



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

(Semesters – II, III & IV)

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		Food and Nutrition	15
		Forensic Science	16
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		Food Packaging	19
		Food Biotechnology	20
5.	BBA (All BBA Courses)	Business Process Outsourcing	21
		Practice of Business Relations	22
		Project Methodology	23
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		Medicinal Herbs	45
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15.	ECONOMICS	Economics of Insurance	53
		Principals of Marketing	54
		Modern Banking and Insurance	55
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		Wildlife Management	59
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21.	JMC & VISCOM	E-media Marketing	73
		Freelance Journalism	74

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		Conflict Resolution	80
24.	HOTEL MANAGEMENT	Travel and Tourism Management	81
		Hospitality Communication-I	82
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		Non Woven & Technical Textiles	88
26.	POLITICAL SCIENCE	Digital Governance	89
		Gender and Politics	90
27.	GEOLOGY	Geohazards	91
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28.	ELECTRONICS AND COMMUNICATION	Basic Electronics – I	93
		Satellite & Cable TV	94
29.	GEOGRAPHY	Geography of Travel and Tourism	95
		Fundamentals of Physical Geography	96
30.	FORENSIC SCIENCE	Instrumentation	97

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

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

S.No	DEGREE	SEMESTER	NAME OF THE COURSE
1.	B.Com (All Commerce Courses) /	2	Consumer Awareness
2.		3	Co-Operative Finance And Banking
3.		4	Advertising and Salesmanship
4.	B.Com Corporate Secretaryship / B.Com Cooperation	2	Consumer Awareness
5.		3	Co-Operative Finance And Banking
6.		4	Advertising and Salesmanship
7.	Computer Science (All CS Courses)	2	Unified Modeling Language
8.		3	Office Automation Tools
9.		4	Parallel Processing
10.	Chemistry	2	Dye Stuffs and Treatment of Effluents
11.		3	Food and Nutrition
12.		4	Forensic Science
13.	Nutrition & Dietetics	2	Food Processing
14.		3	Food Packaging
15.		4	Food Biotechnology
16.	BBA (All BBA Courses)	2	Business Process Outsourcing
17.		3	Practice of Business Relations
18.		4	Project Methodology
19.	ENGLISH	2	Journalism- Basics
20.		3	Public Speaking Skills
21.		3	Interview Skills
22.		4	English for Career
23.	MICROBIOLOGY	2	Microbial Diversity
24.		3	Nutrition and Health Hygiene
25.		4	Apiculture

26.	TAMIL & B.Lit TAMIL	2	ஊடகவியல்
27.		3	தொழில் முனைவுத்தமிழ்
28.		4	பணிவாய்ப்புத் தமிழ்
29.	PHYSICS	2	Space Science
30.		3	Career Competency Skills-I
31.		4	Career Competency Skills-II
32.	BIOCHEMISTRY	2	Good Laboratory Practices
33.		3	Health And Hygiene
34.		4	Life Style Diseases
35.	MATHEMATICS	2	Mathematical Aptitude – I
36.		3	Mathematical Aptitude – II
37.		4	Mathematical Aptitude – III
38.	BIOTECHNOLOGY	2	Biotechnology for Society
39.		3	Medicinal Herbs
40.		4	Cryogenics and Cryobiology
41.	HISTORY	2	Principles of Public Administration
42.		3	Journalism
43.		4	Hotel Management
44.	BOTANY	2	Nursery and Landscaping
45.		3	Environment Impact Analysis
46.		4	Plant Tissue Culture
47.	ECONOMICS	2	Economics of Insurance
48.		3	Principals of Marketing
49.		4	Modern Banking and Insurance
50.	ZOOLOGY	2	Fish Preservation and Economic Importance
51.		3	Human Health and Hygiene
52.		4	Wildlife Management
53.	STATISTICS	2	Statistical Methods and Their Applications
54.		3	Probability Theory
55.		4	Demography
56.	PUBLIC ADMINISTRATION	3	Local Governance in India
57.		4	Information and Cyber Security
58.	SOCIOLOGY	3	Communication Skills
59.		4	Creative Writing Skills

60.	B.S.W.	2	Child Rights and Welfare Programmes
61.		3	Man and Indian Society
62.		4	Dynamics of Human Behaviour
63.	JMC & VISCOM	3	E-media Marketing
64.		4	Freelance Journalism
65.	FOOD TECHNOLOGY	2	Food Biotechnology
66.		3	Public Health Nutrition
67.		4	Food Product Development
68.	PSYCHOLOGY	2	Human Resource Management
69.		3	Relaxation Techniques
70.		4	Conflict Resolution
71.	HOTEL MANAGEMENT	2	Travel and Tourism Management
72.		3	Hospitality Communication-I
73.		4	Hospitality Communication-II
74.	TEXTILE/CDF/FT	2	Sewing Technology
75.		3	Organization of Garment Unit
76.		4	Non Woven & Technical Textiles
77.	POLITICAL SCIENCE	3	Digital Governance
78.		4	Gender and Politics
79.	GEOLOGY	3	Geohazards
80.		4	Geo-heritageandGeo-tourism
81.	ELECTRONICS AND COMMUNICATION	3	Basic Electronics
82.		4	Satellite & Cable TV
83.	GEOGRAPHY	3	Geography of Travel and Tourism
84.		4	Fundamentals of Physical Geography
85.	FORENSIC SCIENCE	4	Instrumentation

B.Com / B.Com Cooperation / B.Com Corporate Secretaryship

(For the Year 2023-2024 & 2024-2025 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

REFERENCE BOOKS

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

1. Francis Cherunilam Business Environment Himalaya Publishing House, New Delhi 2000
2. Jain, N.K Consumer Protection-Law and Practice Regal Publications, New Delhi 2008

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B.Com / B.Com Cooperation / B.Com Corporatesecretaryship
(For the Year 2023-2024 & 2024-2025 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/ Corporate Secretarship/Cooperation
(For the Year 2023-2024 & 2024-2025 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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Computer Science
(For the Year 2023-2024 & 2024-2025 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.

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Computer Science
(For the Year 2023-2024 & 2024-2025 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 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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B.SC. CHEMISTRY
(For the Year 2023-2024 & 2024-2025 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 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 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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B.Sc. NUTRITION AND DIETETICS
(For the Year 2023-2024 & 2024-2025 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. Udipti, 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 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 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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B.B.A
(For the Year 2023-2024 & 2024-2025 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 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 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.A. ENGLISH & B.A.ENGLISH (CA)
(For the Year 2023-2024 & 2024-2025 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 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
(For the Year 2024-2025 Batch)
SEMESTER-III
INTERVIEW SKILLS

UNIT I

Definition of Interview-Essentials of Interview Skill

UNIT II

Needs and Requirements of Interview skills

UNIT III

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

UNIT IV

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

UNIT V

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

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

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

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

B.Sc. MICROBIOLOGY
(For the Year 2023-2024 & 2024-2025 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 virus (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 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 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.

B.A. Tamil / B.Lit. Tamil
(For the Year 2023-2024 & 2024-2025 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 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.எம்.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)

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B.A.TAMIL & B.LIT TAMIL
(For the Year 2023-2024 & 2024-2025 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) சிற்பி.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,, யுனைடெட்டிரைட்டர்ஸ், 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, பரிசுல் 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

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B.SC. PHYSICS
(For the Year 2023-2024 & 2024-2025 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 Telescopes, 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 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 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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B.Sc., BIOCHEMISTRY
(For the Year 2023-2024 & 2024-2025 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 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 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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B.Sc. Mathematics
(For the Year 2023-2024 & 2024-2025 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 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)					

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B.Sc. Mathematics
(For the Year 2023-2024 & 2024-2025 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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B.Sc. BIOTECHNOLOGY
(For the Year 2023-2024 & 2024-2025 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 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 & Shweta Sinha (2001), Ethnobiology. Surabhe Publications – Jaipur.
2. D.C. Pal & S.K. Jain NayaPrakash, (1998), Tribal medicine, Bidhan Sarani, 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 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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B.A. HISTORY
(For the Year 2023-2024 & 2024-2025 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 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. David Wainwright, Journalism Made Simple, Rupa & Co, London, 1981.
4. K.Kulathuran, Tamil Press (Tamil), Jeyakumari Store, Nagarcoil, 1975.
5. M.P.Gurusamy, Journalism, (Tamil), Guru- Thenmozhi Publication, Dindigul, 2009.
6. Mehta.D.S.-Mass-Communication and Journalism in India
7. Rangaswamy Parthasarathy- Journalism in India.

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B.A.HISTORY
(For the Year 2023-2024 & 2024-2025 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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B.Sc. BOTANY
(For the Year 2023-2024 & 2024-2025 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, Bonsaiculture

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 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. Glasston, 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 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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B.A. ECONOMICS
(For the Year 2023-2024 & 2024-2025 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 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 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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B.Sc. ZOOLOGY
(For the Year 2023-2024 & 2024-2025 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 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 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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B. Sc., STATISTICS
(For the Year 2023-2024 & 2024-2025 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 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 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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B.A. Public Administration
(For the Year 2023-2024 & 2024-2025 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 Batch)
SEMESTER-IV
INFORMATION AND CYBER SECURITY

UNIT	Content
I	Meaning, nature and scope of Information and cyber security – Definition – Concepts-Types-Difference-Risks - Strategies and Security Policies–Protecting Government Network- Emerging Challenges.
II	Introduction to Information Security -Information Security Governance-Conventional Cryptographic Techniques - Symmetric and Asymmetric Cryptographic Techniques - Authentication and Digital Signatures- Program Security -Security in Networks
III	Introduction to Cyber Security-Network Defense Tools-Web Application Tools- Cyber Crime, law and Investigation-Cyber law and Policy- Cyber security initiatives in India
IV	Database Management and Policy-Cyber security Policy and Risk Management-Web Technology-Security Threats and Vulnerabilities- Information Security Management Systems- Government models and networks.
V	Cyberspace and inter-state conflict - International Norms and Treaties-Global Internet Governance-Ethical Issues in Information Security & Privacy-Security Challenges in E-commerce & e governance.

Text Books

- 1 Surya Prakash Tripathi and Ritendra (2014), Introduction to Information Security and Cyber Laws, Noida, John Wiley.
- 2 Dr. P.K. Sharma (2016), Information Warfare and Cyber Security, New Delhi, Surendra Publications.
- 3 Anand Shinde (2021), Introduction to Cyber Security, Chennai, Notion Press.
- 4 Kahate, A (2009), Cryptography and Network Security, New Delhi, McGraw-Hill Education.
- 5 Krishna, S., Shirin Madon (2003), The Digital Challenge: Information Technology in the Development Context, United Kingdom, Ashgate Publishing Limited.

Reference Books

- 1 Soni S.L, Col. C.P. Bhargav (2016), Cyber Security and Cyber Law, New Delhi, Prashant Publishing House.
- 2 Forouzan, B.A. (2010), Cryptography & Network Security, New Delhi, Tata McGraw - Hill Education.
- 3 Mark S. Merkow James Breithaupt (2007), Information Security: Principles and Practices, Noida, Pearson Education India.
- 4 Sanil Nadkarni (2020), Fundamentals of Information Security, New Delhi, BPB Publications.
- 5 Brij Gupta, Dharma P. Agrawal, Shingo Yamaguchi (2016), Handbook of Research on Modern Cryptographic Solutions for Computer and Cyber Security, USA, IGI Global.

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B.A. Sociology
(For the Year 2023-2024 & 2024-2025 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 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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BACHELOR OF SOCIAL WORK (B.S.W)

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

(For the Year 2023-2024 & 2024-2025 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 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.A. Journalism & Mass Communication / B.Sc. Visual Communication
(For the Year 2023-2024 & 2024-2025 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 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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B.Sc. FOOD TECHNOLOGY
(For the Year 2023-2024 & 2024-2025 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 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 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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B.Sc. Psychology
(For the Year 2023-2024 & 2024-2025 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 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 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 PSCHOLOGICAL 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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B.Sc. Hotel Management and Catering Science
(For the Year 2023-2024 & 2024-2025 Batch)
Semester-II

TRAVEL & TOURISM 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 Publsihers 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 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 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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**B. Sc. TEXTILE AND FASHION DESIGNING/COSTUME DESIGN AND
FASHION/FASHION TECHNOLOGY**

(For the Year 2023-2024 & 2024-2025 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 abd 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 Batch)

SEMESTER -III

ORGANIZATION OF GARMENT UNIT

Unit I Entrepreneur and Management

Entrepreneur-Meaning, definition and types, need for Entrepreneurs, qualities, and role of Entrepreneur. Management-Definition. Management as a process-Planning, organizing, Directing, Controlling and Co Ordination. Difference between Entrepreneur and Manager.

Unit II Organizational Structure of a Garment Unit

Organizational structure of a garment unit, Design department, Finance department, purchasing department, Production department, organizing different sections- hierarchy Personnel involved in all the departments, nature of the job. Role of HR in apparel industry.

Unit III Factory Design and Layout

Factory Design and layout – importance of factory design, factors affecting factory design, Types of buildings (single and Multi-Storey) – advantages and limitation. Factory layout – Process, Product and combined layout Design requirement-requirements relating to health, safety and Welfare. Balancing – Steps to balance the line - Initial balance - Balance control - Efficiency – Cycle checks - Balancing tools.

Unit IV Principles of Costing

Principles of costing-requirement of good costing system. Cost estimation of yarn and fabric. Cost estimation for dyeing, printing, embroidery, cutting, stitching, checking, packing, final Inspection, shipping and insurance.

Unit V Garment Export Unit

Performance of Indian Garment Export and Institutions supporting Entrepreneurs, SWOC Analysis Setting up of garment unit for export market, Export Document, Export finance-Payment method, Export shipping. Institutions supporting entrepreneurs-DIC, NSIC, SISI, SIPCOT, TII, KVIC, CODISSIA, Commercial banks – SBI.

Text Book(s)

1. Introduction to Clothing Production Management, A J Chester 2nd Edition, Wrenbury Associates Ltd, 1998.
2. The technology of clothing manufacture, Harold Carr and Barbara Latham, Blackwell Science, 1994.
3. Apparel Costing, A functional Approach- Krishnakumar. M, Abishek Publications, Chandigarh, 2011.
4. Principles of Management, Dinakar Pagare, Sultan Chand and Sons, Delhi, 2018.
5. Entrepreneurship Development in India, Dr. C.B Gupta, Dr N.P. Srinivasan, Sultan Chand and Sons Delhi, 1997.
6. Industrial Engineering in Apparel Production, V.Ramesh Babu, Wood Head Publishing, India, 2012.

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B. Sc. TEXTILE AND FASHION DESIGNING
(For the Year 2023-2024 & 2024-2025 Batch)
SEMESTER IV
NON WOVEN & TECHNICAL TEXTILES

UNIT – I

Non – woven – Introduction – definition, classification and scope and application of non woven – fibres used-web preparation, 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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B.A. Political Science
(For the Year 2023-2024 & 2024-2025 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 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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B.Sc. Geology
(For the Year 2023-2024 & 2024-2025 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 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- trappean 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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B.SC. ELECTRONICS AND COMMUNICATION

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

SEMESTER III

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 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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B.SC. GEOGRAPHY

(For the Year 2023-2024 & 2024-2025 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.

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B.SC. GEOGRAPHY
(For the Year 2023-2024 & 2024-2025 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. FORENSIC SCIENCE
(For the year 2023-2024, 2024-2025 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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