organizational Behavior: A Skill-Building Approach by Dr. Christopher P. Neck, Jeffery D. Houghton, and Emma L. Murray, SAGE Publications, Inc, 2019
5. Managing Organizational Behavior: What Great Managers Know and Do by Timothy Baldwin, Bill Bommer, and Robert Rubin, McGraw Hill; 2nd edition 2012 Text books 1. Lydia E. Anderson and Sandra B. B

Sociology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

PERSONALITY DEVELOPMENT

UNIT – I: Introduction to Personality Development: The concept of personality - Dimensions and types of personality – Determinants of Personality - Theories of Freud & Erickson - Significance of personality development.

Unit – II: The concept of success and failure: What is success? - Hurdles in achieving success - Overcoming hurdles - Factors responsible for success – What is failure - Causes of failure. SWOT analysis.

UNIT – III: Attitude: Attitude - Concept - Significance - Factors affecting attitudes - Positive attitude – Advantages –Negative attitude- Disadvantages - Ways to develop positive attitude - Differences between personalities having positive and negative attitude.

UNIT – IV: Self-esteem: Term self-esteem - Symptoms - Advantages - Do's and Don'ts to develop positive self-esteem – Low self-esteem - Symptoms - Personality having low self esteem - Positive and negative self esteem.

UNIT – V: Other Aspects of Personality Development: Body language - Problem-solving - Conflict and Stress Management - Decision-making skills - Leadership and qualities of a successful leader – Character building - Team-work – Time management - Work ethics –Good manners and etiquette.

Reference Books:

1. Hurlock, E.B (2006). Personality Development, 28th Reprint. New Delhi: Tata McGraw Hill.
2. Stephen P. Robbins and Timothy A. Judge (2014), Organizational Behavior 16th Edition: Prentice Hall.
3. Andrews, Sudhir. (1988). How to Succeed at Interviews. 21st (rep.) New Delhi.Tata McGraw-Hill.
4. Heller, Robert. (2002). Effective leadership. Essential Manager series. Dk Publishing.
5. Hindle, Tim. (2003). Reducing Stress. Essential Manager series. Dk Publishing.

BACHELOR OF SOCIAL WORK (B.S.W)

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II

CHILD RIGHTS AND WELFARE PROGRAMMERS

UNIT I - Child Rights as Human Rights– Rights based approach, Difference between Needs, Welfare and Rights. Child Rights: Meaning, scope, origin and development of child rights in India.

UNIT II - Child Rights and Constitutional Provisions – Concept of Human Rights, United Nations Convention on the Rights of the Child (UNCRC), Overview of Legal Systems in India. Provisions for Child Rights in Indian Constitution.

UNIT III - Ensuring Child Rights - Principles of practice and role of caregivers in promoting Child Rights. Role of Duty bearers in ensuring Child Rights – Role in protection, prevention, intervention and Rehabilitation. Role of Family, Community, Civil Society, Media and the State. Separation of powers between the Executive, Judiciary and Legislature. Important schemes and services for ensuring child rights.

UNIT IV - Legal Measures promoting Child Development – Right of Children to free and compulsory education act 2009, Commission for the protection of Child rights Act 2005, Prohibition of Child Marriage Act 2006, The Immoral Traffic Prevention Amendment Bill 2006, Protection of children from sexual offences Rules 2020, Juvenile Justice Care and Protection Act, 2021. Child Labour Prohibition and Regulation Act, 2016.

UNIT V - Stakeholders in Child Development - Ministry of Women and Child Development, Roles and Functions of the Central and State level Commission for Protection of Child Rights in India, National Institute of Public Cooperation and Child Development, The Child Welfare Committee. Role of Social Work and Civil Society Organisations: Advocacy, Lobbying, Fact-finding.

Text Books:

6. Bajpai, A. 2003. Child Rights in India: Law, Policy and Practice, New Delhi: Oxford University Press.
7. Chandru, K., Geetha, R. & Thanikachalam, C.1998. Child Law in India, Chennai: Indian Council for Child Welfare
8. Chopra, G. 2015. Child Rights in India: Challenges and Social Action. New York: Springer.
9. Ghosh, A. 1998. A Primer of the Convention on The Rights of The Child, Calcutta: IPER.
10. Manoharan, A. & Mehendale, A. 2012. Commissions for Protection of Child Rights: Answers to Common Questions Children May Have, Bangalore: Centre for Child and the Law National Law School of India University.

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6. Mehendale, A. 2012. Handbook for Local Authorities: on Commissions for Protection of Child Rights and Grievance Redressal, Bangalore: Centre for Child and the Law National Law School of India University.
7. Verhellen, E. 2006. Convention on the Rights of the Child, London: Garant Publishers. Joachim, T. 2004. Promoting Rights Based Approaches: Experiences and Ideas from Asia and the Pacific, Sweden: Save the Children
8. Upadhyaya Shivendra, 2009. Encyclopedia of Juvenile Rights, Child Rights, and Women Rights, volume 2, Anmol publications, New Delhi.
9. Shrivastave Rekha, 2009 International Encyclopaedia of Women Rights and Children Rights, Anmol Publications, New Delhi.
10. Baxi, Upendra. 2002. Future of Human Rights. Bueren.

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Bachelor of Social Work (B.S.W)

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER III

MAN AND INDIAN SOCIETY

UNIT – I

Introduction: Society – Meaning, Definition, Characteristics, Types, Composition of Indian Society- Racial, Religious, Linguistic Groups in India, Changing trends in the Indian Society

UNIT – II

Components of Indian Society: Community – Meaning, Definition and Types. Socialisation – Meaning, Definition, Agents of Socialisation. Culture – Meaning, Definition, Components of Culture. Globalisation, Privatisation, Liberalisation – Meaning, Definition, Effects on Indian Society, Advantages and Disadvantages

UNIT – III

Indian Social Stratification: Social Stratification – Meaning, Definition, Characteristics, Need and Importance. Caste, Class – Definition, Difference between Caste and Class, Changing Patterns in Caste and Class, Impact of Caste, and Class on Indian Society. Sex and Gender – Meaning, Definition, Difference. Social Mobility – Meaning, Definition, Forms of Social Mobility

UNIT – IV

Social Institutions: Social Institutions – Meaning, Definition Marriage – Meaning, Definition, Types, Changing Trends. Family – Meaning, Definition, Functions, Types, Changing Trends. Kinship – Meaning, Definition, Types. Religion – Meaning, Definition, Types, Role of Religion in Society

UNIT – V

Social Structure and Social Problems: Social Control – Meaning, Definition, Forms of Social Control. Social Processes – Meaning, Definition, Types. Social Change – Meaning, Definition, Factors affecting Social Change. Social Problems – Meaning, Definition, Causes of Poverty, Unemployment, Illiteracy, Addiction and Crime

Text Books

1. Ahuja, Ram. (1999) Society in India: Concepts, Theories and Changing Trends, Jaipur: Rawat Publications
2. Bottmore. T.B, 1980: Sociology: —A Guide to Problems and literature, New Delhi. McGraw Hill
3. Kapadia, K.M., (1966) Marriage and Family in India, New Delhi: Oxford University Press
4. Rao Shankar, (2006) Sociology of Indian Society, New Delhi: S Chand
5. Srinivas, M.N., (1970) Social Change in Modern India, Madras: Allied Publishers

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Bachelor of Social Work (B.S.W)
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER - V

DYNAMICS OF HUMAN BEHAVIOUR

UNIT – I

Introduction to Psychology: Psychology- meaning and definition. Various Fields of psychology. Human Behaviour- definition, meaning, and types. methods in studying human behaviour. Relationship between psychology and social work. Need for psychology in social work practice.

UNIT – II

Sensation and Perception – meaning, concepts – stimulus and response, perceptual process, and factors influencing perception and perceptual selectivity. Learning – definition, types, and theories – classical conditioning, operant conditioning, and social learning theory. Memory – meaning, process- registration, retention, and recall, types of memory.

UNIT – III

Intelligence – definition, levels, and theories. Howard Gardner's theory of multiple intelligences, Sternberg's Triarchic Theory of Intelligence, and Spearman's two-factor theory. Personality- definition and meaning. Dimensions in personality. Theories- Freud's Psychoanalytical theory, Erickson's Psychosocial Development, and Carl Roger's Humanistic theory. Relevance of psychological theories in social work practice.

UNIT – IV

Motivation – meaning, types- Intrinsic and Extrinsic. Abraham Maslow's theory of Hierarchical needs. **Motives-** meaning and types. **Emotion** – Nature, characteristics, and adaptive and disruptive qualities of emotion. Application of motivation theories in social work practice

UNIT – V

Attitude – formation, changes, stereotypes, and Prejudice. **Adjustment-** characteristics of adjustment and maladjustment. Factors – frustration, stress, conflict, and defence mechanism **Mental Health** – concept, Minor and Major mental disorders. Role of a social worker in community mental health

TEXTBOOKS

1. Ahuja, N. A. (1995) Short Textbook of Psychiatry. New Delhi: Jaypee Brother
2. Crider, et al. (1989). Psychology. New York: Scott. Foresman
3. Fernald, L. D. & Fernald, P. S. (1999). Introduction to Psychology. New Delhi: AITBS Publishers.
4. Mangal, S. K. (2006). General Psychology. New Delhi: Sterling.
5. Morgan, et al. (1997). Introduction to Psychology. New York: McCraw-Hillbook Co.

BOOKS FOR REFERENCES

1. Bee, Helen. Mitchell, Sandra. (1984) The Developing Person-A Life Span Approach.Ed2, New York Harper and Ro.
2. Benjamin A. Lahey, (1998). An Introduction to Psychology (Sixth Edition), New Delhi:Tata McGraw Hill.
3. Compton, Beulah. Galway, (2005) Cournoyer, Social Work Processes. Ed 7, USA: BrooksCole Learning,
4. Coleman, James, (1976) Abnormal Psychology and Modern Life. Ed 5, Mumbai: D.B Taraporewala& Sons Corner Ronald, J, (2012). Abnormal Psychology. New Delhi: Wisdom Press.

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B.S.W
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

INDIAN POLITY

Unit I SBEC-INDIAN POLITY Constitutional Framework: Historical Background, Salient features of the Indian Constitution, Preamble to the Constitution, Amendment of the constitution, Basic structure of the constitution. Union and its territory and Directive principles of state policy

Unit II System of Government: Parliamentary system, Federal System, Centre- state relations, Inter-state relations and Emergency provisions.

Unit III Union Government: Functions of President, Vice-President, Prime Minister, Central Council of Ministers, Cabinet committees, Parliament, Parliamentary committees and Supreme Court.

Unit IV State Government: Activities of Governor, Chief Minister, State Council of Ministers, State legislature and High court.

Unit V Local Government: Panchayati Raj, Evolution of Panchayati Raj, Salient features of the act (73rd amendment act of 1992) and Municipalities and Municipal Corporations

References

1. Laclau Ernesto, Politics and Ideology in Marxist Theory, Verso, London, 1977
2. Kothari Rajni, Caste in Indian Politics, Delhi, 1973
3. Miller David, On Nationality, Clarendon Press, Oxford, 1995
4. Bhargava Rajeev, Secularism and its Critics, OUP, New Delhi, 1999.
5. Chandhoke Neera (edt) Understanding the Post Colonial World, Sage, New Delhi, 1994

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B.S.W
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

PERSONALITY DEVELOPMENT

UNIT – I: Introduction to Personality Development: The concept of personality - Dimensions and types of personality – Determinants of Personality - Theories of Freud & Erickson - Significance of personality development.

Unit – II: The concept of success and failure: What is success? - Hurdles in achieving success - Overcoming hurdles - Factors responsible for success – What is failure - Causes of failure. SWOT analysis.

UNIT – III: Attitude: Attitude - Concept - Significance - Factors affecting attitudes - Positive attitude – Advantages –Negative attitude- Disadvantages - Ways to develop positive attitude - Differences between personalities having positive and negative attitude.

UNIT – IV: Self-esteem: Term self-esteem - Symptoms - Advantages - Do's and Don'ts to develop positive self-esteem – Low self-esteem - Symptoms - Personality having low self esteem - Positive and negative self esteem.

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Reference Books:

1. Hurlock, E.B (2006). Personality Development, 28th Reprint. New Delhi: Tata McGraw Hill.
2. Stephen P. Robbins and Timothy A. Judge (2014), Organizational Behavior 16th Edition: Prentice Hall.
3. Andrews, Sudhir. (1988). How to Succeed at Interviews. 21st (rep.) New Delhi.Tata McGraw-Hill.
4. Heller, Robert. (2002). Effective leadership. Essential Manager series. Dk Publishing.
5. Hindle, Tim. (2003). Reducing Stress. Essential Manager series. Dk Publishing.

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JMC & VISCOM
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II

CITIZEN JOURNALISM

UNIT I : Citizen – definition -Society - Community – Society Vs Community - Culture and communication – Access to knowledge & Culture – Public Sphere- Political sphere - Mediated communication (Historical context) – Mediated communication on modern culture - News inflation and filtering
UNIT II : Design of technologies (control and desire), Inequalities of design, control of public space – laws and regulation - Media stereotypes and bias - Media ecology (Tribal age, Literacy age Print age, Electronic age, New media age), Media in transition, Technological convergence, Media identity, Introduction of participatory culture, Disruptions (New Technologies, New Audiences, New Rhetorics, New Authority)

UNIT III: Digital Revolution- Media literacy – Content analysis in modern context- Democracy in Virtual World - Activism & Civil Disobedience – Activism and civil disobedience without media literacy - Social Justice – Vigilantism - Safe space – Political correctness - post-truth
Technological determinism, Mobile Journalism (MOJO)

UNIT IV: Internet as Human right (net neutrality) - Social Networks and participatory culture – online privacy and citizen surveillance – Crowd sourcing- Non-fiction documentaries - Advocacy Films - Alternative journalists and their agenda - Parody news shows – significance and context.

UNIT V: Open data and open governance - New forms of civic media - Access to information in digital world - Available tools for citizen journalist -Indian government and civic media – impartiality in citizen journalism – source journalism, Citizen media, Participatory journalism. Hyper Local Journalism in today's media market.

References 1. Hoffmann David, (2014), Citizens Rising: Independent Journalism and the Spread of Democracy. Delhi, India: Prakash Books India Pvt. Ltd.

2. Mohamed Ali Sayed, (2013), Citizen Journalism and Democratic Transformation in Egypt. Saarbrücken, Germany: OmniScriptum.

3. Paramjeet Singh Dhawal, (2001), International Encyclopaedia of New Media: Citizen Journalism. Bengaluru, India: Anmol Publications

B.A. Journalism & Mass Communication / B.Sc. Visual Communication
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER III
E-Media Marketing

UNIT I

Marketing – Definition – Marketing Mix elements – Globalisation – competition- need for effective marketing – Marketing and Selling - New trends in marketing – Corporate social responsibilities – Green marketing- social marketing and other concepts

UNIT II

Targeted market - niche marketing – types of market – characteristics of the Indian market – Need for market study – global brands and market perception – Demographic, psychographic and geographic segmentation of markets – Test marketing: objectives, planning and execution. Customer Service – Disadvantages - Time intensive - Trademark and Copyright Issues - Trust, Privacy and Security Issues - User-Generated Content (UGC).

UNIT III

Introduction – Content – Context - Social Media Marketing and Its features – Advantages – Cost - Social Interaction – Interactivity - Social media Sites (Facebook) – Micro-blogging sites (Twitter) – Publishing tools (Wordpress) – Review Sites – Photo Sharing sites – Video Sharing Sites – Personal broadcasting tools

UNIT IV

Social Media marketing trends – Social Media Executive - Organic reach - pay to play – merging channels – merging tools - Advertising options - audience to target – integration – going live.

UNIT V

Integrated Marketing Communication – Need for integrated approach – cross cultural marketing programmes – challenges in multinational marketing - Future trends – Social Analytics – adverts–case studies - Media Monitoring - Campaign Analysis - Image Analytics - Audience Analysis - – ethical issues in social media marketing – consumer rights and forums.

REFERENCE:

1. Social Media Marketing by Tracy L Tuten Michael R Solomon
2. Social Media Marketing 2019 by Clarke Gary
3. Social Media Analytics Strategy by Alex Goncalves
4. Kenneth Clow & Donald Baack. 2005. Integrated Advertising, Promotion and Marketing Communication (2nd edn.) Prentice Hall, New Delhi.
5. Arun Kumar, N.Meenakshi. 2006. Marketing Management. Vikas Pub. New Delhi. Marketing Communication – an integrated approach (4th edn.) by PR Smith and Jonathan Taylor, Kogan Page publisher 2005.
6. Principles of Advertising and IMC (2nd edn.) by Tom Duncan, Tata McGraw Hill company Ltd., New Delhi 2008.
7. Advertising and Promotion, an Integrated Marketing Communications Perspective (7th edn.) by George E Belch, Micheal A Belch and Keyoor Purani, Tata McGraw Hill company Ltd., New Delhi 2010.

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B.A. Journalism & Mass Communication / B.Sc. Visual Communication
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-IV

FREELANCE JOURNALISM

UNIT I

Importance of News, Concept of News, Elements of News, Forms of News, Significance of News in Modern Life.

UNIT II

Organs of News Body, Different Forms of News Writing, Familiarisation with News Items of Newspapers, Magazines & News Agencies, Translation of News, Preparing of News , Theories and Practice of News Items.

UNIT III

Change of Information in to a News, Change of News into an Information, Corelation Differentiation and Transformation of News & Information.

UNIT IV

News, sources of news and news value parameters and the basic reportorial and editing skills.

UNIT V

The systems of syndication and stock libraries in India, required tools of the trade and the areas/scope of freelance journalism

REFERENCE BOOKS:

1. M.V.Kamath, The Journalist's Handbook, Vikas,1992.
2. Michael Barratt, Making the Most of the Media, Kogan Page,1996.
3. RangaswamiParthasarathy, Journalism in India, Sterling,1989.
4. News writing and Reporting, James, M. Neal, Surjeet Publication.
5. News writing – George A. Hough, Kanishka publishers N. Delhi.

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JMC & VISCOM
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V
Broadcasting

UNIT I

Development of Radio Broadcasting in India – Ownership – Control – Autonomy for Radio – Types of Radio services- Radio as a source of News and entertainment; Types of Radio programmes.

UNIT II

Broadcast News – Value – Radio Language – News Bulletin – News Source for Radio – Reporters, Editors and Agencies – External News Services Interviews – Features – Writing for Radio.

UNIT III

Special Audience Programmes – Rural and Farm Broadcasting – Educational Programmes – Programmes for Children, Women and Youth. Women Welfare – Children Welfare – Health and Family Planning – Rural Development – Urban problems

UNIT IV

Development of Television in India – News Programmes: a) News cast b) News Review – Formats of TV Programmes – Documentary – Special Features – Interviews. TV as a powerful Audio – Visual Media – Commercial and Sponsored Programme – Educational Service.

UNIT V

Broadcasting in the Information age – knowledge society - global media and audiences; New media: digital revolution – Internet TV, satellite TV and DTH; mediaconvergence.

REFERENCE BOOKS:

1. Chatterji, P.C, Broadcasting in India, Sage Publications, New Delhi, 1987
2. MehraMassani, Broadcasting and the People, National Book Trust, New Delhi, 1985
3. Luthra, H.R, Indian Broadcasting, Publications Division, New Delhi, 1986
4. Warren K. Agee, Introduction to Mass Communication, 6th Edition, Oxford & IBH, Calcutta
5. Kumar, Keval J, Mass Communication in India, Jaico Publishing House, Bombay, Delhi, Bangalore, Calcutta, Madras
6. Gerald Millerson, Effective TV Production.

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JMC & VISCOM
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

MEDIA PRESENTATION SKILL

Unit 1: What is presentation? - Why we need training? – Boring presentation – Common cases of infective presentation – Steps to make an effective presentation – communication is the key

Unit 2: Introduction to Voice: - Introduction to Human Voice -5 P's of Voice. i.e. - Pitch - Pace – Pause - Projection –Punch. Breathing :- Breathing & Voice relationship - How to Breathe – Controlling the Airflow - When to breathe - Noisy breathing - The diaphragm - Breathing Exercises, Pranayama

Unit 3: Introduction to the Art of Public Speaking & Presentation: - Understanding the Audience – Preparation of Subject - Scripting - Presentations; Reading for Microphone & Presentation: - Introduction to Micro-phone - Use of Mike - Voice Modulations - Characterization - Language & Dialects.

Unit 4: Voice-Over: - Voice Over for different Audio-Visual genres i.e. Documentaries, Walkthrough, Programsetc- Voice Over for Audio Programs - Voice Over for Commercials - Techniques of Voice recording & editing. Dubbing: - Introduction to dubbing - Understanding of Character - Dubbing as Art - Role of Dubbing Artist - Introduction to Dubbing Studio's - Dubbing Exercises - Reviewing Dubbed Films & other genre

Unit 5: New Media: - Sparklers - Promo's - Hello Tunes - IVR (Interactive Voice Response) & Voice Artist - Audio Branding Opportunities. Industry & Opportunities - Introduction to Industry - Preparing Individual Profile - Preparing Commercial Projects etc - Social Media Strategies – What is social media? - Build relationships - Separating business/personal profiles.- Online Presenting: Show reel.

References:

1. Introduction to Broadcast Voice – Jenny Mill
2. The Art of Public Speaking- McGraw-HiLL International Edition
3. Introduction to Broadcast Journalism- Dr.KeshavSathaye
4. Biographies of distinguished Performers & Actors like ShreeramLagoo, Dada Kondke, Amitabh Bachhan and many more.
5. Introduction to Advertising- Oxford University Press

B.Sc. FOOD TECHNOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-II
FOOD BIOTECHNOLOGY

UNIT-I

Biotechnology- Meaning and importance, history of biotechnology- traditional and modern biotechnology. Genetically modified foods- Definition and examples, advantages, disadvantages and safety aspects of foods produced by genetic engineering.

UNIT-II

Food biotechnology- Single cell protein, algae and spirulina: production and uses; Mushroom-production and processing. Genomics and proteomics- Meaning, types and future; bioinformatics- meaning, sequences and nomenclature; information sources; uses.

UNIT-III

Enzymes- Role in food processing, importance; applications- industrial application of microbial enzymes; production of amylase, lipase and pectinase; immobilized enzymes and their applications.

UNIT-IV

Fermentation- Types, advantages, factors controlling; batch fermentation and continuous fermentation; Fermented products- citric acid, lactic acid, vinegar, wine, beer, oriental fermented foods- tempeh and tofu.

UNIT-V

Biotechnology and biosafety- Introduction to intellectual property rights; intellectual property laws; Trade Related Aspects of Intellectual Property Rights. Forms of IPR like patent, design and copyright trademark; Bioethics: Necessity of bioethics, different paradigms of bioethics- national and international.

REFERENCES

1. R.C. Dubey, A text book of Biotechnology, S.Chand and company, New Delhi, 2005.
2. S.N. Tripathy, Food biotechnology, Dominant publishers and distributors, 2006.
3. Kumar, H.D., A text book of Biotechnology, Affiliated East-West Press pvt ltd., New Delhi, Second edition, 2004.
4. Kumaresan.V., Biotechnology, Saras Publication, 2005.

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B.Sc. Food Technology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-III

Public Health Nutrition

UNIT-I

Definition of public health nutrition and health promotion; public health nutrition cycle; public health approaches- socio ecological approach, life style approach and biological approach. Assessment of nutritional status in individuals and population: Anthropometry, biomarkers, clinical assessment and dietary assessment- methods and their advantages and disadvantages.

UNIT-II

Assessment of physical activity: Physical activity and health; dimensions of physical activity; assessment methods- principle, advantages and disadvantages of objective methods (doubly labeled water method, minute by minute heart rate monitoring, motion sensors and accelerometers) and subjective methods (activity diaries and physical activity questionnaires)

UNIT-III

Public health education: Health education- definition, objectives, content and principles. Communication in public health education- key elements and barriers of communication; audio visual aids in communication- (auditory aids, visual aids and combined AV aids); levels of health education-(individual and family health education, group health education and education of general public); planning and evaluation of education program

Unit-IV

Communicable and non communicable disease- causes, modes of transmission and preventive measures (general only). Public health aspects of over and under nutrition: BMI criteria by WHO; Obesity as a determinant of mortality and morbidity; under nutrition- definitions, clinical syndromes and public health consequences of under nutrition.

UNIT-V

Nutrition related policies and programs: Health, nutrition and family welfare through XIIth five year plan; ICDS- objectives and services; Public Distribution System; Anthyodaya Anna Yojana; National Food Security Act; National Food for Work Program. National and international agencies in combating malnutrition: International- WHO, FAO, UNICEFAim and functions. National- ICAR, ICMR, NIN, NFI, FNB, CFTRI, NNMB, NSI, DFRL- Aim and functions.

REFERENCES

1. Michael J. Gibney, Barrie M. Margetts, John M. Kearney and Lenore Arab, Public health nutrition, Blackwell publishing company. 2005.
2. Mark Lawrence and Tony Worsley, Public health nutrition from principles to practice, Chennai microprint (P) Ltd., Chennai. 2008.
3. Srilakshmi. B, Nutrition science, fifth edition, New age international (P) limited. 2016. 4. Park.K, Text book of preventive and social medicine, Banarsidas Bhanot publishers, Jabalpur. 1997.

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B.Sc. FOOD TECHNOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER –IV

FOOD PRODUCT DEVELOPMENT

UNIT-I

Introduction to New food products & food product development Concepts, definitions & characteristics. Factors to consider for food product development (external and internal factors) Types of new food products- Line extensions, new-to-world products, innovative/creative products, existing products- repositioned, reformulated, new form, new size, and new package.

UNIT-II

Stages in food product development Idea generation Internal & external sources; Screening - Course Objectives and criterion; Development of product prototype- market research, concept testing approaches, product formulation and specification, product optimization, process development & optimization, product attributes, scale up requirements; Product prototype testing - consumer testing, packaging testing, shelf life testing, product integrity and conformance to standards; Marketing plans - price structure, place & distribution system, promotional program, market positioning, test marketing, results evaluation

UNIT-III

Concepts in sensory evaluation of foods Sensory attributes of foods: Chemical senses (olfactory and gustatory); physical, kinesthetic and tactile senses (appearance, color, texture, & overall taste). Score card development. Role of sensory analysis in product development & quality control.

UNIT-IV

Subjective evaluation methods Definition, advantages, and disadvantages. Subjective tests: Analytical tests (sensitivity tests, difference tests, ranking tests), descriptive tests, and consumer/preference tests.

UNIT-V

Objective and instrumental evaluation methods Objective methods for appearance, size, shape, volume, specific gravity, refractive index, moisture, fat, and others. Instrumental methods for evaluation of colour, viscosity, texture & aroma

REFERENCES

1. Carpenter Lyon & Hasdell, "Guidelines for Sensory Analysis in Food Product Development and Quality Control", Springer, 2000
2. Earle, M. D., Earle, R. L., & Anderson, A. M. (2001). Food product development. Boca Raton, Fla: CRC Press.
3. Gordon L Robertson. 2006. Food Packaging: Principles and Practice. 2nd Ed. CRC Press 4. Harper J.M. Extrusion of Foods. Vol. 1 & 2 (1991) CRC Press, Inc.) Boca Raton, Aorida
5. Naik, H.R., & Amin, T. (2021). Food Processing and Preservation (1st ed.). CRC Press. <https://doi.org/10.1201/9781003243250>
6. V.K. Joshi (2006) Sensory science- Principles and Applications in Food Evaluation, Agrotech Publishing Academy, Udaipur.

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FOOD TECHNOLOGY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

Entrepreneurship Development

UNIT-I Entrepreneur: Definition, qualities and essential skills of an entrepreneur, communication and presentation skill; innovativeness; idea generation and SWOT analysis. Steps to start a small enterprise, learning journey of a successful entrepreneur.

UNIT-II Business plan for small enterprises: Importance of business plan, purpose, contents and benefits of business plan; business plan creation process, benefits of business plan, preparation of sample business plan. Business ethics and etiquettes.

UNIT-III Market survey: Meaning, process of conducting market survey, points to be considered for effective market research; steps to register a company; regulatory requirements.

UNIT-IV Management process and policies: Importance of policy creation, corporate governance, management process, management functions- production and operation management, marketing management, financial management and human resource management. Pricing policy and methods of pricing.

UNIT-V Marketing management- Concept of marketing, market assessment, market regulation, market targeting, marketing mix, promotional strategies and tips for successful marketing. Financial needs: Types of financial needs- fixed and working capital; methods of raising capital, working capital management, working capital cycle.

REFERENCES

1. Entrepreneurship development- Your gateway to the journey of entrepreneurship, ICT Academy of Tamil Nadu, Chennai. 2015.
2. S.S. Khanka, Entrepreneurial development, S.Chand Publications, 2007.
3. Vasant Desai, Entrepreneurial development, Vol-1, Himalaya Publishing House, 2009.

FOOD TECHNOLOGY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

FAMILY FINANCE AND HOUSING

UNIT - I

Introduction to Home Economic: Indian standard of living - ways to improve the standard of living in India. Human wants: Nature and classification, the concept of marginal utility, principles of equi-marginal utility, law of diminishing marginal utility.

UNIT - II

Family income and expenditure: Types of Income, Methods of handling family income, Family budget, Engle's laws of consumption, Home account maintenance, Institutions for family saving. Household purchases: Functions of money, Rise in prices and methods used to curb it in India, when and how to purchase.

UNIT - III

Consumer Protection: Consumerism - Need for consumer protection, Right of a consumer, Methods adopted to provide consumer protections. The main Indian Taxes: The influence of taxes on willingness to work and save.

UNIT -IV

House Planning: Selection of a site, Principles involved in planning a good house, plans for different income groups namely low, middle and high. Housing finance - Financial consideration in housing, Source of finance Government and other agencies Co-operative Banks, Nationalized Banks, Housing Board and NGO

UNIT - V

House and its services: Lighting in home, importance, types of lights, lighting requirements for various rooms, selection of lamp shades. Major Labour Saving devices: Selection, use and care of washing machines - Vacuum cleaner, refrigerator and mixer.

REFERENCES:

1. Deshpande K.S. - "Modern Ideal Homes for India", United Book Corporation, Pune, 1983.
2. Nickell P and Dorsey, J.M. "Management on Family Living", John Wiley and sons, 1978.
3. Deshpande, R.S. "Build your own home", United Book Corporation, Pune, 1983.
4. Agan, J. "The house and its plan and use" J.P. Lippen Cott and Co, New York, 1970.
5. Mitra K.J, "Economic Micro-Macro" the Work Press Private Ltd., Calcutta, 1975.

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B.Sc. Psychology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-II
HUMAN RESOURCE MANAGEMENT

UNIT I: HRM: AN INTRODUCTION

Human Resource Management – Definition – Objectives – Scope – Functions of HRM. Job analysis – Process of job analysis, Team analysis – Employee Empowerment.

UNIT II: HR PLANNING AND SELECTION

Human Resource Planning – Objectives – Process of HRP– Recruitment – Sources of recruitment. Selection Procedure - Test and Interview - Types – reference check – final selection -Placement – Induction (orientation).

UNIT III: HRD AND CAREER PLANNING

HRD – Need – Functions – Training – Methods – Executive Development – Differences between Training and Development. Career Planning – Process – Succession Planning - Concept of Quality of Work Life (QWL).

UNIT IV: PERFORMANCE APPRAISAL AND JOB EVALUATION

Performance appraisal – Process – Techniques – Difference between Performance appraisal and Job Evaluation. Job Evaluation – Process – potential appraisal.

UNIT V: PROMOTION AND ABSENTEEISM

Promotion – Criteria – Benefits of effective promotion policy, Transfer – Purpose of transfer. Absenteeism – Causes – Measures - Labour Turnover – separation – VRS - retirement – dismissal.

TEXT BOOK

1. S.S. Khanka, Human Resource Management, SulthanChand& Sons, New Delhi.

REFERENCE BOOKS

2. C.B. Mamoria, Personnel Management – Humalaya publications house.
3. J. Jayasankar, Human Resource management, Margham Pub., Chennai.
4. K. Aswathappa, Human Resources and Personnel Management, TMH, New Delhi.
5. Kaushal Kumar, Human Resources Management – ABD Publishers.
6. Keith Davis, Human Relations at work – TMH.
7. G.R. Bassotia, Human Resources Management, Mangal Deep Publications.
8. Dr.K.Ramesh, “Human Resource Management”, Mithila Publications.

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B.Sc. Psychology

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-III

RELAXATION TECHNIQUES

UNITE I INTRODUCTION

Meaning, Nature and importance of relaxation techniques in today's world

UNITE II MEDITATION

Meaning – Nature – Types- Procedure – Benefits

UNIT III: GUIDED IMAGERY

Meaning – Nature – Types- Procedure – Benefits

UNIT IV: PROGRESSIVE MUSCULAR RELAXATION

Meaning – Nature – Types- Procedure – Benefits

UNIT V: BIOFEEDBACK

Meaning – Nature – Types- Procedure – Benefits

REFERENCE

Payne, R.A. (2010). Payne's Handbook of Relaxation Techniques: A Practical Guide for the Health Care Professional, Churchill Livingstone; 4th edition.

2. Online resources

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B.SC.PSYCHOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV

CONFLICT RESOLUTION

UNIT – I: INTRODUCTION

Meaning, Nature, Consequences of conflicts and the need for resolving conflicts.

UNIT-II: COMPONENTS OF CONFLICT

Conflict with the self, Conflict with others, Conflict with the environment and Conflict with the supernatural.

UNIT- III: TYPES OF PSYCHOLOGICAL CONFLICT

Approach-Approach, Avoidance-Avoidance, Approach- Avoidance, Double Approach-Avoidance

UNIT-IV: DEALING WITH CONFLICT

Thomas-Kilmann Model of Conflict Resolution

UNIT-V: CONFLICT RESOLUTION AND PEACE BUILDING

Peace building – meaning and significance. Conflict Prevention, Conflict Management, Conflict resolution and transformation and Post-conflict reconciliation.

References:

1. Weinstein, L. (2019). The 7 Principles of Conflict Resolution. Pearson Education. India.
2. Online resources

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PSYCHOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

PSYCHOLOGY OF ADJUSTMENT

UNIT - I : THE DYNAMICS OF ADJUSTMENT Adjustment: Meaning – The roots of happiness- Improving Academic Performance: Developing Sound Study Habits – Improving Your Reading – Getting More out of Lectures – Applying Memory Principles.

UNIT –II : PERSONALITY AND ADJUSTMENT Personality: Meaning - Personality traits – Psychoanalytic theory – Pavlov's classical conditioning – Maslow's theory – Eysenk's theory.

UNIT – III : STRESS AND ADJUSTMENT The Nature of Stress – Major Types of Stress: Frustration – Conflict – Change – Pressure. Responding to Stress – The Potential Effects of Stress - Factors influencing stress tolerance – stress management.

UNIT – IV : INTERPERSONAL COMMUNICATION Process of Interpersonal Communication – Non-verbal communication – Toward More Effective Communication- Communication Problems – Interpersonal conflict – Developing Assertive skills.

UNIT - V : MARITAL ADJUSTMENT Moving Toward Marriage: The motivation to marry – Selecting a mate – Predictors of marital success. Marital Adjustment Across the Family Life Cycle - Vulnerable areas in Marital Adjustment – Divorce– Adjusting to divorce – Remarriage.

REFERENCES

1. Wayne Weiten, Margret A. Lloyd. (2004). Psychology Applied to modern Life : (7 Edition).
2. Crisp, R.J. and Turner, R.N. (2007). Essential Social Psychology. New Delhi : Sage Publications.

PSYCHOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

PROFESSIONAL COMPETENCY SKILLS-COMMUNICATIVE SKILLS

UNIT I: THE COMMUNICATION PROCESS Sending the Message, the Channel, Receiving the Message; misinterpretations and unintended messages, Feedback; self monitoring, Context and Noise; Psychological. Stereotyping, Semantics.

UNIT II: ACTIVE LISTENING SKILLS AND NON-VERBAL COMMUNICATION Listening Skills, Barriers to Listening, Listening Behaviours, Active Listening Skills. Non-verbal Communication Skills, Culture and Non-Verbal Messages, Forms of nonverbal communication: Facial Expressions and Eye Gaze, Posture and Gestures, Voice, Personal Space & Distance, Personal Appearance.

UNIT III: GIVING CONSTRUCTIVE FEEDBACK Difficulty in providing honest feedback. Feedback Skills: Being Specific, Offering a solution, Delivering the feedback face to face, Being sensitive, Being problem oriented and not people oriented, Being descriptive and not evaluative, Owning rather than disowning and checking. Structure of feedback.

UNIT IV: QUESTIONING SKILLS Questioning Techniques, Types of Questions: Probing/clarifying Questions, Reflective Questions, Direct Questions and Hypothetical Questions.

UNIT V: PRESENTATION SKILLS Presentation and dealing with Fears of presentation. Planning the Presentation: Setting objective, Understanding the audience, Knowing the setting, Writing down the „central theme“ of the talk, Writing the outline, Developing visual aids, Preparing delivery notes and delivering the presentation.

Reference

1. Hargie, O., Dickson, D., Tourish, D. (2004) Communication Skills for Effective Management. Palgrave Macmillan. Hampshire.
2. Adler, R. B. & Elmhorst, J. M. (1999) Communicating at Work: Principles and Practices for Business and the Professions McGraw Hill Singapore
3. Dixon, T., O'Hara, M (2010). Communication Skills. Op

B.Sc. Hotel Management and Catering Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-II

TOURISM & TRAVEL MANAGEMENT

Unit-I

Definitions: Tourism, Tourist, Foreign Tourist, Domestic Tourist
Components of Tourism: Attractions - Accessibility and Amenities
Motivations for Tourism
Types of Tourism

UNIT II

Elements of tourism
Positive and Negative impacts of tourism
Activities of Department of tourism
Economic impact of tourism
Geographical Components of Tourism

UNIT III

Indian cultural Heritage - Religions, Belief and their Practices
Music's in India
Dances in India - Classical and Folk Dances
Fairs and Festivals in India
Population status and Regional Languages in India

UNIT IV

International civil aviation organization (ICAO)
Future of airline industry
Airport authority of India (AAI)
Computerized reservation system (CRS) - SABRE-GALILEO WORLDSP AN AMADEUS

UNIT V

Government Organizations
India Tourism Development Corporation (ITDC). Tamilnadu Tourism Development Corporation (TTDC)
Private Organizations
International Air Transport Association (IATA)
Travel Agents Associations of India (TAAI)
Role of United Nations Organization in Tourism

REFERENCES

1. Bhatia A.K. – Tourism Development : Principles and Practices , Sterling Publishers, New Delhi, India
2. Bhatia A.K. – International Tourism, Sterling Publishers, New Delhi India
3. Kaul R.N – Dynamics of Tourism Past, Sterling Publishers, New Delhi India
4. Christopher Hooloway J – The Business of Tourism Bitman Publshers Pvt. Ltd London
5. Burkhart A. and Medlik S.- Tourism Past, Present and Future, ELBS Publishers , London
6. Tourism Management - Pran Nath Seth - Sterling Publishers Private Limited.
7. Tourism Marketing Management - A.K.Bhatia - Sterling Publishers Private Limited,

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B.Sc. Hotel Management and Catering Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-III
HOSPITALITY COMMUNICATION – I

UNIT-I

BUSINESS COMMUNICATION

- A. Need
- B. Purpose
- C. Nature
- D. Models
- E. Barriers to communication
- F. Overcoming the barriers

UNIT-II

LISTENING ON THE JOB

- A. Definition
- B. Levels and types of listening
- C. Listening barriers
- D. Guidelines for effective listening
- E. Listening computerization and note taking

UNIT-III

EFFECTIVE SPEAKING

- A. Restaurant and hotel English
- B. Polite and effective enquiries and responses
- C. Addressing a group
- D. Essential qualities of a good speaker
- E. Audience analysis
- F. Defining the purpose of a speech, organizing the ideas and delivering the speech

UNIT-IV

NON VERBAL COMMUNICATION

- A. Definition, its importance and its inevitability
- B. Kinesics: Body movements, facial expressions, posture, eye contact etc.
- C. Protemies: The communication use of space
- D. Paralanguage: Vocal behaviour and its impact on verbal communication
- E. Communicative use of artefacts – furniture, plants, colours, architects etc.

UNIT-V

SPEECH IMPROVEMENT

- A. Pronunciation, stress, accent
- B. Important of speech in hotels
- C. Common phonetic difficulties
- D. Connective drills exercises
- E. Introduction to frequently used foreign sounds

USING THE TELEPHONE

- A. The nature of telephone activity in the hotel industry
- B. The need for developing telephone skills
- C. Developing telephone skills

Reference Books:

1. Business Communication
2. Communicative English
3. Communication Skills for Hospitality Industry- Oxford Publication
4. Developing Communicating Skills by Krishna Mohan

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Hotel Management and Catering Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-IV

HOSPITALITY COMMUNICATION – II

UNIT 1

Stress Management Meaning, purpose, techniques, **Basic concept of Recruitment and Selection**, - Intent and purpose, selection procedure, types of interviews - **Handling meetings**, Types of meetings, Structuring a meeting: agenda and minutes, Conducting a types of Meetings.

UNIT 2

Preparing for interviews, Self planning, writing winning resume, knowledge of company profiles, academics and professional knowledge review, update on current affairs and possible questions

Facing an interview panel, Time – Keeping, grooming, dress code, document portfolio, frequently asked questions and their appropriate answers, self – introduction, panel addressing, mental frame – work during interview

UNIT-3

Personality Enrichment Grooming, Personal hygiene, Social and Business and Dining Etiquettes, Body language use and misuse, Art of good Conversation, Art of Intelligent Listening - Etiquettes & Manners Social & Business Dining Etiquettes, Social Travel Etiquettes-Bus, Car and flight (c) Personality Development Strategies Communication Skills, Presentation Skills, Public Speaking, Extempore Speaking, importance and art of 'Small Talk' before serious business

UNIT-4

Interpersonal Skills Dealing with seniors, colleagues, juniors, customers, suppliers, contract workers, owners etc at work place - Group Discussion Team behavior, how to effectively conduct yourself during GD, do's and don'ts, clarity of thoughts and its expression

UNIT-5

Telephone conversation Thumb rules, voice modulation, tone, do's & don'ts, manners and accent - Presentation Presentation skills, seminars skills role – plays - Electronic Communication Techniques: E mail, Fax,

SUGGESTION READINGS:

1. Personal management and Human Resources, by C.S.Venkata Ratanam and B.K. Srivastave, Published by Tata Mc Graw Hill Publishing Ltd, New Delhi.

2. Human Behavior at Work, By: Keith Davis, Published By: Tata Mc Graw Hill Pub. Ltd, New Delhi.
3. Im OK, You are OK, by: Thomas A. Harris, Published By: Pan Books, London and Sydney
4. Pleasure of your Company, by: Ranjana Salgaocar, Published By: Pyramid Published Goa
5. How to get the job you want, by: Arun Agarwal, Published By: Vision Books, New Delhi
6. Get That Job, Rohit Anand & Sanjeev Bikhchandani, Harper Collins
7. How to succeed at interviews, by: Sudhir Andrews, Published By: Tata Mc Graw Hill Pub. New Delhi.
8. Interview for all competitive exams, G.K. Puri, Published by: I.I.M, Near Masjid Road, New Delhi
9. Introduction to Hospitality Industry – Bagri & Dahiy, Aman Publications New Delhi
10. Interview in a nutshell, S.K. Sachdeva, Published by: Competition Review Pvt. Ltd.
11. Business Communication, Lesikar, Pettit (AITBS)
12. Theory & Application
13. Communication for Business, Shirley Taylor, Pearson Education Asia

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Hotel Management
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

FOOD AND BEVERAGE MANAGEMENT

UNIT I Food Cost and Purchasing Control

- ❖ Introduction to Cost Control
- ❖ Define Cost Control
- ❖ The Objectives and Advantages of Cost Control
- ❖ Definition of Food costing
- ❖ Food Cost Cycle
- ❖ Purchasing Control
- ❖ Types of Food Purchase
- ❖ Job Description of Purchase Manager/Personnel
- ❖ Definition of Yield
- ❖ Definition of Standard Purchase Specification
- ❖ Periodical Purchasing
- ❖ Open Market Purchasing
- ❖ Standing Order Purchasing
- ❖ Centralized Purchasing
- ❖ Purchase Order Forms
- ❖ Ordering Cost
- ❖ Carrying Cost
- ❖ Economic Order Quantity

UNIT II Receiving Control

- ❖ Aims of Receiving
- ❖ Job Description of Receiving Clerk/Personnel
- ❖ Equipment required for receiving
 - ❖ Documents by the Supplier (including format)
- ❖ Delivery Notes
- ❖ Bills/Invoices
- ❖ Credit Notes
- ❖ Records maintained in the Receiving Department v Goods Received Book Daily Receiving Report
- ❖ Meat Tags
- ❖ Receiving Procedure
- ❖ Blind Receiving

UNIT III Storing & Issuing Control

- ❖ Storage Control
- ❖ Aims of Store Control
- ❖ Function of Store keeper
- ❖ Conditions of facilities and equipment
- ❖ Stock Ledger
- ❖ Two types of foods received – direct stores (Perishables/nonperishable's)
- ❖ Stock Records Maintained Bin Cards (Stock Record Cards/Books)
- ❖ Issuing Control
- ❖ Inventory Control
- ❖ Transfer Notes
- ❖ Perpetual Inventory Method
- ❖ ABC analysis
- ❖ Storage and Garbage disposal waste
- ❖ Methods of Garbage disposal

UNIT IV Production Control And Beverage Control

- ❖ Aims and Objectives
- ❖ Tools of Production Control
- ❖ Definition of standards (Quality & Quantity)
- ❖ Standard Recipe (Definition, Objectives and various tests)
- ❖ Standard Portion Size (Definition, Objectives and equipment used)
- ❖ Standard Portion Cost (Objectives & Cost Cards)
- ❖ Definition Menu Merchandising
- ❖ Importance and uses of Menu
- ❖ Advantage and Disadvantage of Menu
- ❖ Types of Menu
- ❖ Factors affecting Menu Planning
- ❖ Menu structure
- ❖ Components of Menu
- ❖ Design Menu

UNIT V Sales Control And Budgetary Control

- ❖ Sales control
- ❖ Sales Promotion
- ❖ Personal selling
- ❖ Advertising
- ❖ Calculation of selling price
- ❖ Billing procedure
- ❖ Cash and credit sales
- ❖ Cashier's Sales summary sheet
- ❖ Definition of budget
- ❖ Importance and uses budget
- ❖ Objectives of budget
- ❖ Types of budget
- ❖ Define budgetary control
- ❖ Budgetary control

REFERENCE BOOKS

1. Costas Katsigris, Mary Porter, Chris Thomson – The Bar &The Beverage Book – Johnwiley& Sons INC
2. Dr.JagmohanNegi – Professional Food & Beverage Management
3. BernadDaris and Sally Stone – Food & Beverage Management – ELBS
4. Brian Verghese – Professional Food & Beverage Management – Franc Bros & Co. Ltd

Hotel Management
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

Professional Competency Skill -

PRINCIPLES OF TOURISM

Unit - I

- 1.1 Introduction to tourism.
- 1.2 Classification of travelers.
- 1.3 Factors influencing the growth of tourism
- 1.4 Types of tourism.
- 1.5 Basic components of tourism.

Unit - II Elements of tourism. Positive and Negative impacts of tourism. Activities of Department of tourism. Economic impact of tourism. Geographical Components of Tourism.

Unit - III Indian cultural Heritage - Religions, Belief and their Practices. Music's in India. Dances in India - Classical and Folk Dances. Fairs and Festivals in India. Population status and Regional Languages in India.

Unit - IV Tourism Planning & Importance in planning, Steps in planning. Planning Process. Management levels & skills. The role of Manager. Forms of Organization.

Unit – V

- 5.1 International Co-operation and Collaboration
- 5.2 Job Design
- 5.3 Job Analysis
- 5.4 Job Description
- 5.5 Organization chart of the department of tourism in India

Reference Books

1. Akshay Kumar – Tourism Management
2. P.N.Seth – Tourism Management
3. Gun Clare – Tourism Planning
4. Kishore – Dance of India 5. Chitralkh Singh – Hindus Festivals and Fairs and Fasts

**B. Sc. TEXTILE AND FASHION DESIGNING/COSTUME DESIGN AND
FASHION/FASHION TECHNOLOGY**

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER –II

SEWING TECHNOLOGY

UNIT – I

Introduction to sewing, History of sewing machines, Sewing Machine – parts and functions of single needle machine, Tools for measuring, marking, cutting & pressing. Selection of thread and needle for various types of fabric

UNIT – II

Classification of sewing machines -Single Needle Lock stitch Industrial model, Over Lock Machine, Zig Zag Multi Purpose Machine, Double Needle Machine, Bar Tack Machine, button hole making machine, button fixing machine, blind stitching machine, fabric examining machine. Machine attachments - care and maintenance of sewing machines

UNIT – III

Basic sewing machines and associated work aids, simple automobiles. The use of components & trims – Labels and motifs, lining, Interlining, wadding, lace, braids & elastics, Hooks and loop fastening, Seam binding and tape, Shoulder pad, Eyelets & laces, Zip fastener, Buttons, Tack buttons, Snap fasteners and Rivets, Performance properties of components and trims. Sewing machines attachments – (Hemmers, Ruffler, Binder, Tucker, cloth guide, zipper foot, gathering foot, feed cover plate, circular attachment). Common problem & remedies

UNIT – IV

Fusing – Definition, advantages of using fusible interlinings, requirement of fusing, Fusing process. The means of fusing, Fusing equipments, Methods of fusing quality control in fusing. Alternative of fusible interlining. Pressing: the purpose of pressing, categories of pressing, means of pressing, pressing equipments and methods, pleating, permanent press. State of pressing

UNIT – V

Stitching mechanism – needles, bobbin and bobbin case, bobbin winding, upper and cover threading, auxiliary hooks, throat plates, take –ups tension disc. Feeding mechanism – drop feed, different fed, needle feed, compound feed, puller feed.

Reference:

1. The Technology of Clothing manufacture, Harold Carr and Barbara Catham, Blackwell Science (1994)
2. Goswami, B.C. “ Textile Yarns”, Technology, Structure and applications”, Mc graw Hill.
3. Chris Jefferys (2004), 101 Essential Tip- Basic Sewing, D.K. Publishing
4. Besty Hosegood (2006), The complete book of sewing, Dorling Kindersley Ltd., London.
5. Thomas Anna Jacob, “The art of sewing:”, USB publishers New Delhi, 1994.
6. Readers Digest Sewing book.

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B. Sc. TEXTILE AND FASHION DESIGNING
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER -III
TEXTILE AND GARMENT INDUSTRY MANAGEMENT

UNIT-I Selection of land for textile and garment mills. Factors to be considered while selecting land. Plant layout- product- process- compound. Material handling equipments.

UNIT-II Types of building- single storey- multi storey – roof - RCC. Lighting and ventilation - air conditioning - power and lighting requirements - types of lamps.

UNIT-III Humidification - relative humidity - working principles of humidification plant- heating.

UNIT-IV Principles of management - process of management – planning - types and strategies, business organization - types of leadership- motivation- communication.

UNIT-V Entrepreneurship – functions - starting a new industry - essentials of a successful center. Project – planning – formulation - appraisal.

REFERENCES

1. Management in textile industry, the textile institute, Manchester, longman London 1989.
2. Management in textile industry, Textile trade press, Ahmedabad 1981.
3. Textile project management, The textile institute, 1992.
4. Principles of management, Terry and Franklin, AITBS 2002.
5. For entrepreneurs only, Harell, Career publications, New Jersey, 1995.

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B. Sc. TEXTILE AND FASHION DESIGNING
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER IV

NON WOVEN & TECHNICAL TEXTILES

UNIT – I

Non – woven – Introduction – definition, classification and scope and application of non woven – fibres used-web preparartion, opening, cleaning machine, production of parallel laid web, cross laid and random laid web.

UNIT – II

Bonding methods – mechanical, thermal, chemical/ adhesive, melt blown and spun lace techniques. Finishing of bonded fabrics. Fusing –methods of fusing. Braiding – methods of braiding. Netting – methods, lacing.

UNIT - III

Technical Textiles – Introduction, definition, scopes & importance and uses. Application of Agro Tech, Build Tech, Cloth Tech, Home Tech, Indu Tech, Medical Tech, Sports Tech, Pack Tech, Mobile Tech, Protect Tech, Geo Tech.

UNIT – IV

Medical Tech, Sports Tech, Protective – introduction, general properties and end uses.

UNIT – V

Smart & intelligent textiles, Smart – Active smart, passive smart & ultra smart, Intelligent – PCM, SMP, Chromic & conductive materials

REFERENCE:

1. Non woven bonded fabrics – Lunenscholss J and W Albrocht, Ellis Horwood, London 1985
2. Non – Wovens – Arul Dahiya, MG Kamath, Raghavendra R Hedge and Monika Kannadnguli
3. Geo Textiles – NWM John, Blackir London
4. Family Clothing – Tate and Glisson, John Wiky and Sons., Illinas, 1963
5. Technical Textiles – Anand and A.R. Horracks, Textile Institute

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TFD/CDF/FT
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

Garment Quality and Cost Control

UNIT I

Basics of Quality Control Definition and Scope of Quality Control – Establishing Merchandising Standards–Establishing Raw Material Quality Control specifications – Quality Control of Raw Material.

UNIT II

Quality Control System Establishing Processing quality specification – Training Quality Control Personnel – The Quality Standard Control – Quality Control Inspection, Procedures for processing – Quality control of finished garments – Quality control and Government contacts – Quality Control for Packaging, Warehousing and shipping – Statistical Quality Control, Sampling plans – industry – wide quality standards.

UNIT III

Basics of Production control Function of Production control – Production, Analysis – Quality Specifications– Quantitative specifications – Scope of Apparel Manufacturing Activity – Coordinating departmental Activities – Distribution of Documents and Records.

UNIT IV

Production Control System Type of Control forms – Basic Production Systems –Principles for Choosing a Production System – Evaluating Production Systems – Flow Process Grids and Charts – Basic Flow Process Grid Construction – Flow Process Grids for Production control

UNIT V

Cost Control, Function of Cost Control: Types of Costs and Expenses – Apparel Manufacturing Cost Categories – Sales Cost Control – Purchasing Cost Control – Production Cost Control – Administration cost control – Cost Ratio Policies – the manufacturing Budget – Cash flow Control – Standard Cost Sheet, Break–Even Charts

REFERENCES:

1. Patty Brown, Janett Rice,-Ready to wear apparel analysis, Prentice Hall,1998.
2. Salinger, Jacob Apparel, —Manufacturing Analysis, New York, Textile Books Futs, 2001
3. Introduction to Clothing Production Management, A.J. Chuter, Second Edition, Black Well Publishing, Second Edition, 2004.
4. Apparel Merchandising, Robin Mathew, First Edition, Book Enclave Publishing, 2008.
5. Textile Industry Development and Growth, Satish Tiwari, First Edition, Anmol Publications Pvt. Ltd., 2000.

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TFD/CDF/FT
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

BOUTIQUE MANAGEMENT

Unit-I How to start a boutique, creating a business plan, finding a ideal location, financial planning.

Unit-II Government norms to run a boutique, interior designing, sourcing of raw materials, and inventory planning.

Unit-III Buyer supplier relationships, consumer relationship, tips and tricks to attract customers.

UNIT-IV Essential technology to run a boutique and labour management and warehouse.

UNIT-V Quality control, research and development and analysis, marketing and promotion ,maintenance of boutique.

REFERENCE;

1. Opening a boutique store: how to start your own boutique, Briana Stewart Bull City Publishing, 2014.
2. Fabjob guide to become a boutique owner, Tag Goulet, Debra Mikaelson, Catherine Goulet, Fabjob incorporated,2011.
3. Fashion unraveled: How to start ,run and manage an independent Fashion Label,Jennifer Lynne Mathews, 2009.

POLITICAL SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II

CONSUMER RIGHTS AND PROTECTION IN INDIA

UNIT – I

Introduction Meaning, Types, Scope and Importance of Consumer Rights - Consumer Rights: Right to safety, Right to be informed, Right to choose, Right to Redressal.

UNIT- II

Legal Framework Legislative Framework on Consumer Protection in India - Evolution of Consumer Movement in India- Consumer Protection Laws in India.

UNIT- III

Consumer Courts Consumer Courts in India: Structures, Objectives, Powers and functions - National Consumer Disputes Redressal Commission (NCDRC) - State Consumer Disputes Redressal Commission (SCDRC) - District Consumer Disputes Redressal Forum (DCDRF).

UNIT- IV

Consumer Awareness Consumer Awareness- Consumer Services – Deficiency of Services - Consumer Grievance –Consumer Complaints

UNIT – V

Ministry of Consumer Affairs Ministry of Consumer Affairs, Food and Public Distribution - Consumer Responsibilities - Problems of Consumer – Online Consumers and their problems.

REFERENCE BOOKS

1. Saraf D.N., Law of Consumer Protection in India (1995), Tripathi, Bombay.
2. P.K. Majundhar, The Law of Consumer Protection in India (1998); Orient Publishing Co., New Delhi. 3. Avtar Singh, The Law of Consumer Protection: Principles and Practice (2000) Eastern Book Co., Lucknow.
4. Viswanathan V.N: Consumer Rights in Service Sector; Concept Publishers, New Delhi.

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B.A. Political Science
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-III
DIGITAL GOVERNANCE

UNIT I

What is e-governance? – Meaning- Definition- Importance of E- Governance Stages and Development of e-governance – E-governance process

UNIT II

Public – Private partnership for e-Governance – Difference between government and Governance – Government Database management

UNIT III

National Informatics Centre - Data Warehouse – Government Web Services – State Data Centre

UNIT IV

Digitalization of State and District Administration – Bridging and Digital Divide

UNIT V

Cyber Law and e-governance – Legal Status for Digital Transactions – Information Technology- digital citizenship -e-sevai services – public benefits

REFERENCE BOOKS

1. Satyanarayanan.J: E-Government – The science of the possible; Prentice Hall of India (PVT)
2. Kenneth Kennison and Deepak Kumar (Eds): IT Experience in India; Bridging the Digital Divide
3. R.P.Sinha
4. S.Panka

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B.A.POLITICAL SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
SEMESTER-IV
GENDER AND POLITICS

UNITS

Details

- I Definition of Gender and Sex - Need for Gender Studies - Gender stereotyping and roles – Gender discrimination - Glass Ceiling
- II Waves of Feminist Movements - Feminist theory and its variants - Women Empowerment – Patriarchy and its variants
- III International Legal Provisions to Gender Rights - Significant role of Beijing Conferences - Women and Indian Law - Rights of Transgender - Reservations and Affirmative Actions for Gender Justice
- IV Women and Politics - Women and Governance - Gender and Power – Gender and Psychology
- V Politics and Gender - Gender Specific Government Policies - Legal and Statutory redressal mechanisms in India - Role of Education, Media and Civil Society in Gender Development

Text Books

1. Sarah Sobieraj, Credible Threat
2. Beth Reingold, Kerry L. Haynie, and Kirsten Widner, Race, Gender, and Political Representation
3. Kamalaxi G. Tadasad, Dilavar A Kudari, Geeta I Mallapur, Sangamesh I Patil, Gender and Politics
4. A V Satish Chandra, Politics of Identity Gender and Development. Viva Books
5. Menon Nivedita, Gender & Politics in India (Oup): Themes in Politics. 2001.

Reference Books

1. A V Satish Chandra, Politics Of Identity Gender And Development. Viva Books
2. Kamalaxi G. Tadasad, Dilavar A Kudari, Geeta, Mallapur, Sangamesh, Patil, Gender and Politics, Current Publications. 2022
3. Keral Jaya, Gender Equality And Political Representation In India. Reliance Publishing House
4. Judith Butler, Gender Trouble: Feminism and the Subversion of Identity.
5. Amy G. Mazur (Editor), Gary Goertz (Editor), Politics, Gender, and Concepts: Theory and Methodology.

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POLITICAL SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

POLITICAL PARTIES PRESSURE GROUPS AND PUBLIC OPINION

UNIT – I Origin – Development – Definition of Political Parties- Importance of Political Parties and Functions of Political Parties

UNIT – II Types of Party System: Single Party system – Bi-party System – Multi-party System- Merits and demerits

UNIT – III National Parties – Bharatiya Janata Party - Indian National Congress- Communist Party of India (Marxist) Communist Party of India State Parties – DMK- AIADMK- Telugu Desam - Samajwadi Party

UNIT – IV Pressure Groups – Meaning, Definition, Nature and Types – Functions of Pressure Groups – Role and Technique of pressure Groups – Lobby System.

UNIT – V Public Opinion – Meaning and its Importance –Agencies of Public Opinion – Visual Media and Public Opinion – Print Media, Social Media and Public Opinion -Social Influence and Public Opinion.

Reference books

1. Robert Blank, Political Parties: An Introduction.
2. Key V.O., Parties Politics and Pressure Groups.
3. Walter Limpan, Public Opinion.
4. Sadasivam S.N., Party & Democracy in India.
5. R.C. Agarwal, Political Theory, S.Chand & Co, Ltd. New Delhi, 2010.
6. R.C.Agarwal, Indian Political System, S.Chand & Co, Ltd. New Delhi, 2007.
7. J.C.Johari, Comparative Politics, Sterling Publishers Pvt. Ltd., New Delhi, 1996.

POLITICAL SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

PEACE AND CONFLICT RESOLUTION TECHNIQUES

UNIT-I Concepts and Theories Peace: Meaning, Nature, Typology and Theories Conflict: Meaning, Causes, Nature, Typology, Theories and Outcomes

UNIT-II

Peace Work and Conflict Workers Principles of Peacemaking, Peacekeeping, and Peace building Principles of Conflict Prevention, Conflict Management, Conflict Resolution, Conflict Response, and Conflict Transformation

UNIT-III

Dynamics in Peace and Conflict State and Non-State Actors in Peace and Conflict Processes of Reconciliation, Reconstruction and Development in Post Conflict Scenarios

UNIT-IV

Issues and Challenges Transformative Justice and Transitional Justice - Political Trauma & Conflict Sensitivity

UNIT-V

Peace as Practice Gender in Peace and Conflict - Youth in Peace and Conflict

Text Books

1. Charles Webel and Johan Galtung (Eds.), Handbook of Peace and Conflict Studies, Routledge, London.
2. Sean Byrne, Thomas Matyók, Imani Michelle Scott and Jessica Senehi (Eds.), Routledge Companion to Peace and Conflict Studies, Routledge.
3. Tom Keating and W. Andy Knight (Eds.), Building Sustainable Peace, United Nations University Press, Tokyo.
4. Michael Lund and Steve McDonald, Across the Lines of Conflict, Facilitating Cooperation to Build Peace.
5. Robert Ricigliano, Making Peace Last: A Toolbox for Sustainable Peace building.

Reference Books

1. Mary B. Anderson and Marshall Wallace, Opting Out of War: Strategies to Prevent Violent Conflict.
2. Donald L. Horowitz, Ethnic Groups in Conflict, University of California Press, London.
3. Michael W. Doyle and Nicholas Sambanis, Making War and Building Peace: United Nations Peace Operations, Princeton University Press, New Jersey.
4. Joseph de Rivera (Ed.), Handbook on Building Cultures of Peace, Springer, New York.
5. Joanna Spear and Paul D. Williams, Security and Development in Global Politics: A Critical Comparison.

GEOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II

Gemology and Gemstone Evolution

UNIT-I

Definition and Scope of Gemology – Minerals as Gemstones – Classification of Gemstones – Characteristic and Desirable Features of Gemstones. Basic Physical and Optical properties of Gemstones– Optical Classification of Gemstones.

UNIT-I

Gem Testing: Introduction to Gem Mineral Equipment and Instruments: polarizer – Refractometer – Pycnometer – Use of Heavy liquids. Non destructive methods in gem Identification. Gem Simulants and Proxies. Artificial Gemstones and Substitutes

UNIT-I

Gemstone Cutting: Cutting Instruments: Diamond Saw – Blade. Preliminary Observations – Rough Cutting of Gemstones – Sizing and Shaping of Raw stones – Styles of Cutting: Rounding, Cabochon, Flat, Square, Rectangle, Crown, Brilliant, and Laser

Sculpting

UNIT-I

Weight Standard Schemes used in Gemology – 4Cs Scheme for Diamonds. Polishing of Gemstones – Polishing Angles and limits. Polishing Equipments. Feasibility and Economics of Gem Industries in India with special reference to Tamil Nadu. Grading, Valuation and Pricing of Gems.

UNIT-I

Gemstone Prospecting: Host rocks – Gemstone Mineralization – Deposits. Exploration Techniques and Exploitation. Gemstone Occurrences in India and with special references to Tamil Nadu.

Text Books

1. Economic Mineral deposits, Bateman, A.N. (1981), Asian publishers House, New Delhi.
2. Karanth K.V. (2000), Gem and gem industry in India, Memoir 45, Geological Society of India, Bangalore
3. Anderson, B.W(1990). Gem testing (10th edition), Butterworth Scientific, London. Babu, T.M.(1998) Diamonds in India. Geological Society of India, Bangalore
4. Hall, C.(1994). Gemstone, Dorling Kindesley, London
5. Prasad U, Economic Mineral Deposits, CBS. Delhi (2003)

References Books

1. India's Mineral Resources, Krishnaswamy, S revised by Shina, R.K, (1986), III Edi., Oxford & IBH Pub., Co., Ltd., New Delhi
2. Deer, W.A., Howie, R., & Zussman, S. (1992). An introduction to rock forming minerals, ELBS, London
3. Industrial Minerals, Sinha, R.K, (1986), Oxford 7 IBH Pub. Co., New Delhi
4. Kerr, P.F. (1997). Optical mineralogy, 4th Ed. McGraw Hill Book & Co New York

B.Sc. Geology
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)
Semester-III
GEOHAZARDS

UNIT I

Natural Hazard–Definition- Earth’s processes: catastrophic geological hazards: study of floods, tsunamis, Landslides, Earthquakes, Volcanism and avalanches–with a view to assess the magnitude of the problem, prediction and perception of the hazards. Laws and regulations towards hazard management

UNIT II

Earthquakes - Definition - focus - epicentre - seismic waves- intensity and magnitude - Richter scales – Tsunami - Seismograph-seismogram-seismicity in Indian region – Seismicgaps - mitigation measures and management. Preparation of seismic hazardmap

UNIT III

Volcanoes - Definition - structure – types - Global distribution-mitigation measures and management. Avalanche – Definition–types–mitigation - Definition - causes - vulnerable zones in India-Mitigation measures and management. Coastal erosion– its causes- mitigation measures and management

UNIT IV

Landslides-types-slow flowage, rapid flowage, sliding and subsidence–causes and mechanism-Vulnerable zones in India-mitigation measures and management Deforestation and land degradation-Cyclone- Definition- causes – vulnerable zones in India - mitigation measures and management.

UNIT V

Mass movement - factor influencing slope stability - types of mass movement - hazards of mass movement - strategies for their reduction and the role of geology. Soil erosion - Soil formation - soil classification - factor influencing soil erosion -hazards of soil erosion– Drought– types, mitigation measures

TEXT BOOKS

1. Geology, environment, Society K. S. Valdiya (2004) Universities Press (India) Private Limited, Hyderabad, India
2. Coping with natural hazards: Indian context K. S. Valdiya (2004) Orient Longman Private Limited, Hyderabad, India.
3. Engineering and general geology Parbin Singh (2003) S. K. Kataria and sons Delhi India.

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GEOLOGY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

Semester-IV

GEO-HERITAGE AND GEO- TOURISM

UNIT-I

Introduction to Heritage - Geodiversity- Geoheritage. Definition and introduction to Geotourism. Geo conservation. Importance of studying Geological heritage. Geo heritage site -meaning, distribution in Tamil Nadu.

UNIT-II

Geoheritage sites in Tamil Nadu- detailed study on their location, Geology, conservation and important features- Fossil wood near Tiruvakkarai, Nationalfossilwood park Sattanur, Charnockite St.Thomas Mount, Badlands of Karai- Kulakkalnatham.

UNIT-III

Geoheritage sites in South India- detailed study on their location, Geology conservationand their important features- Peninsulargneiss, Lalbagh Botanical Garden;Columnar Bas alt, Coconut Island; Pillowlavas, Chitradurga District; Pyrocl asticrocks Kolardistrict. Varkalaciff section,Thiruvanantha puram;Volcano genicbeddedbarytes, Cuddapah; Eparchaeon Un conformity, Chittor;

UNIT-IV

Geoheritage sites in other than South India- detailed study on their location, Geology, Conservation and their important features- Stroma to lite Fossil park, Jamarkotra; Wood Park, Jaisalmer; Plant fossil-bearing inter- trapean beds of Rajmahal Formation; Lonar Lake, Buldana Dist.Maharashtra.

UNIT-V

Recognition of Geological and Geomorphological heritage in India. Importance of Geology and geography in tourism, natural and climatic regions of India. Important places of attraction for geological sites.

Text Books

1. Geological world heritage: Aglobal framework- paul Dingwall, Tony Weighell and Tim Badman(2005)
2. Amonographon National Geo heritage monuments of India(2016)- INTACH, Natural Heritage division, NewDelhi.

Refer ences Books

1. Tourism Geography (1998) Philip. G. National Publisher

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GEOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

Remote Sensing & GIS

UNIT I Definition and Types: Aerial, Satellite and Radar, Development of Space Programmes - History and Organization Associated with Remote Sensing in India and in other Countries.

UNIT II Remote Sensing: Sources of Energy, Electromagnetic Radiations (EMR) Atmospheric Windows, Energy Interaction with Atmosphere and Earth. Types of Platforms: Active and Passive. Remote Sensing Methods, Ideal Remote Sensing Systems.

UNIT III Fundamentals of Aerial Remote Sensing: Components of Aerial Camera, Types of Aerial Photographs, Marginal Information of Aerial Photographs, Elements of Photo Interpretation.

UNIT IV Fundamentals of Satellite Remote Sensing: Types of Satellites: Geo-Stationary and Sun Synchronous Satellites, Resolution: Spatial, Spectral, Radiometric and Temporal, Types of Data Products, Marginal Information of Satellite Images.

UNIT V Geographical Information Systems (GIS) Meaning- Developments-Raster and Vector Data-Data Integration-Global Positioning System (GPS) Advantages and Limitations of GIS and GPS.

References Books

1. Curran,P.B.(1985). Principles of Remote Sensing. ELBS, London.
2. Drury,S.D.(1993). Image Interpretation in Geology. Allen & Unwin, London.
3. Barret, E.C. and Curtie, L.F. (1990), Introduction to Environmental Remote Sensing, Chapman and Hall, London.
4. Cambell, James B. (1987), Introduction to Remote Sensing, The Guilford Press, NewYork.
5. Lilles and, T. M. and Kieper (1987), Remote Sensing and Image Interpretation, John Willyand Sons, New York

GEOLOGY
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

OCEANOGRAPHY

UNIT-I

Oceanography: Scope, Content, Significance, Distribution of Land and Sea - Hypsometric Curve, Surface Configuration of the Ocean Floor: Continental Shelf, Continental Slope, Deep Sea Plain, Oceanic Deeps and Submarine Canyons.

UNIT-I

Relief Features of the Major Oceans: Atlantic, Pacific and Indian Ocean –Horizontal and Vertical Distribution of Seawater Temperature. Salinity: Factors Affecting Salinity and Distribution.

UNIT-I

Ocean Water Circulation: Factors Influencing Ocean Circulation-General Circulation of Ocean Currents, Currents of the Atlantic, Pacific and Indian Ocean, Waves and Tides: Definition and Types, Tsunamis: Origin and Effects.

UNIT-I

Marine Deposits: Classification and Distribution - Coral Reefs types - Conditions for the Growth.

UNIT-I

Marine Resources: Types - Distribution and Uses – Tidal Energy - Role of National Institute of Oceanography in India.

Text Books

1. Anikouchine, W. A. and Sternberg, R. W., (1973): The World Oceans An Introduction to Oceanography, Englewood Cliffs.
2. Garrison, T., (1998): Oceanography, Wadsworth Co.USA
3. Gerald, S. (1980): General Oceanography: An Introduction, John Wiley & Sons, New York.
4. King, C. A. M., (1972): Beaches and Coasts, E. Arnold, London: King, C. A. M., (1975): Oceanography for Geographers, E. Arnold, London
5. Ramasamy, G., (1970): Oceanography (Tamil Edition), Tamil Nadu Text Book Society, Chennai

References Books

1. Sharma, R. C. and Vatel, M., (1970): Oceanography for Geographers, Cheytanya Publishing House, Allahabad.

Electronics and Communication
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II

NMEC I - CELLULAR PHONES

UNIT-I: Basics Working of a Telephone-Local Exchange- Initiating a call-Calling a Number-Making a Connection- Answering a Call-Conversation-Ending a Call- Hook Switch-Transmitter-Receiver-Ringer-Cellular Mobile Telephone System-Mobile Phone Service Area-Mobile Fraud Call.

UNIT-II Access technologies GSM-CDMA-GPRS-EDGE-WCDMA-UMTS-HSDPA-Satellite Phones-GPS-Mobile Browsers- WAP.

UNIT-III

Hardware/Software Types of: Wireless Options, Batteries, Memory Cards, Messaging, Ring Tones, Keypad Types, Display Types. Handset Form Factor - SMS Abbreviations - Mobile OS.

UNIT-IV

Hardware/software repairing: Hardware/Software Repairing - Various Locks - Installation of: UFS Driver, UFS Suite & Flashing Files - IMEI Number Detection - Mobile GSM Utility Codes (Any Five of Nokia Set)

UNIT-V Other mobile service tools Ultrasonic Cleaner-Computer Connectors- SIM Card Reader-Memory Card Reader-Mobile Virus- Virus Prevention-Removing Virus-Health Hazards with Mobiles-SAR.

REFERENCE BOOKS :

- 1.ModernMobilePhoneIntroduction&Servicing-ManaharLotia-BPB-Rs.75/-(Unit-I)
2. Modern Mobile Phone Repair Using Computer Software Service Devices – Manahar Lotia - BPB - 120/- (Units I, IV & V)
- 3.ModernMobilePhoneUnlocking&UtilityCodesForGSM&CDMA Phones-ManaharLotia-BPB- Rs.99/-(Unit-IV).
4. Mobile Telephony - Digit Magazine - Supplement - Jan 2006 - Jasubhai Digital Media Publications. (UnitII&III)
- 5.BlueToothTechnology–CSRPrabhu&APrathapReddi–PHI-Rs.250/-
- 6.Mobile&PersonalCommunicationSystems&Services-RajPandya-PHI–Rs.250/-

B.SC. ELECTRONICS AND COMMUNICATION
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER III

NMEC - BASIC ELECTRONICS- I

Unit- I

Semiconductor theory

Intrinsic Semiconductor – Extrinsic Semiconductor - Theory of PN Junction Diode - Zener Diode - Avalanche Breakdown - Zener Break Down - Operation of PNP & NPN Transistor - CB, CE, CC Configuration and Characteristics - Transistor as an Amplifier.

Unit-II

Electronic components

Simple Theory & Use of: Resistors, Capacitors, Inductors, Diodes, Zener diodes, Transistors, FET, MOSFET, UJT, SCR, DIAC, TRIAC, LED, Seven Segment Display, Basic Gate IC's, Transformers, LDR, Switches, Microphone, Loudspeaker, Buzzers, Fuse.

Unit-III

Circuit laws

Ohm's Law- Kirchhoff's Current Law Kirchhoff's Voltage Law-Voltage Division Current Division-Series Circuits-Parallel Circuits Series & Parallel Circuits-Open Circuit-Short Circuit.

UNIT-IV

Resistors, capacitors & inductors

Resistor Resistors, Capacitors & Inductors in Series and Parallel-Factors governing the Resistance of a, Capacitor& Inductor- Colour Coding of Resistors Energy Stored in a Capacitor-Energy Stored in an Inductor

UNIT-V

Waveforms

Sinusoidal Waveform-Non-Sinusoidal Wave forms Peak Value-Peak to Peak Value-Average Value-RMS Value-Period & Frequency Measurement.

REFERENCE BOOKS:

1. Electronic Devices&Circuits-Salivahanan-TMH-2nd Edition
2. Principles of Electronics-V.K.Mehta- S.Chand.
3. Circuits&Networks-Sudhakar-TMH-4th Edition.

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B.SC. ELECTRONICS AND COMMUNICATION

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER IV**SATELLITE & CABLE TV**

Unit	Unit Title	
I	Digital Satellite System	Digital Satellite System - Block Diagram - DTH Working - DTH Antenna - DTH LNB - DTH Receiver - Additional Accessories - Complete DTH Process.
II	Cable TV network	Connecting more than one TV Receiver to a Single Dish - Connecting more than one TV to a Single Satellite Receiver - Connecting more than one Dish/LNB to a Single Receiver - Changing Satellite Channels - Need for a Telephone Jack.
III	Dish Installation	Dish Installation - Site Survey - Dish Roof and Wall Mounts - Adjusting the Azimuth & Elevation Settings.
IV	DTH Components	Dish Antenna Connection Procedures - Precautions while installing the DTH System - Troubleshooting - Adjusting the Dish in Correct Position - LNB Testing
V	Peripherals of DTH	DD Direct Plus - Satellites Used - Comparison with Other DTH Systems - Reception of DD Direct Plus - Receiver Installation - TV/Radio Channels on DD Direct Plus.

REFERENCE BOOKS :

1. Modern DTH Digital Satellite Receiver-ManaharLotia-BPB-Rs.120/-
2. Modern Television Practice-Gulati-NAI-IIIEdition.
3. Composite Satellite & CableTV-RR Gulati-NAI.

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Electronics and Communication
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V

COMPETITIVE SKILLS

UNIT-I: Verbal reasoning Analogy – Classification – Direction Sense Test – Logical Sequence of Words – Inserting The Missing Character – Situation Reaction Test.

UNIT-II: Nonverbal reasoning Analytical Reasoning–MirrorImages– WaterImages-Completion of Incomplete Pattern– Cubes and Dice.

UNIT-III: Arithmetical, ability Average–Problems on Age–Percentage– Profit &Loss–Ratio & Proportion–Chain Rule– Time & Work

UNIT-IV: Logarithms Pipes & Cistern–Time & Distance– Problems on Trains-Boats & Streams– Simple Interest–Compound Interest –Logarithms.

UNIT-V Charts Area–Calendar–Clocks–Heights & Distances– Bar Graphs–Pie Charts.

Reference Books

1. A Modern Approach to Verbal & Non Verbal Reasoning - Revised Edition – R.S. Aggarwal – S. Chand.(Units:I&II)–Rs.750/-
- 2.Quantitative Aptitude-Revised Edition-R.S.Aggarwal–S.Chand.Units:III,IV&V)–Rs.440/-
3. An Advanced Approach to Data Interpretation-R.S.Aggarwal–S.Chand.
4. Advanced Objective General Knowledge-R.S.Aggarwal–S.Chand
5. Objective General English-R.S.Aggarwal–S.Chand

Electronics and Communication

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

NMEC II – BASIC ELECTRONICS –II

UNIT-I: Number systems Introduction - Binary Number System - Octal Number System - Decimal Number System - Hexadecimal number system - Conversion from one system to another - Binary Addition - Binary Subtraction - Binary Multiplication-Binary Division- 1's&2's Complement Subtraction- 9's&10's Complement Subtraction.

UNIT-II Logic GATES - NAND as a UNIVERSAL GATE -NOR as a UNIVERSAL GATE - Basis Laws of Boolean Algebra - Principle of Duality – De Morgan's Theorem.

UNIT-III Combination al elements Half Adder-Full Adder-Half Subtractor-Full Subtractor- Encoder-Decoder-Multiplexer-Demultiplexer

UNIT-IV Power supplies Half Wave Rectifier - Full Wave Rectifier - Bridge Rectifier - Capacitor Filter - Fixed IC Regulated Power Supply using 78XX - Dual IC Regulated Power Supply using 78XX & 79XX – SMPS – UPS.

UNIT-V Electronic instruments Use of Multimeter - Resistance Measurement - AC & DC Voltage Measurement - AC & DC Current Measurement Testing of Diodes & Transistors- Use of CRO-Frequency and Amplitude Measurement-Use of : Strip Board, Bread board, Soldering Rod - Function Generator - Power supplies- Resistance Box -Capacitance Box-Inductance Box.

REFERENCE BOOKS :

1. Digital Circuits & Design–Salivahanan-VikasPub-III Edition.
2. Electronic Devices & Circuits-Salivahanan-TMH-2nd Edition
3. Principles of Electronics-V.K.Mehta-S.Chand.

B.SC. GEOGRAPHY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER II

GEOGRAPHY OF INDIA

UNIT I

Location and Administrative Units – Physiographic divisions – Climate – Climatic types – Soils and Natural Vegetation.

UNIT II

Agriculture – Salient features – Factors affecting, agriculture in India – Major crops : Rice, wheat, cotton, jute, tea, coffee, sugarcane and tobacco – Irrigation and types – Multipurpose projects.

UNIT III

Power resources: Hydel, thermal and nuclear – Mineral resources: Iron ore, manganese, bauxite and mica – Fuel minerals: Coal and Petroleum – Major industries: Iron and steel, Cotton textile, Cement, Sugar and Jute industries.

UNIT IV

Transport and communication : Road, Railways and Water transport – Inland waterways – Ports – Air transport – Foreign trade – Exports and Imports.

UNIT V

Population: Growth and Distribution of Population –Population migration, Urbanisation in India.

REFERENCE BOOKS:

1. Singh, G. (1976). A Geography of India. Atma Ram & Sons Pub., New Delhi.
2. Siddhartha, K. and Mukherjee, S. (2013). Geography through Maps (11th Edition). Kisalaya Publications Pvt. Ltd., New Delhi.
3. Husain, M. (2014). Geography of India (5th Edition). McGraw Hill Education, New Delhi.
4. Sharma, T.C. and Coutinho, O. (1978). Economic and Commercial Geography India (2nd Edition). Vikas Publishing House Pvt. Ltd., New Delhi.
5. Mamoria, C.B. (1980). Economic and Commercial Geography of India. Shiva Lal Agarwala & Company, Agra.
6. Dubey, R.N. and Negi, B.S. (1968). Economic and Commercial Geography of India. Kitabmahal, Allahabad.
7. Tiwari, R.C. (2010). Geography of India. Prayag Pustak Bhawan, Allahabad.
8. Spate, O.H.K. and Learmonth, A.T.A. (1967). India and Pakistan: A General and Regional Geography. Methuen Publications, London.

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B.SC. GEOGRAPHY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER III

GEOGRAPHY OF TRAVEL AND TOURISM

Unit-I

Tourism: Scope and Significance of Tourism – Basic components of tourism: Attraction, Accessibility and Accommodation – Factors affecting tourism activities – Types of tourism.

Unit-II

Travel Documents: Passport and Visa – types – Tourist facilities and services: Transport facilities – Accommodation, Catering and Hospitality – Entertainment, Trade, Fairs, Festival, Sports and Games

Unit-III

Accommodation: Significance and role in tourism industry – Hotel types, Motels, Choultries, Guest Houses, Youth Hostels, Tour Operators.

Unit-IV

Tourism and Travel Agencies: Functions - Role of trade fairs and festivals - National and International sports and games as promoters - Tourism in Tamil Nadu - Impact on Economy.

Unit-V

Major Tourist Centers of India: Selected centers only (Jaipur, Agra, Shimla, Ajanta and Ellora) – A Geographical study of tourist centers: Udgamandalam, Kodaikanal, Yercaud, Bengaluru and Mysuru.

Reference Books:

1. Seth, P.N. and Bhat, S.S. (2012). *An Introduction to Travel and Tourism*. Sterling Publishers Private Ltd., New Delhi.
2. Ghosh, B. (2009). *Tourism and Travel Management (2nd Edition)*. Vikas Publishing House Pvt. Limited. New Delhi.
3. Singh, A.P. (1989). *Himalayan Environment and Tourism*. Chugh Publications, Allahabad.
4. Kaul, R.N. (1985). *Dynamics of Tourism: A Trilogy*. Sterling Publishers Pvt. Limited, New Delhi.
5. Bhatia, A.K. (2002). *Tourism Development: Principles and Practices*. Sterling Publishers Pvt. Limited, New Delhi.
6. Singh, S.N. (1985). *Geography of Tourism and Recreation with Special Reference to Varanasi*. Inter India Publication, New Delhi.
7. Das, M. (1983). *India, a Tourist Paradise: Introducing a Wonderful Land and a Wonderful People*. Sterling Publishers Pvt. Limited, New Delhi.

B.SC. GEOGRAPHY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER IV

FUNDAMENTALS OF PHYSICAL GEOGRAPHY

Unit-I

General Geography: Nations and Capitals, Geographical locations - Latitude, Longitude and Time Zone, Solar system and Planets.

Unit-II

Landforms: Major Relief features, Earth's External and Internal forces and agents of Denudation-Features formed by them.

Unit-III

Climatology: Atmosphere, insolation-Temperature, Pressure Wind-Humidity-Forms of condensation and Precipitation Types and distribution of rainfall - Air mass- Front, Cyclones.

Unit-IV

Oceanography: Land and Sea distribution-Bottom Topography of Oceans-Temperature, Salinity, Current, Tide, Coral reefs, Ocean deposits and Resources.

Unit-V

Biogeography: Elements of biogeography - Environment, Habitat, Plants and animals - Distribution Groupings Distribution of forests and major communities.

Reference Books:

1. Dayal, P.A. (1996). Text book of Geomorphology. Shukla Book Depot, Patna.
2. Sivamoorthy, A. (1964). Geomorphology (Tamil Edition). Tamil Nadu Text Book Society, Chennai.
3. Lal, D.S. (1989). Climatology. Chaitanya Publisher's House, Allahabad.
4. Critchfield, H. (1975). General Climatology. Prentice-Hall, New York.
5. Christopherson, R.W. (2011). Geosystems: An Introduction to Physical Geography (8th Edition). Prentice Hall, New Jersey.

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B.SC. GEOGRAPHY

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER V

Geography of Tamil Nadu

UNIT I: Location and Extent: Administrative units – Major relief features - Major rivers – Climate: temperature, Seasonal and Annual rainfall distribution, Soil: types and their distribution.

UNIT II: Forest, Livestock and Fisheries: Types and distribution, forest products, Livestock: cattle, sheep, dairying and fisheries- inland and deep-sea fishing.

UNIT III: Irrigation and Agriculture Resources: types and distribution – canal, tank and well irrigation, Agriculture: distribution and production of rice, cotton, sugarcane, and rain fed crops, oil seeds, tea and coffee.

UNIT IV: Mineral and Industrial Resources: General distribution and production. Power resources: Hydel, thermal, atomic and wind power, Industries: distribution and production of cement, sugar, cotton, automobile and paper.

UNIT V: Transport: Development and distribution of roads, railways, air and sea transportation - Important ports, Population – growth and distribution of rural and urban population.

REFERENCE BOOKS:

1. Kumaraswamy, S.V. (2014). Geography of Tamil Nadu (Tamil Edition), Sakthi Abirami Pathipagam, Coimbatore.
2. SHBoTN (2004). Statistical Hand Book of Tamil Nadu. Department of Economics and Statistics, Government of Tamil Nadu, Chennai.
3. TNEA (2014). Tamil Nadu – An Economic Appraisal 2011-12 to 2013- 14. Department of Evaluation and Applied Research, Chennai.
4. SCRoTN (2004). Season and Crop Report of Tamil Nadu for the Agricultural Year 2003-2004. Department of Economics and Statistics, Chennai.
5. Tiwari, R.C. (2010). Geography of India. Prayag Pustak Bhawan, Allahabad.

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Geography

(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI

AN INTRODUCTION TO SOCIAL GEOGRAPHY

UNIT I: Population – World Population distribution – factors affecting population – growth of population – Theories: Malthus, Optimum and Demographic Transition - Migration.

UNIT II: Settlement: Rural and Urban – Site and Situation – Urbanization – Regional Studies:- Formal, Functional, Natural, Agricultural, Industrial and Cultural Regions of the World.

UNIT III: Resources of the World: Resource types – Agriculture: Distribution and Production of Paddy, Wheat, Tea and Coffee – Forest types – Distribution – Fisheries.

UNIT IV: Minerals: Iron ore – Power Resources: Coal, Petroleum, Thermal, Hydro and Nuclear – Industries: Cotton Textiles, Iron and Steel, Ship Building - Transport and Trade.

UNIT V: Geography of India: Location, Relief, Climate, Soil, Population, and Transport.

REFERENCE BOOKS:

1. Ahmed, A. (2004). Social Geography. Rawat Publication, New Delhi.
2. Chapman, K. (1979). People, Pattern and Process – An Introduction to Human Geography. Edward Arnold Ltd., London.
3. Jones, E. and Eyles, J. (1977). An Introduction to Social Geography. Oxford University Press, Oxford.
4. Kolars, J.E. and Nystuen, J.D. (1974). Geography. McGraw Hill Book Co., London.
5. Dickinson, R.E. (1964). City and Region, Routledge, London.
6. Leong, G.C. and Morgan, G.C. (1982). Human and Economic Geography. Oxford University Press, London.

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B.SC. FORENSIC SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-II
CAREER COMPETENCY SKILLS – I

UNIT I RESUME FORMATS

Biodata – Resume – Curriculum vitae (CV) - Tips to create an effective resume – Resume format for various professions.

UNIT II GROUP DISCUSSION

Group discussion – Definition – Types of group discussion – Importance – Elements of group discussion – Skills for group discussion – preparation of group discussion.

UNIT III TECHNICAL APTITUDE

Basic aptitudes – Steps to prepare technical test – Critical reasoning skills – Common aptitude types - technical aptitudes for different professions

UNIT IV INTERVIEW SKILLS

Types of Interviews – Best skills for an Interview – Preparation for an Interview

UNIT V PERSONALITY

Four personality types – Personality traits – Body language – Dress code – Ways to improve personality.

BOOK FOR STUDY AND REFERENCE

1. Ajai B. Kher, Group discussion, Vohra Publisher, Allahabad, India,
2. Ela Kashyap Sharma, Technical Aptitude for Interviews, PHI Learning Private Limited, Delhi, 2015
3. T.S. Jain and Gupta, UPKAR'S Interviews and group discussions, E-Books

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B.SC. FORENSIC SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-III
CAREER COMPETENCY SKILLS – II

UNIT I

Operations on numbers – H.C.F & L.C.M of numbers – Decimal fractions – Simplifications – Square roots and Cube roots – Averages.

UNIT II

Problems of ages - Surds & Indices – Percentage – Profit & Loss – Ratio & Proportions – Time & Work – Pipes & Cisterns.

UNIT III

Time & Distance - Problems on Trains - Boats & Streams – Allegation & Mixtures – Logarithms – Simple interest & Compound interest.

UNIT IV

Area, Volumes and Surface areas – Calendar – Clocks – permutations & combinations – probability – Heights & Distances

UNIT V

Logical Reasoning – Puzzles – Dice – Visual Reasoning – Alphanumeric Reasoning – Number series

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B.SC. FORENSIC SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-IV
INSTRUMENTATION

UNIT I PERFORMANCE CHARACTERISTICS OF AN INSTRUMENTATION SYSTEM

Introduction – System configuration – Problem Analysis – Basic Characteristics of measuring devices – Calibration - Generalized measurement – Zero-order system – Second order system – Dead time element – Specification and testing of dynamic response.

UNIT II SENSORS AND TRANSDUCERS

Basic principles of sensors - pressure sensor (Strain Gauge) – IR sensor - Characteristics of transducers - variable resistance transducer -variable capacitance transducer – Voltage and current transducer.

UNIT III DIGITAL INSTRUMENTS

Introduction – Digital Multimeter – Digital panel meter – Digital frequency meter – Digital measurement of time – Universal counter – Digital tachometer – Digital PH meter.

UNIT IV MEDICAL INSTRUMENTATION

ECG - EEG - Lead systems and recording methods -typical waveforms - X-ray machine – Digital Stethoscope - Computer tomography - MRI – Ultrasonography - Thermography - Pacemakers –Ventilators - Dialyzers.

UNIT V GAS ANALYSERS AND POLLUTION MONITORING INSTRUMENTS

Types of gas analysers - Oxygen, NO₂ and H₂S types - IR analyser - Air pollution standards Air pollution detector - Dust and smoke detector- Radiation monitoring instruments –Area radiation dosimeter- personal radiation dosimeter - radiation warning alarm.

BOOKS FOR STUDY AND REFERENCE

1. E.A.Doebelin, Measurement Systems-Applications and Design, Tata McGraw Hill, (1990)
2. C S Rangan, G R Sharma, V.S.V. Mani, Instrumentation Devices and Systems, Second Edition, Tata McGraw Hill, (2011)
3. R.S.Khandpur, Handbook of Analytical Instruments, Tata McGraw Hill (2003).
4. D.Patranabis, Sensors and Transducers, Prentice Hall of India, (1999)
5. M. Arumugam, Bio-medical Instrumentation, Anuradha Agencies, (2002)
6. John G. Webster, Medical Instrumentation: Application and Design, John Wiley & Sons Inc (2009)
7. John P. Bentley Principles of Measurement Systems, Third Edition, Pearson Education, (2000)

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B.SC. FORENSIC SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-V
SPACE SCIENCE

UNIT I:

Universe Planets - interior planets - exterior planets - crust, mantle and core of the earth - different - region of earth's atmosphere - rotation of the earth - magnetosphere - Van Allen belts - Aurora.

UNIT II:

Comets, Meteors, Asteroids Composition and structure of comets - periodic comets – salient features of asteroids, meteors and its use UNIT III : Sun Structure of photosphere, chromosphere, corona - sunspots – solar flares - solar prominences - solar piages - satellites of planets -structure, phases and their features of moon.

UNIT IV :

Stars Constellations - binary stars - their origin and types star clusters –globular clusters - types of variable stars - types of galaxies

UNIT V :

Origin of Universe Big bang theory - pulsating theory - steady state theory – composition of universe expansion

REFERENCE :

1. K.D. Abyankar, Astrophysics of the solar system, University press, India (1999)
2. BaidyanathBasu, Sudhindra Nath Biswas And Tanuka Chattopadhyay, An Introduction To Astrophysics, Prentice Hall OfIndia, New Delhi (2010)
3. Prof. P.Devadas, The fascinatingAstronomy, Devadas Telescopies, Chennai
4. R.P. Singhal, Elements of Space Physics, PHI, (2009)

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B.SC. FORENSIC SCIENCE
(For the Year 2023-2024, 2024-2025 & 2025-2026 Batch)

SEMESTER-VI
Professional Competency Skills -
QUANTITATIVE APTITUDE FOR COMPETITIVE EXAMINATIONS

UNIT-I

Operations on numbers – H.C.F & L.C.M of numbers – Decimal fractions – Simplifications - Square roots and Cube roots – Averages.

UNIT-II

Problems of ages - Surds & Indices – Percentage – Profit & Loss – Ratio & Proportions – Time & Work – Pipes & Cisterns.

UNIT-III

Time & Distance - Problems on Trains -Boats & Streams – Allegation & Mixtures – Logarithms – Simple interest & Compound interest.

UNIT-IV

Area, Volumes and Surface areas – Calendar – Clocks – permutations & combinations – probability – Heights & Distances.

UNIT-V

Logical Reasoning – Puzzles – Dice – Visual Reasoning – Alphanumeric Reasoning – Number series.

TEXT BOOKS

1. Quantitative aptitude for competitive exams, R.S. Aggarwal, S. Chand publications, edition 2018 New Delhi.

REFERENCE BOOKS

1. Fast Track Objective Arithmetic Paperback, edition 2018, Rajesh Varma, Arihant publications
2. Abhijith Guha, Quantitative Aptitude for Competitive Examination, Tata McGraw Hill. 5th edition, New Delhi.

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Digital and Cyber Forensic Science
(For the Year 2024-2025 & 2025-2026 Batch)
Semester-II
UNIFIED MODELING LANGUAGE

UNIT – I

Introduction : Role of Analysis and Design in Software Development - Object Orientation - Overview of various OOAD Methodologies - Goals of UML. Use Case Modeling: Actors and Use Cases - Use Case Relationships - Writing Use Cases Formality -Choosing the System Boundary - Finding Actors - Finding Use Cases -Use of Use Cases for Validation and Verification - Use case Realization.

UNIT - II

Static Modelling Using Class Diagrams: Classes and Objects - Attributes and Operations - Visibility of Attributes and Operations - Class Scope Attribute - Mapping Class to Java Code - Attributes with Default Values - Association - Role Names -Qualified Association - Association Class - Ternary Association - Recursive Association - Multiple Association between Two Classes - Aggregation - Generalization - Abstract Class - Subclass Partitioning - Generalization Set - Interfaces - Packages and Grouping of Classes into Packages -Parameterized Classes.

UNIT- III

Interaction Diagrams: Introduction to Interaction Diagram - Creating New objects - Combining Fragments - Communication Diagrams.

UNIT - IV

Dynamic Modelling Using State and Activity Diagrams: State Machines - Events - States and Transitions - Formal Syntax for Specifying a State Transition - Substates - Modelling Complex Transitions - The History Indicator - The Junction State- The Synch State - The Submachine Reference and the Stub States -Activity Diagrams - Swimlanes - Dynamic Concurrency - Decomposing an Activity - Activity diagrams for Career Guidance Portal. The unified Process of Software Development: The Unified Process of Software Development - Phases of the Unified Software Development Process - Best Practices in the Unified Process - Workflows of the UP.

UNIT - V

Architectural Modelling: Subsystem - Broker Architecture for Distributed Systems- Model View Controller Architecture - Component Diagrams - Deployment Diagrams. Case Study: Simulation of Cell Phone - Social Networking Site.

TEXT BOOK

1. Mahesh P.Matha, "Object Oriented Analysis and Design Using UML", PHI Learning Private Ltd. NewDelhi, 2010.

REFERENCE BOOK

1. Jason T. Roff, "UML -A Beginner's Guide", 1st Edition, Tata McGraw - Hill, 2003.

Digital and Cyber Forensic Science
(For the Year 2024-2025 & 2025-2026 Batch)
Semester-III
OFFICE AUTOMATION TOOLS

UNIT- I

Introduction to Computers - Five Generations of Modern Computers - Classification of Digital Computer Systems - Anatomy of a Digital Computer - Memory units - Input and Output Devices - Auxiliary Storage Devices.

UNIT- II

Getting Started: Starting a Program - Identifying Common Screen Elements - Choosing Commands - Finding Common Ways to Work - Getting Help with Office

UNIT- III

MS-WORD: Learning Word Basics - Formatting a Word Document - Working with Longer Document.

UNIT- IV

MS-EXCEL: Creating a Simple Spreadsheet - Editing a Spreadsheet - Working with Functions and Formula - Formatting Worksheets - Completing Your Spreadsheet – Creating Charts

UNIT- V

MS-POWERPOINT: Creating and Viewing Presentations - Editing a Presentation - Working with Presentation Special Effects.

TEXT BOOK

1. Alex Leon, Mathew Leon, "Introduction to Computers", Vikas Publishing, 2008.
2. Diane Koers, "Microsoft Office XP - fast & easy", Prentice Hall of India Private Limited, New Delhi, 2001

REFERENCE BOOKS

1. Joyce Cox & Team, "Step by Step 2007 Microsoft Office System", PHI Learning Private limited, New Delhi, 2009.
2. Peter Weverka, "MS Office 2013 All-in-One for Dummies", 1st Edition, Wiley Publications, 2013

**Digital and Cyber Forensic Science
(For the Year 2024-2025 & 2025-2026 Batch)**

**Semester-IV
PARALLEL PROCESSING**

UNIT - I

Parallel Computer Models: The State of Computing - Computer development milestones- Elements of modern computers-Evolution of computer architecture- System attributes to performance. Multiprocessors and Multicomputer: shared-memory and multiprocessors-Distributed-memory multicomputer- A Taxonomy of MIMD computers. Multi-vector and SIMD Computers: Vector super computers-SIMD super computers. PRAM and VLSI Models: Parallel Random-access machines VLSI complexity model. Architectural Development Tracks: Multiple-processor tracks- Multi-vector and SIMD tracks.

UNIT-II

Program and Network Properties: Conditions of Parallelism - Data and resource dependences-Hardware and software parallelism-The role of compilers. Program Partitioning and Scheduling: Grain sizes and latency-Grain packing and scheduling-Static multiprocessor scheduling- Program Flow Mechanisms: Control flow versus data flow-Demand-driven mechanisms- System Interconnect Architectures: Network properties and routing- Static connection networks- Dynamic connection networks.

UNIT -III

Principles Of Scalable Performance: Performance Metrics and Measures - Parallelism profile in programs-Harmonic mean performance-Efficiency, utilization, and quality-Standard performance measures. Parallel Processing Applications: Massive parallelism for grand challenges-Application models of parallel computers. Speedup Performance Laws: Amdahl's law for a fixed workload. Scalability Analysis and Approaches: Scalability metrics and goals-Evolution of scalable computers.

UNIT -IV

Processors and Memory Hierarchy: Advanced Processor Technology - Design space of processors – Instruction set architectures. Superscalar and Vector Processors: Superscalar processor. Memory Hierarchy Technology: Hierarchical memory technology. Virtual Memory Technology: Virtual memory models- TLB, paging and segmentation.

UNIT -V

Pipelining: Linear Pipeline Processors - Asynchronous and synchronous models - Clocking and timing control-speedup, efficiency and throughput Nonlinear Pipeline Processors: Reservation and latency analysis-Collision-Free scheduling-Pipeline schedule optimization. Instruction Pipeline Design: Instruction execution phases-Mechanisms for instruction pipelining-Dynamic instruction scheduling Branch handling techniques. Arithmetic Pipeline Design: Computer arithmetic principles- Static arithmetic pipelines-Multifunctional arithmetic pipelines.

TEXT BOOK

1. Kai Hwang, — Advanced Computer Architecture, TMGH, India, 2008.

REFERENCE BOOK

1. Behrooz Parhami, —Introduction to Parallel Processing – Algorithms and Architectures, Plenum series, 2002

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**Semester-V
IMAGE EDITING TOOL**

UNIT-1

Getting Started with Photoshop CS5: Launching Photoshop CS5 - Exploring the Interface - Using Screen Modes - Opening an Existing Image - Opening an Image Using Adobe Bridge - Exploring Commonly Used Tools in the Tools Panel - Creating a New Document - Saving a Document - Reverting a Document- Selecting a Workspace - Creating a New Workspace - Deleting a Workspace - Working with Panels in Photoshop CS5 - Keyboard Shortcuts and Menu Settings - Customizing Preferences.

UNIT-2

Working with Images: Differences between Bitmap and Vector Images - Understanding Image Resolution Editing Images - Different Color Modes in Photoshop CS5 - Making Color Adjustments - File Formats in Photoshop CS5 -Creating a PDF File in Photoshop CS5 - Importing a PDF File into Photoshop CS5 - Making a Selection with Selections Tools - Modifying a Selection- Transforming a Selection - Transforming Pixels

UNIT-3

Mastering Layers in Photoshop CS5: Exploring LAYERS Panel - Working with Layers -Organizing Layers Working with Opacity and Blend Modes - Working with Adjustment Layers - Masking in Photoshop CS5 - Setting the Current Foreground and Background Colors - Filling a Selection with the Current Foreground Color - Using the Content-Aware Feature - Exploring Drawing Tools - Exploring Painting Tools - Exploring Retouching Tools.

UNIT-4

Working with Layer Styles and Filter Effects: Understanding Layer Styles - Working with Smart Objects - Understanding Filters

UNIT-5

Animation, 3D, and Printing in Photoshop CS5: Working with Actions - Working with Automate Commands - Exploring 3D in Photoshop - Working with Animation in Photoshop CS5 - Printing in Photoshop Cs5.

TEXT BOOK

1. Kogent Learning Solutions Inc, "Photoshop CS5 in Simple Steps", Dreamtech Press, New Delhi, 2012.

REFERENCE BOOKS

1. Brie Gyncild, "Adobe Photoshop CS6 Classroom in a Book", Adobe Press / Peachpit, 2012
2. Lisa Danae Dayley, Brad Dayley, "Adobe Photoshop Cs6 Bible", Wiley India Pvt Ltd.
3. Edward Bailey, "Photoshop: 7 Ways to Use Adobe Photoshop Like a Pro", Create space Independent Publishing Platform

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Semester-VI

SHELL PROGRAMMING

UNIT-I

Shell - comparison of Shells - working in the shell - Learning Basic Commands - Compiler and interpreter differences - Various directories

UNIT-II

Drilling deep into process management, job control and Automation

UNIT-III

Text processing - Text filtering Tools - working with commands. - Logical operators. - local variables and its scope - working with arrays

UNIT-IV

Tricks with shell scripting - interactive shell scripts - The here document and << operator - sort command - WC command - file handling - Debugging

UNIT-V

Automating Decision - Making in scripts - Automating repetitive tasks - working with Functions.

Text Books

- 1.The Complete Reference LINUX - Richard L. Petersen, McGraw Hill,
2. LINUX shell scripting by Ganesh Naik, Packt Publishing Ltd.,

Reference Books

- 1.Yashwanth Kanetkar, — Unix Shell Programming, B.P.B Publications 1st Edition Reprint 2012

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