

**BACHELOR OF BUSINESS ADMINISTRATION (B.B.A)
CORE-XIV: RESEARCH METHODOLOGY**

SUBCODE: BB25B

Learning Objectives:

- 1. To acquire basic knowledge about the research and types.**
- 2. To enable the students know research process & report writing.**

UNIT-I

Introduction to Business Research - Research in Business – Research Process- Research need, formulating the problem, designing, sampling, pilot testing .

UNIT –II

Research Design- Exploratory, Descriptive, Casual, Formulation of hypothesis - types. Measurement- characteristics of sound measurement tool, Scaling methods and sampling techniques.

UNIT –III

Sources and Collection of Data- : Primary and secondary sources, survey observation, experimentation- details and evaluation. - Questionnaires – schedules, data entry, tabulation & cross tabulation-and Graphic presentation . Data.

UNIT –IV

Analysis and Preparation: Hypothesis testing – statistical significance, statistical testing procedure. Tests of significance- -Simple Correlation -Regression .

UNIT –V

Presenting results and writing the report: - The written research Report.

REFERENCE

- 1. Donald R Cooper, Business Research Methods 7th Ed, McGraw Hill,2001**
- 2. Krishnaswami OR, M.Ranganatham, Methodology of Research for Social Science, Himalaya, Mumbai,2001.**
- 3. Anderson J. et.al, Thesis and Assignment writing, Wiley Eastern 4. Research Methodology by C.R.Kothari**



CORE-XIX: BUSINESS TAXATION

SUBCODE: BB25C

UNIT I:

Objectives of Taxation – Canons Of Taxation – Tax System In India – Direct And Indirect Taxes – Meaning And Types.

UNIT II: Central Excise Duty – Classification – Levy and Collection of Excise duty – Clearance of excisable goods- Exemption from excise duty – Excise and Small Scale Industries – Excise and Exports – Demand, Refund, Rebate of Central Excise duty – Offences and Penalties – Settlement – Appellate Provisions.

UNIT III: The Customs duty – Levy and Collection of customs duty – Organisation of the customs department – Officers of the customs – Powers – Appellate machinery – Infringement of the law – offences and penalties – Exemption from duty – customs duty drawback – duties free zones.

UNIT IV: Central Sales Tax Act – Levy and Collection of CST - Liability of Tax – Registration of dealers – Goods of Special Importance – Offences and penalties - Value added tax – objectives – Levy of VAT – Arguments in favour of VAT – Difficulties in administering VAT

UNIT V: Definition of GST – Administrative structure of GST – Officers as per CGST Act - Officers as per SGST Act – Jurisdiction – Appointment- Powers- Procedure for Registration – Amendment of registration – Cancellation of registration.

REFERENCE BOOKS:

- 1. V.S.Datey, Central Excise, JBA Publishers, Edition 2013. Reddy .T.S and Y. hari Prasad reddy, Business Taxation (Goods & Services TAX - GST),Margam Publication, Edition2019.**
- 2. Srinivasan N.P and Priya Swami. M , Business Taxation, Kalyani publishers Edition 2013**
- 3. Pagaredinkar, Business Taxation, Sultan Chand and Sons,2012.**
- 4. Senthil and Senthil, Business Taxation, Himalaya Publication, 4thEdition.**
- 5. . Vinodk.Singania, Indirect Tax, Sultan Chand and Sons, Edition2013. 6. Dr. Vinodk.Singania and Dr. Monica Singhania, Students Guide to Income Tax (including service tax, vat) , JBA Publishers, Edition2013.**

MANAGERIALECONOMICS (Allied Subject)

SUBCODE:BB31A

UNIT I

Nature and scope of managerial economics – definition of economics – important concepts of economics – relationship between micro, macro and managerial economics – nature and scope – objectives of firm

UNIT II

Demand analysis – Theory of consumer behavior – Marginal utility analysis – indifference curve analysis Meaning of demand – Law of demand – Types of demand – Determinants of demand – Elasticity of demand – Demand forecasting

UNIT III

Production and cost analysis – Production – Factors of production – production function – Concept – Law of variable proportion – Law of return to scale and economics of scale – cost analysis – Different cost concepts – Cost output relationship – Short run and long run – Revenue curves of firms – Supply analysis

UNIT IV

Pricing methods and strategies – Objectives – Factors – General consideration of pricing – methods of pricing – Dual pricing – Price discrimination

UNIT V

Market classification – Perfect competition – Monopoly – Monopolistic competition – Duopoly – Oligopoly

Recommended Texts

1. Dr.S.Shankaran, Managerial Economics- Margram Publication- Chennai
2. P.L.Metha, Managerial Economics- Sultan Chand Publications- New Delhi
3. RLVarsheny and KLMaheshwari, Managerial Economics- Sultan Chand Publications- New Delhi.
4. Joel Dean, Managerial Economics- Prentice Hall of India Pvt.Ltd.,- New Delhi.
5. Spencer MH, Contemporary Economics- Worth publishers- New York.
- VI Mote Samuel Paul G.S Gupta, Managerial Economics – concepts and cases- Tata McGraw Hill- New Delhi.

INTERNATIONAL TRADE(Allied Subject)

SUBCODE:BB32A

UNIT I

Difference between Internal and International trade – Importance of International Trade in the Global Context

UNIT II

Theories of Foreign Trade – Absolute, Comparative, Equal cost differences (Adam Smith, Ricardo, Haberler's, Heckscher-Ohlin theories only)

UNIT III

Balance of Trade, Balance of Payment Concepts, causes of disequilibrium method to correct disequilibrium: Fixed and floating exchange rates

UNIT IV

International Monetary system: - IMF – International Liquidity – IBRD

UNIT V

WTO and its implications with special reference to India

Recommended Texts

- 1. Cherunilam Francis, International Trade and Export Management - Himalaya Publishing House - Mumbai.**
- 2. T.T.Sethi, Money Banking & International Trade - S.Chand & Co., - Delhi.**
- 3. Paul.R.Krugman and Maurice Obstfeld, International Economics (Theory and Policy) - Pearson Education Asia - Addison Wesley Longman (P) Ltd. - Delhi - 92.**
- 4. Robert J. Carbaugh, International Economics - Thomson Information Publishing Group - Wadsworth Publishing Company - California.**
H.G.Mannur, International Economics – Vikas Publishing House (P) Ltd. - New Delhi - 14.

CORE-VII: COMPUTER APPLICATION IN BUSINESS

SUBCODE:BB23C

Learning Objectives :

- 1. To acquaint skills in Ms-Word and Ms-Excel for business functions.**
- 2. To understand DBMS, EDI, Internet basic concepts and its applications.**
- 3. To familiarize about Information system audit.**

UNIT – I

Word Processing: Meaning and role of word processing in creating of documents, Editing,formatting and printing documents using tools such as spell check, thesaurus, etc., in word processors (MS Word), Electronic Spreadsheet, Structure of Spread sheet and its applications to accounting , finance, and marketing functions of business; Creating a dynamic/ sensitive worksheet; Concept of absolute and relative cell – reference; Using built – in functions; Goal seeking and solver tools; Using graphics and formatting to worksheet; Sharing data with other desktop applications ; Strategies of creating error – free worksheet (MS Excel)

UNIT – II

Programming under a DBMS environment: The concept of data base management system; Data field, records, and files, Sorting and Indexing data; Searching records. Designing queries, and reports; Linking of data files; Understanding programming environment in DBMS; Developing menu driven applications in query language (MS – Access).

UNIT – III

Electronic Data Interchange (EDI) : Introduction of EDI - Basics of EDI; edistandards;Financial EDI (FEDI) FEDI for international trade transaction; Applications of EDI, Advantages of EDI; Future of EDI.

UNIT – IV

The internet and its basic concepts: Internet concept, History, Development in India: Technological foundation of internet; Distributed computing; Client – server computing ;internet protocol suite; Application of distributed computing ; Client server computing; Internet protocol suite in the internet environment ; Domain Name System (DNS); Generic Top – Level Domain (gTLD); Country code Top Level Domain (ccTLD) – India; Allocation of second level domains; IP addresses, Internet protocol; Applications of Internet in business, Education, Governance ,etc. 2

UNIT – V Information System Audit : Basic idea of information audit; - Difference with the traditional concepts of audit; Conduct and applications of IS audit in internet environment.

Reference Books:

- 1. . Agarwala Kamlesh N and Agarwala Deeksha – Business on the Net – Introduction to E-Commerce**
- 2. Goyal – Management Information System.**

CORE-X: BUSINESS REGULATORY FRAME WORK

SUBJECT CODE : BB24D

Learning Objectives :

- 1. To understand the provisions of law related to business**
- 2. To know the legal remedies for business.**

UNIT I

Brief outline of Indian Contracts Act - Special contracts Act - Sale of goods Act - Contract of Agency

UNIT II

Brief outline of Indian Companies Act 1956.

UNIT III

Brief outline of FEMA - Consumer Protection Act UNIT IV The laws of Trade Marks - Copyright - Patents - Designs - Trade related Intellectual Property Rights. (TRIPS) RTP -IDRA -an overview

UNIT V Brief outline of Cyber Laws Recommended Textbooks

Recommended Textbooks

- 1. N.D.Kapoor, 1993, Business Laws, Sultan Chand, NewDelhi**
- 2. K.S.Anantharaman, 2003 Business and Corporate Laws ,Sitaraman&co.Pvt.Ltd. Chandrasekaran ,2004 Sitaraman&co Pvt Ld , Intellectual PropertyLaw**
- 3. Bare Acts- FEMA , Consumer ProtectionAct**
- 4. Acharya -2004, Intellectual Property Rights Asia Law HousePublication,**

BCOMCORPORATESECRETARYSHIP MANAGEMENT ACCOUNTING

SUBCODE:AY26B

OBJECTIVES :

- To enable the students to get knowledge about the various techniques of Management Principles.
- To make the students to get practical skill in solving management problems.

OUTCOME:

- Understand the primary purpose of management accounting namely financial statement
- analysis and budgetary control
- Develop and apply budget for planning and controlling purpose.●

UNIT I:

Introduction Management Accounting - Meaning- Scope- Importance- Limitations - Management Accounting Vs Cost Accounting – Management Accounting Vs Financial Accounting.

UNIT II:

Financial Statement Analysis Analysis and Interpretation of Financial Statements – Nature and Significance – Types of Financial Analysis – Tools of Analysis – Comparative Statements – Common size Statement – Trend Analysis.

UNIT III:

Ratio Analysis Meaning – Advantages – Limitations – Types of Ratios – Liquidity Ratios – Profitability Ratios Turnover Ratios – Capital Structure Ratios – Leverage Ratios – Calculation of Ratios.

UNIT IV:

Fund Flow Analysis & Cash Flow Analysis Introduction, Meaning of Funds Flow Statement-Ascertainment of flow of funds- Technique of preparing funds flow statement- Schedule of Changes in Working Capital- Adjusted Profit and Loss account-Funds Flow Statement Meaning of Cash Flow Statements – Advantages – Limitations – Preparation of Cash Flow Statement – Types of Cash flows - Operating, Financing and Investing Cash flows.

UNITV:

Budgetary Control & Marginal Costing Budgetary Control – Meaning – Preparation of various Budgets – Cash Budget - Flexible Budget – Production Budget – Sales Budget. Capital Expenditure Control - Application of Marginal Costing in Decision Making – Make or Buy –Shut down or Continue – Exploring New Markets.



TEXT BOOK:

1. **Rajiv Kumar Goel , Ishaan Goel – Concepts Building Approach to management Accounting –CENGAGE New Delhi**
2. **Drury – Management and Cost Accounting with CourseMate**
3. . **Maheswari,S.N.,Management Accounting, Sultan Chand & Sons REFERENCE BOOKS: 1. Murthy A and Gurusamy S ,Management Accounting- Theory &Practice, Vijay Nicole Imprints Pvt. Ltd .Chennai 2. Charles T. Horngren and Gary Sundem, N, Introduction to Management Accounting, Prentice Hall 3. Sharma and Shashi K. Gupta, Management Accounting, Kalyani Publishers**
4. . **Reddy, T.S. & Dr. Hariprasad Reddy, Y, Management Accounting, Margham Publications, Chennai.**
5. **Hansen - Mowen, Cost Management Accounting and Control, South Western College**

WEB REFERENCE:

1. www.accountingcoach.com
2. www.accountingstudyguide.com
3. www.futureaccountant.com
4. www.thestudentcpa.com

SECURITIES LAWS AND MARKET OPERATIONS

SUBJECT CODE:AY26B

Course objectives:

- **To promote conceptual understanding and in-depth knowledge of trading in securities and its implication in financial markets.**

UNIT I - Primary Market / New Issue Market

Meaning – Functions of New issue market – Methods of floating new issues – Players involved in the new issue market (Merchant bankers – Underwriters – Brokers - Registrar- Lead managers & Banks) – Role of SEBI relating to the new issue market – SEBI Guidelines for disclosure & Investor Protection.

UNIT II - Secondary Market / Stock Exchange

Origin & Management of stock exchanges in India – Characteristics – Functions Members – Granting recognition to stock exchanges – Listing of securities & registration of brokers – Kinds of brokers in stock exchange – NSE – BSE – OTCEI – SEBI Guidelines relating to listing of securities.

UNIT III - Financial Instruments in New Issue & Secondary Market

Treasury bills- Commercial bills- Certificate of deposits- Equity shares- Preference shares- Sweat equity shares- Debentures- American Depository Receipts- Global Depository Receipts- Exchange traded funds & exchange traded notes – Mutual Funds.

UNIT IV - Mechanism of Stock Market Trading

Screen based trading and internet based trading – Demat trading and role of depositories – Market Derivatives, advantages and its types – futures, hedge fund, forward, options & swaps Market indexes – SENSEX, NIFTY & CNX NIFTY (Basics)

UNIT V - Credit Rating Agency



Meaning – Functions – Credit rating in India – Credit rating agencies in India CRISIL & CARE

Practical orientation

To give practical exposure to students relating to stock trading and market indexes reading of various sectors like manufacturing, pharmaceuticals, health, aviation, hospital etc.

- 1. Assignment**
- 2. Collage on IPO Issues.**

Suggested Readings

- 1. Dr. L. Natarajan - Securities Laws & Market Operations, Margham Pub. Chennai.**
- 2. K.Natarajan, E.Gordon – Financial market & Services, Himalaya publishing House, Mumbai.**
- 3. S.Gurusamy – Securities Laws & Market operations, Vijay Nichole Prints, Chennai.**
- 4. Gupta L.C – Stock Exchange Trading in India, Society for Capital Market Research and Development, Delhi**
- 5. MachiRaju.H.R – Working of Stock Exchange in India, New Age International**
- 6. Chandrate K.R; et al : Capital issue, SEBI & Listing; Bharat Publishing House**
- 7. V.K .Bhaliya – Financial Derivatives – Risk Management, Sultan Chand ltd, New Delhi.**

JOURNALS

- **Taxman – SEBI and Corporate Laws**
- **Corporate Law Advisor**
- **SEBI Monthly Bulletins**
- **NSE Yearly Publications**

e-LEARNING RESOURCES

- <http://corporatefinanceinstitute.com>
- www.bseindia.com
- www.managementstudyguide.com
- www.investopedia.com

CORE-XIII: INDUSTRIAL LAWS

SUBJECT CODE: AY26B

Inst.Hrs : 6 Credits :

4 YEAR: III SEMESTER: VI

Course Objectives:

- **To acquire knowledge on various rules and regulations prevalent in the present business scenario.**
- **To gain insight on various legal Acts passed to protect the health, safety & welfare of the employees**

UNIT I - Factories act 1948

Definitions – Health – Safety – Welfare – Working Hours of Adults – Employment of Women – Employment of Young Persons – Leave with Wages.

UNIT II - Industrial Disputes Act 1947

Definitions – Authorities under the Act – Reference of Disputes – Procedures and Powers of Authorities – Strikes and Lock-outs – Lay-off & Retrenchment – Special Provisions relating to Lay-off, Retrenchment & Lock-outs

UNIT III - The Workmen Compensation Act 1923

Need for the Act – Scope & Coverage of the Act – Definitions – Employer's liability for Compensation (Section 3) including Theory of Notional Extension & Occupational Diseases – Defences available to Employer – Amount & Distribution of Compensation – Notice & Claim – Medical Examination - Obligations & Rights of Employers & Employees - Schedules to the Act

UNIT IV - Employees State Insurance Act 1948

Objects-definitions-ESI Corporation, functions- contribution and recovery- benefits- penalties for false claims

UNIT V - Employees Provident Fund and Miscellaneous Provision Act, 1952

Objects definition- provident fund schemes- contribution and recovery – penalties and offences Practical orientation - Students can be assigned to submit a report on



welfare, health and safety measures taken by the manufacturing industries of their choice.

Practical orientation - Students can be assigned to submit a report on welfare, health and safety measures taken by the manufacturing industries of their choice.

SUGGESTED READINGS

- 1. N.D.Kapoor – Industrial Laws, Sultan Chand & Sons, New Delhi.**
- 2. P.C.Tripathi - Industrial Laws, Sultan Chand & Sons, New Delhi**
- 3. Dr.M.R.Sreenivasan&C.D.Balaji - Industrial Laws & Public Relations, Margham Publications, Chennai.**
- 4. B.Nandha Kumar, Industrial Laws, Vijay Nichole Prints, Chennai.**
- 5. S.Thothadri&Vijayalakshmi.M, IK International Publishing House Pvt Ltd.**

ENTREPRENEURIAL DEVELOPMENT

SUBCODE:AY26C

Inst.Hrs:6

YEAR:III

Credits:Core4/Elective5

SEMESTER:VI

Course Objectives:

- 1. To enable the student to understand the concept of Entrepreneurship and to learn the professional behavior expected of an entrepreneur.**
- 2. To identify significant changes and trends which create business opportunities and to analyze the environment for potential business opportunities.**
- 3. To provide conceptual exposure on converting ideas to a successful entrepreneurial firm.**

OUTCOME

- On completion of syllabus student will understand on the basic concepts of entrepreneurship and business opportunities to familiar with knowledge about business and project reports for starting a new venture on team based.**

UNIT I: Entrepreneurship

Entrepreneur: Meaning of entrepreneurship – Types of Entrepreneurship – Traits of entrepreneurship – Factors promoting entrepreneurship- Barriers to entrepreneurship- the entrepreneurial culture- Stages in entrepreneurial process – Women entrepreneurship and economic development-SHG.

UNIT II: Developing Successful Business Ideas

Recognizing opportunities – trend analysis – generating ideas – Brainstorming, Focus Groups, Surveys, Customer advisory boards, Day in the life research – Encouraging focal point for ideas and creativity at a firm level- Protecting ideas from being lost or stolen – Patents and IPR.



UNITIII:OpportunityIdentificationandEvaluation

Opportunityidentificationandproduct/serviceselection–

Generationandscreening the project ideas – Market analysis, Technical analysis, Cost benefitanalysisandnetworkanalysis-Projectformulation– Assessmentofprojectfeasibility-Dealingwithbasicandinitial problemsofsettingupofEnterprises.

UNITIV:BusinessPlanningProcess

Meaningofbusinessplan-Businessplanprocess-Advantagesofbusinessplanning- preparing a model project report for starting a new venture (Team-based projectwork).

UNITV:Funding

Sources of Finance- Venture capital- Venture capital process- Business angles- Commercialbanks-GovernmentGrantsandSchemes.

CORE-XII: INDIRECT TAXATION

SUBJECT CODE: AY24B

Inst.Hrs : 5

Credits :4

YEAR: II

SEMESTER: IV

OBJECTIVES:

1. To facilitate the students to gain knowledge of the principles of Indirect Taxation.
2. To enable the students to gain knowledge of Goods and Services (GST)
3. To highlight the students about customs duty.

OUTCOME:

- The students will be able to understand the concepts of Indirect taxation, types and Assessment procedures

UNIT – I Introduction

History and Objectives of Taxation – Tax System in India- Direct & Indirect Taxes – Meaning and Types – Powers of Union and State to levy taxes. Constitutional Amendments leading to introduction of GST and their importance

UNIT – II GST – Overview & Concepts

Background behind implementing GST- The need for GST- objectives of GST- Business impact Benefits of GST-SGST- CGST and IGST- Taxes covered by GST- Definitions - Scope and Coverage Scope of supply- Levy of tax- Rate Structure- Taxable Events. Types of Supplies – Composite and Mixed Supplies –Composition Levy.

UNIT – III GST Taxation/ Assessment proceedings

Return- Refunds- Input Tax Credit- Reverse charge Mechanism, Transitional Provisions composition under GST- Administrative structure of GST-Officers as per CGST Act- Officers as per SGST Act-Jurisdiction- Appointment Powers. Relevance of Cross Empowerments

UNIT-IV GST Audit Assessment and Audit

under GST- Demands and Recovery- Appeals and revision- Advance ruling Offences and Penalties. National Anti-Profiteering Authority – GST Practitioners – eligibility and Practice and Career avenues

UNIT-V Customs duty The custom duty

Levy and collection of customs duty- Organisations of custom departments Officers of customs- powers- Appellate Machinery- Infringement of the Law-Offences and Penalties- Exemptions from duty customs duty draw back- duties free Zones. Export incentive schemes

Recommended Texts

- 1. Shilpi Sahi – Concepts Building Approaches to Goods and Services Tax (GST), & Customs Law - CENGAGE , New Delhi**

SUGGESTED READINGS

- 1. Sweta Jain GST law and practice Taxmann Publishers, July 2017**
- 2. V.S.Daty – GST- Input Tax Credi- Taxmann Publishers, second edition August 2017**
- 3. C.A. Anurag Pandey- Law and Practice of GST- Sumedha Publication House 2017**
- 4. Dr.Vandana Banger- Beginners- Guide AadhayaPrakashan Publisher 2017**
- 5. Dr.M. Govindarajan- A practical guide send text publishers July 2017**

INTERNATIONAL TRADE

SUBCODE : AY31A

UNIT- I

Theories of International Trade- Ricardo- Haberlers Opportunity cost- Heckscher Ohlin theorem.

UNIT-II

Trade policy- Case for protection- Regional integration- European Union- EEC- UNCTAD- GATT- Asian- Development Bank

UNIT-III

WTO- Functions of WTO- An Overview

UNIT-IV

Balance of payments- Disequilibrium- Remedies- Exchange control- Purchasing Power parity Theory.

UNIT-V

International monetary system- IMF- SDR- International liquidity- IBRD REFERENCE

BOOKS:

1 K.R.Gupta - International Economics

2 P.Saravanan - International Marketing

3 S.S.Ankara- Money, Banking and International trade

4 Francis Cherunilas- International Trade and Export Marketing

CORE-V: CORPORATE ACCOUNTING

SUBJECT CODE: AY23A

Inst.Hrs :6

Credits : 4

YEAR: II

SEMESTER: III

OBJECTIVES

- **To make the students familiarize with corporate accounting procedures**
- **To enable the students to acquire conceptual knowledge about the preparation of the company accounts.**

OUTCOME:

- **The students will learn the accounting procedures of corporate undertaking and their financial statement preparations**

UNIT – I

Share Capital

Issue of Shares - Types of Shares – Forfeiture of Shares- Reissue of Shares- Redemption of Preference Shares.

UNIT – II

Debentures & Underwriting

Issue of Debentures – Redemption of Debentures- Profit prior to incorporation. Underwriting of Shares & Debentures

UNIT – III

Final Accounts

Final Accounts - Preparation of Profit & Loss account and Balance sheet- Managerial Remuneration.

UNIT –IV

Valuation of Goodwill & Shares

Valuation of Goodwill & Shares – Meaning – Methods of valuation.

UNIT – V

Accounting for Insurance Companies

Insurance Accounts- Types- Final accounts of Life Insurance- Profit determination of Life Insurance



TEXT BOOK:

- 1. Raj Kumar Sah-Concepts Building Approach to Corporate Accounting- Cengage, New Delhi.**
 - 2. Gupta, R.L & Radhaswamy, M, Advanced Accounts, Sulthan Chand, New Delhi.**
- BOOK**

REFERENCE:

- 1. Jain, S.P & Narang, N.L., Advanced Accounting, Kalyani Publications.**
- 2. Shukla & Grewal & Gupta, Advanced Accounting, S. Chand & Co., New Delhi**
- 3. Reddy T.S. & Murthy, A, Corporate Accounting, Margham Publications, Chennai.**

WEB RESOURCE:

- 1. www.accountingcoach.com**
- 2. www.accountingstudyguide.com**
- 3. www.futureaccountant.com**
- 4. www.education.svtuition.org**

CORE-VI: COMPANY LAW & SECRETARIAL PRACTICE

SUBJECT CODE:AY23B

Inst.Hrs : 6

Credits : 4

YEAR: II

SEMESTER: III

Course Objectives

- **To acquire knowledge at practical and procedural aspects of a company formation and e-governance including digital signature and compliance requirements.**

UNIT I - INCORPORATION OF COMPANY AND ROLE OF COMPANY SECRETARY

Evolution of Company law – Meaning and characteristics of a company – Stages of incorporation – e-filing – Memorandum of Association and Articles of Association – Alteration – Effects of registration – Doctrine of constructive notice – Ultravires and indoor management – lifting of Corporate veil. Role and importance of Company Secretary – Key Managerial Personnel – Compliance officer – Compulsory Appointment - Qualification and disqualifications – Powers, duties and responsibilities of Secretary – Resignation and removal of Company Secretary – Officer in default.

UNIT II - PROSPECTUS & SHARECAPITAL

Prospectus – Shelf Prospectus – Red herring Prospectus – Civil & Criminal liability for misstatement in Prospectus – Statement in lieu of Prospectus - Secretarial duties in the issue of Prospectus. Share capital – Alteration of Share capital – rights issue, Bonus issue, Private and preferential allotment – Dividend, interim dividends, warrants and mandates – Secretarial duties in the issue of share capital.

UNIT III - MEMBERS AND SHAREHOLDERS

Members – Rights and responsibilities – who can be a member – member, shareholder, contributory – difference – transfer and transmission of shares (including depository mode) – Nomination and its importance.

UNIT IV - KEY MANAGERIAL PERSONNEL AND MEETINGS

Directors – Women Director – Independent Director and Whole time Key Managerial Personnel – Director Identification Number and its significance – duties, qualification and disqualification. Board meeting, shareholder meeting, committee meeting, mandatory committee meeting – Role and composition – Powers of the board – Notice , Agenda, minutes and resolution – Secretarial duties in meetings.

UNIT V - WINDING UP

Modes of Winding up - Winding up by the tribunal – Voluntary Winding up – NCLT – Special courts – Mediation and Conciliation panel.

Practical orientation – To encourage the students to role play as company secretary in any meeting of the company (conduct Mock meeting)

Suggested Readings:

- 1. Dr. B. Ravi – Company Law and Secretarial Practice (New Companies Act 2013)**
- 2. N. D Kapoor – Company Law, Sultan Chand & Sons, New Delhi**
- 3. Gaffoor & Thothadri – Company Law and Secretarial Practice, Vijay Nicole Prints, Chennai**
- 4. V. Balachandran and M. Govindarajan – A Student Handbook on Company Law and Practice, Vijay Nicole Prints, Chennai**
- 5. Taxman’s Companies Act 2013 - Taxman Publications, New Delhi**
- 6. Vinod Kothari – Understanding Companies Act 2013 – Jain book agency, New Delhi.**
- 7. Mr. Srinivasan – Company Law & Secretarial Practice, Margham Publications, Chennai**

Journals:

- India business Law Journal, Vantage Asia publishing Limited**
- Law Journal/ Corporate Law Reporter**
- Symbiosis Contemporary Law Journal**
- ICSI - Journals & Bulletins**

E – learning resources

- www.indianlawjournal.org**
- www.icsi.edu**
- www.clioindia.com**

CORE-IX: ADVANCED CORPORATE ACCOUNTING

SUBJECT CODE:AY24A

**Inst.Hrs : 6
YEAR: II**

**Credits : 4
SEMESTER: IV**

OBJECTIVES

- To provide the students with an understanding of accounting procedure for corporate restructuring.
- To make the students understand the applications of Accounting Transactions in Corporate Sector.

OUTCOME:

- The students will be able to understand the procedures of corporate restructuring and to prepare the various accounting statements

UNIT I: Internal Reconstruction

Meaning - Alteration of share capital – Accounting Procedures.

UNIT II: Amalgamation, Absorption & External Reconstruction

Meaning- Amalgamation in the nature of Merger, Purchase - External Reconstruction – Applicability of AS 14- Calculation of Purchase consideration (all methods) – Journal Entries in the books of Transferor and Transferee Companies, Revised Balance Sheet (excluding inter - company holdings)

UNIT III: Liquidation

Meaning – Preparation of Liquidator’s Final Statement of Accounts – Calculation of Liquidator Remuneration.

UNIT IV: Consolidation



Holding Company –Subsidiary company - Meaning – Preparation of Consolidated Final Statement of Accounts.

UNIT V: Accounting For Banking Companies

Bank accounts - Concept of Non-Performing Assets (NPA)-Preparation of Profit and Loss Account - Asset classification - Preparation of Balance Sheet.

TEXT BOOK:

- 1. 1.Raj Kumar Sah - Concepts Building Approach to Corporate Accounting – CENGAGE , New Delhi.**
- 2. 2.Gupta, R.L.&Radhaswamy ,M., Advanced Accounts, Sulthan Chand &Sons, New Delhi.**

REFERENCE BOOKS:

- 1. Jain, S.P. & Narang K.L., Advanced Accounts – Kalyani Publishers.**
- 2. Reddy, T.S & Murthy, A, Corporate Accounting, Margham Publications, Chennai.**
- 3. Shukla, M.C. & Grewal, J.S, Advanced Accounts, S.Chand and Company, NewDelhi**

WEB RESOURCE:

- 1. www.accountingcoach.com**
- 2. www.accountingstudyguide.com**
- 3. www.futureaccountant.com**
- 4. www.education.svtuition.org**

B.COM INFORMATION SYSTEM OF MANAGEMENT

OBJECT ORIENTED PROGRAMMING USING C + +THEORYANDPRACTICAL

SUBJECT CODE:BS21B

Inst.Hrs:6

YEAR:II

Credits:4

SEMESTER:III

CourseObjectives

- **Toexposethestudentsto basicsofObjectOrientedProgrammingconcepts.**
- **Todeveloptheprogrammingskillsusingobjectorientedconcepts.**
- **AbletoapplytheOOPsconceptsinreallife problems.**

UNIT I: Principles of object oriented programming, object-oriented programmingparadigm. Applications of OOPs. OOPs concepts – OOPs Languages. Models:-ClassModel-StateModelandInteractionModel.

UNITII:IntroductiontoC++-Tokens,Keywords-Identifiers-Variables-Operators-Manipulators-Expressions-ControlStructures.

UNIT III: Functions - Main Function - Function Prototyping - Inline Functions - Friendand Virtual Functions-Parameters Passing in Functions-Values Return byFunctions,fileconcepts.

UNITIV:ClassesandObjects;ConstructorsandDestructors;andOperatorOverloadingandTypeConversions-TypeofConstructors-Functionoverloading.

UNITV:Inheritance:SingleInheritance-MultilevelInheritance-MultipleInheritance - Hierarchical Inheritance - Hybrid Inheritance. Virtual FunctionsandPolymorphism;ManagingConsoleI/Ooperations.

RECOMMENDED BOOKS



1. **R.S.Bichkar–ProgrammingwithC--UniversityPress,Hyderabad**
2. **K.SasiKalaRani-ProgramminginC-VijayNicoleImprintPrivateLimited,Chennai**

ReferenceBooks:

1. **E.Balagurusamy, Object Oriented Programming with C++, Tata McGraw-Hill Publishing Company Ltd, 6th edition 2013.**
H.Schildt. C++ the Complete Reference. TMH. 1998.



C++PRACTICALS

- 1. Simple programs like Area of a circle and square and Temperature conversion, to revise C++ fundamentals**
- 2. Constructor and constructor overloading**
- 3. Friend function**
- 4. Inline Function**
- 5. Function and Function prototyping**
- 6. Function overloading**
- 7. Operator overloading**
- 8. Inheritance, multiple inheritances**
- 9. Virtual Functions**
- 10. File program**

CORE-II:INTERNET-OF-THINGS

SUBJECT CODE : BS21B

**Inst.Hrs:6
Credits:4**

**YEAR:I
SEMESTER:IV**

To introduce the basics of Internet of Things.

Learning Outcomes

At the end of this course the students will be able to

- **Understand the Internet's underlying architecture.**
- **Communicate through internet**
- **Use basic internet tools.**
- **Use internet for getting information.**
- **Understand the security aspects of internet.**

Unit I – Introduction to Internet: Definition of Internet – An internet time line – Send data across the internet through computer networks – Linking network with internet – Working principles of TCP/IP – Internet's software structure: Client/Server architecture – Domain name system – IP address – Routers.

Unit II - Connecting to the Internet: Connecting computers to the internet - Modems – Internet enabled TVs – Wi-fi – Satellite connections – Bluetooth – Hotspots – Communicating on the Internet: Emails – Email software – Mailing list – Case study: Blackberries Email – Spam folder – Chat and Instant messaging in internet.

Unit III - World Wide Web: Introduction to WWW - Basics about Web pages and its organization – Constructing websites –



Working principles of web browsers – Basics of HTML – DHTML – XML – Hyperlinks – Structure of URLs – Forms – Web servers – Database access through web pages – Mapsites.

Unit IV- Internet Tools: Telnet – FTP – Agents on the Internet – ActiveX and Java scripts – CGI scripting – Multimedia on the Internet: Audio streaming – RealPlayer – MP3 files – Podcasting – Virtual reality using VRML – Animations on Web – Online shopping – Virtual Private Networks (VPNs).

Unit V – Protection on Internet: Firewalls: Corporate and Personal – Proxy Servers – Hacking – Email Viruses – Protection on wireless networks – Worms – Cookies – Spyware and Phishing – Introduction to Cryptography: Working principles – Digital Signatures.

Text Book:

How the Internet Works, Preston Gralla, Pearson Education, Eighth Edition, 2006.

Reference Books:

1. **Internet for Everyone, Alexis Leon, S. Chand (G/L) & Company Ltd; Second Edition 2012.**

Web References:

1. <https://fcit.usf.edu/internet/chap1/chap1.htm>
2. <https://www.coursera.org/learn/raspberry-pi-platform>
3. https://www.tutorialspoint.com/internet_of_things/index.htm

JAVA PROGRAMMING - THEORY & PRACTICAL

SUBJECT CODE : BS221

Course Objectives

- To learn the basics and advanced concepts of Java programming.
- To learn the basics of user interfaces components using Java.
- To apply and develop the real time applications using Java programming.

UNIT – I

Introduction to Java-Features of Java-Basic Concepts of Object Oriented Programming-Java Tokens-Java Statements-Constants-Variables-Data Types- Type Casting-Operators-Expressions-Control Statements: Branching and Looping Statements

UNIT-II

Classes, Objects and Methods-Constructors-Methods Overloading-Inheritance-Overriding Methods-Finalizer and Abstract Methods-Visibility Control –Arrays, Strings and Vectors-String Buffer Class

UNIT – III

Interfaces-Packages-Creating Packages-Accessing a Package-Multithreaded Programming-Creating Threads- Stopping and Blocking a Thread-Life Cycle of a Thread-Using Thread Methods-Thread Priority

UNIT – IV

Managing Errors and Exceptions-Syntax of Exception Handling Code-Using Finally Statement-Throwing Our Own Exceptions-Applet Programming-Applet Life Cycle-Graphics Programming

UNIT – V

Managing Input /Output Files: Concept of Streams-Stream Classes-Byte Stream Classes-Character Stream Classes – Using Streams-Using the File Class-Creation of Files-Random Access Files-Other Stream Classes

RECOMMENDED BOOKS

1. Sagayaraj , Denis, Karthik, Gajalakshmi – JAVA Programming - University Press , Hyderabad



Reference Books

1. E. Balagurusamy, 2004, **Programming with JAVA**, 2nd Edition, Tata McGraw-Hill Publishing Co.Ltd
2. Muthu C, **Programming with Java**, Vijay Nicole Imprints, Chennai
3. Cay S. Horstmann, Gray Cornell. *Core java 2 Volume I. Fundamentals*, 5th Edn. PHI, 2000.
4. P. Naughton and H. Schildt. *Java2 (The Complete Reference)*. Third Edition, TMH 1999.
5. K. Arnold and J. Gosling. *The Java Programming Language*. Second Edition, Addison Wesley, 1996.

PYTHON PROGRAMMING THEORY AND PRACTICAL

SUBJECT CODE: BS24D

Course Objectives

- To introduce the basic features of Python programming and impart skills in an industry standard programming language
- Understand fundamental programming concepts of Python programming and its Libraries
- Create advanced programming features in Python to solve industry standard problems

UNIT-I

Computer systems – Python Programming Language Computational Thinking – Python Data Types: Expressions, Operator, Variables, and Assignments – Strings – Lists – Objects & Classes
– Python standard library

UNIT- II

Imperative programming: Python modules – Built-in function: print() function – eval() function – user-defined function & assignments – parameter passing.

UNIT- III

Text Data, Files & Exceptions: Strings, revisited – formatted output – files – errors & Exceptions
– Execution control Structures: decision control & the IF statement

UNIT-IV

For LOOP & Iteration Patterns – two-dimensional list- while loop – more loop patterns – additional iteration control statements – Container and Randomness: Dictionaries – other built-in container types – character encodings & strings – module random.

UNIT-V

Namespaces – encapsulation in functions – global vs local namespaces – exceptional flow control
– modules as namespaces.

RECOMMENDED BOOKS

1. Michael Dawson – Python Programming for The Absolute Beginner – Cengage, New Delhi
2. Kenneth A. Lambert – Fundamentals of Python First Programs – Cengage, New Delhi
3. Ch Satyanarayana, MRadhika Mani, BN Jagadesh – Python Programming – Cengage, New Delhi

Reference Books



1.

Ljubomir Periodic, “Introduction to Computing Using Python: An Application Development Focus”, John Wiley & Sons, 2012

2. **Shymala Devi, Python Programming, Vijay Nicole Imprints, Chennai**
3. **Sheetal Taneja & Naveen kumar, Python Programming a Modular approach – A Modular approach with Graphics, Database, Mobile and Web applications, Pearson, 2017.**
4. **Martin C. Brown, Python: The Complete Reference, Osborne/McHraw Hill, 2001.**
5. **Wesley J. Chun, “Core Python Programming”, Pearson Education, Second Edition, 2007.**

WEB REFERENCES

- **NPTEL & MOOC courses titled Python programming**
- **http://spoken-tutorial.org/tutorial-search/?search_foss=Python&search_language=English**
- **<http://docs.python.org/3/tutorial/index.html>**
- **<http://interactivepython.org/courselib/static/pythonds>**

PYTHONPROGRAMMINGPRACTICALS

Objectives:

- Toimplementthepythonprogrammingfeaturesinpracticalapplications.
- Towrite,test,anddebugsimplePythonprograms.
- ToimplementPythonprogramswithconditionalsandloops.
- UsefunctionsforstructuringPythonprograms.
- RepresentcompounddatausingPythonlists,tuples,dictionariesandmodules.

LISTOFEXERCISES:

1. Program to convert the given temperature from Fahrenheit to Celsiusand viceversadependinguponuser'schoice.
2. Program to calculate total marks, percentage and grade of a student. Marksobtained in each of the five subjects are to be input by user. Assign gradesaccording to the following criteria:Grade A: Percentage ≥ 80 GradeB:Percentage ≥ 70 and < 80 GradeC:Percentage ≥ 60 and < 70 Grade D:Percentage ≥ 40 and < 60 GradeE:Percentage < 40
3. Program,usinguser-definedfunctiontofindtheareaofrectangle,square,circleandtrianglebyaccepti ngsuitableinputparametersfromuser.
4. Programtodisplaythefirstnterms ofFibonacciseries.
5. Programtofind factorialofthegivennumber.
6. WriteaPythonprogramtocountthenumberofevenandoddnumbersfromNnumbe rs.
7. Python function thataccepts a string and calculate thenumberof uppercaselettersandlowercaseletters.
8. Pythonprogramtoreverseagivenstringandcheckwhetherthegivestringpali ndromeornot.
9. Write aprogramtofindsumofallitemsinadictionary.
10. WriteaPythonprogramtoconstructthefollowingpattern,usinganest edloop122

333

4444

55555

666666

7777777

88888888

999999999

11. Simpleanalysislisting

CORE-VII: BANKING THEORY LAW AND PRACTICE

SUBJECT CODE: BS221

Objectives:

- 1. To facilitate the understanding of the origin and the growth of the Indian Banking System**
- 2. To understand the modern day Developments in Indian Banking Sector.**

OutComes:

- After completion of this subject students understand the growth of Indian Banking Systems and their Modern Day Development.**

UNIT-I : Introduction to Banking

History of Banking- Components of Indian banking -Indian Banking System-Phases of development-Banking structure in India-Payment banks and small banks-Commercial Banking-Definition-Classification of banks. Banking System- Universal banking- Commercial Banking-functions-Role of Banks in Economic Development. Central Banking-Definition –Need-Principles- Central Banking Vs Commercial banking- Functions of Central bank.

UNIT-II: RBI

Establishment-objective-Legal framework-Functions-SBI-Origin and History- Establishment-Indian subsidiaries-Foreign subsidiaries-Non-Banking-Subsidiaries- Personal banking-International banking-Trade Financing-Correspondent banking.Co-operative banks-Meaning and definition-Features-Co-operative banks vs Commercial banks-Structure.-NBFC-Role of NBFC- RBI Regulations-Financial sector reforms- Sukhmoy committee 1985-Narasimham committee I and II-Prudential norms: capital adequacy norms-classification of assets and provisioning.

UNIT-III: E-Banking

Meaning-Services-e-bankingandFinancialservices-Initiatives-Opportunities-Internet banking-Meaning-InternetbankingVsTraditionalbanking-Services-Drawbacks-Frauds in Internet banking. Mobile banking–Anywhere Banking-Any Time Banking- Electronic MobileWallets. ATM-Evolution -Concept-Features - Types-. Electronicmoney-Meaning-Categories-Meritsofe-money-ElectronicFunds Transfer (EFT)system - Meaning- Steps–Benefits-Monetary policies- final sector reforms- sakhmoychakrevarthycommittee 1985- Narasiman Committee I & II- prudential norms capital adequacy norms- classification of assets & provisionary meaning- Structure of Interest rates (short and long term)-impacts on saving and borrowings.

UNIT IV: Bank Account



Opening – Types of Accounts-FDR-Steps in opening Account-Saving vs Current Account- ‘Donatio Mortis Causa’ - Passbook-Bank Customer Relationship-Special Types of currents-KYC norms. Bank Lending –Lending Sources-Bank Lending Principles-Forms of lending-Loan evaluation process-securities of lending-Factors influencing bank lending – Negotiable Instruments –Meaning –Characteristics-Types. Crossing –Definition –Objectives-Crossing and negotiability-Consequences of Crossing.

UNIT-V: Endorsement

Meaning-Components-Kinds of Endorsements-Cheques payable to fictitious person-Endorsement by legal representative –Negotiation bank-effect of endorsement-Rules regarding endorsement.Paying banker-Banker’s duty-Dishonoring of Cheques-Dischargeof paying banks-Payments of a crossed cheque payment. Collecting bankers-Statutory protection under section 85-Refusal of cheques Payment. Collecting Banker-Statutory protection under section 131- Collecting bankers’ duty –RBI instruction – Paying Banker Vs Collecting Banker- Customer grievances-Grievance redressal – Banking Ombudsman.

TEXT BOOKS

- 1. Michael W. Brandi – Money, Banking, Financial Markets and Institutions –Cengage , New Delhi**
- 2. Gurusamy S, Banking Theory : Law and Practice, Vijay Nicole Publication, 2015, Chennai**

SUGGESTED READINGS

- 1. Clifford Gomez, Banking and finance, Theory, Law and practice, Jain Book Agency, 2010 Mumbai**
- 2. Gupta, R K Banking Law and Practice, Jain Book Agency, 2001, New Delhi.**
- 3. Sundaram and Varshney, Banking Theory Law and Practice, Sultan Chand Co, 2010, New Delhi.**
- 4. Maheswari, S.N. Banking Theory Law and Practice, Kalyani Publications, 2011, Mumbai.**
- 5. Santhanam.B, Banking Theory Law and Practice, Margam Publications.**
- 6. Nirmala Prasad, Banking and Financial Services, Himalaya Publications.**

E-RESOURCES

- www.lawcommissionofindia.nic.in
- www.rbi.org
- www.bankingombudsman.org

**BSW
CORE-XII: FIELD WORK – V**

SUBJECTCODE: AW251

CONCURRENT FIELD WORK

Students are expected to have hands-on practice experience and will be required to work directly with individuals, groups and communities in the field, through agencies or through field action projects of the departments. They should be able to acquire necessary skills and practical knowledge in the direct practice of Social Work. The broad aim of Field Work is to provide opportunities for students to apply the knowledge learnt in the classroom situations and to plan, implement and evaluate these experiences while working with residents in an institution. These will be in keeping with the placement agency's philosophy, policy and goals and use of guided supervision.

OBJECTIVES OF FIELD WORK

- To identify 3 cases and draw up a face sheet and case analysis
- To execute simple referrals
- To identify groups in the community and conduct group work with one group
- To organise and conduct a programme based on the needs assessed
- To develop skills in resource mobilization
- To acquire the skills in report writing

LEARNING OUTCOMES:

Student will:

- Ability to plan independently for programmes
- Identify resources and funding options (ex. Medical camps. Awareness programmes)
- Ability to produce reports and monographs

METHODS OF ASSESSMENT

1. In relation to tasks achieved and personal growth
2. An internal viva voce will be conducted.

ELECTIVE-I(B): HUMAN RIGHTS AND SOCIAL JUSTICE

SUBJECT CODE:AW26C

CREDITS: 3

TOTAL TEACHING HOURS: 60

Objectives

- **Develop sensitivity to the problems and concerns in Indian Society**
- **Develop ability for analysis of Indian society and identify the roots of the problems and also the structures that sustain them.**
- **To understand Human Rights with specific reference to special groups.**

LEARNING OUTCOMES:

Student will:

- **Develop sensitivity on rights of self and others**
- **Promote the rights of marginalized groups**
- **Use of methods and strategies to safeguard human rights**

Unit I (12 hours)

Concept of human rights and classification of human rights, Importance of Human Rights. Human rights and social justice concerns in Indian society: inequality, injustice, oppression, social economic, political structures of Indian society, and their effect on social development and ecology. Globalization and its impact on human rights.

Unit II (12 hours)

Human rights concern – the U.N. Declarations of Human Rights. Introduction to the Conventions – Civil and Political and Economic, Social and Cultural.

Unit III (12 hours)

Constitution of India

The Preamble, Fundamental Rights and duties under the Indian Constitution, Directive principles of State Policy, Law and social justice in India, a critical assessment.

Unit IV (12 hours)

Justice Issues and Human Rights with Specific Reference to Women, Children, Dalits, Environment, Unorganised Labourers, Disabled and Tribes.

Unit V (12 hours)

Role of Social Work in Relation to Human Rights. Mechanism of securing social justice: First Information Report, Public Interest Litigation, Legal Aid, Lok Adalats, role of organizations working in the field of Human Rights - advocacy, role of social action.



BOOKS FOR REFERENCE

- 1. Agarwal, H.O, International Law and Human Rights, Central law Publications, 2002.**
- 2. Alok Chakravati, Protecting Human Rights, Reference Press, New Delhi, 2003**
- 3. Bajwa G.S, Human Rights in India, Anmol Publishers, 1995**
- 4. Gupta D. N, Human Rights Acts, Statutes and Constitutional Provisions, Kalpaz Publications, 2003**
- 5. Jayashree P.M, Dalit Human Rights Violation, Vol.1, National Campaign, 2000**
- 6. Khanna, H.R, The Judicial System, 11 P.A, New Delhi, 1980**
- 7. Ramphal, Perspectives in Human Rights, Rawat Publications, 2001**
- 8. Syed,M. H, Human Rights-The New Era,Kilaso Books, 2003**



CORE-XV: FIELD WORK – VI

SUBJECT CODE:AW261

CREDITS: 5

CONCURRENT FIELD WORK

Students are expected to have hands-on practice experience and will be required to work directly with individuals, groups and communities in the field, through agencies or through field action projects of the departments. They should be able to acquire necessary skills and practical knowledge in the direct practice of Social Work. Students will learn to mobilize resources of the government, local bodies and community as part of their learning.

OBJECTIVES OF FIELD WORK

- To acquire the skills in resource mobilisation
- To acquire the skills in report writing
- To acquire the basic skills of administration
- To develop skills working with different client systems using the integrated approach in practice – integrating methods

LEARNING OUTCOMES:

Student will:

- Understand varied approaches of the placement NGOs
- Identify special groups in communities
- Be proficient in analytical writing
- Critical analysis of human problems
- Comprehend the holistic approach in working with people.

METHODS OF ASSESSMENT

1. In relation to tasks achieved and personal growth and change
2. An external viva voce will be conducted.

A comprehensive viva voce of all the six semesters fieldwork learning will be conducted

CORE–XIII: FIELDS OF SOCIAL WORK

SUBJECT CODE: AW26A

CREDITS: 4

TOTAL TEACHING HOURS: 60

Objectives

- To develop an understanding regarding the macro level of practice in Social Work
- To develop skills in students to envisage, plan and work out strategies in working with different macro level interventions
- To enable students understand the applicability of integrating methods and fields of social work

LEARNING OUTCOMES:

Student will:

- Familiarize with challenges of practice in the various fields
- Awareness on varied client groups and their requirements
- Build competency in addressing diverse and special problems

Unit I

Social Work with Family, Children, Adolescents and Youth (12 hrs)

Intervention with Family and Children – Indian Families, Prospects and Problems, Problems of Children, Children in Special Circumstances, Emerging Issues in the Areas of Family and Child Welfare, Services in the Field of Family and Child Welfare, Role of Social Worker; Intervention with Adolescents and Youth – Definition, Demographic Profile, Needs, Specific Problems and Services for Youth, School Social Work, Role of Social Worker, National Policy on Youth

Unit II

Social Work with the Senior Citizens (12 hrs)

Definition of the Aged, Changes – Physiological, Economic and Social, Common Problems of the Elderly, Services for the Senior Citizens. Legislation and Policies for the Senior Citizens

Unit III

Social Work with Rural and Urban Communities (12 hrs)

Definition of Rural and Urban Community and Rural and Urban Community Development, Emerging Trends in Urban and Rural Development. Current Issues in Urban Areas, Different Services in the Field of Urban and Rural Community Development, Role of Social Worker

Unit IV

Social Work with the Displaced (12 hrs.)

Meaning, Causes, Problems of Displacement, Social, Economic, Psychological, Cultural, Rehabilitation, Problems of Rehabilitation – Awareness,

BOOKS FOR REFERENCE

- 1. Brandon, M., Schofield, G., and Trinder, L. Social Work With Children. New York: Palgrave, 1998.**
- 2. Colton, P., Sanders, M., R., and Williams, M. An Introduction to working with Children – A Guide for Social Workers. New York: Palgrave Macmillan, 2001.**
- 3. Devi, Laxmi. Child and Family Welfare- Institute for sustainable development., New Delhi: Anmol.1998**
- 4. Johri, P., K. Social Work for Community Development. New Delhi: Amol, 2005.**
- 5. Kaila, H., L. Women, Work And Family. New Delhi: Rawat, 2005.**
- 6. Liebig, S., P., Rajan, I., S. An Aging India- Perspectives, Prospects and Policies. Jaipur: Rawat, 2005.**
- 7. Ledwith, M. Community Development. Jaipur: Rawat, 2005.**
- 8. Katare, M., P. Social Work and Rural Development. New Delhi: Arise, 2006.**
- 9. Kumar, S. Methods for Community Participation – A Complete Guide for Practitioners. New Delhi: Vistaar, 2002.**
- 10. Mohan, S. Urban Development New Localism. New Delhi: Rawat, 2005.**
- 11. Nagpaul, H. Social Work in Urban India. Jaipur: Rawat, 2005.**
- 12. Phillips, I., Ray, Mo, Marshall, M. Social Work With Older People. New York: Palgrave Macmillan, 2006.**
- 13. Radhakrishna, R., and Ray, Shovan. Handbook of Poverty in India- Perspectives, Policies and Programmes. New Delhi: Oxford University Press, 2006.**
- 14. Sandhya, N. Indian Society. New Delhi: Vrinda Publications (P) Ltd., 2005.**
- 15. Sharma, Ram Nath and Sharma, Rachana. Child Psychology. New Delhi: Atlantic, 2006.**
- 16. Twelvetrees, A. Community Work. New York: Palgrave, 200**

CORE-XIV: WOMEN DEVELOPMENT- ISSUES AND CONCERNS
SUBJECT CODE:AW26B

CREDITS: 4

TOTAL TEACHING

HOURS: 60

Objectives

- To gain an understanding of the basic concepts of women and development of the status of women in society
- To enable students, understand the issues and concerns of women development
- To understand the various strategies and approaches to development specifically for women

LEARNING OUTCOMES:

Student will:

- Understand concepts of gender in society
- Understand approaches to development specific for women
- Apply knowledge, attitude and skills in social work practice for women

Unit I Introduction – Gender and Development

Gender and Development – Meaning and Definition, Women in the Development Process: Need and Importance, Developmental Rights of Women, Significance of Women’s Development; Positive and Negative Indices of Women Development.

Unit II Basic Concepts in Understanding Women’s Development

Sex and Gender, Gender Stereotypes, Gender Relations, Gender Division of Labour, Gender Roles and Responsibilities, Gender Discrimination, Equity and Equality, Gender Mainstreaming, Concept of Patriarchy, Feminism.

Unit III Issues and Concerns related to Women

Socialization of the Girl Child, Dowry, Widowhood, Foeticide, Rape, Sexual Abuse, Domestic Violence, and Problems faced by Female Headed Households, Feminization of Poverty, women and health, maternal health, Reproductive health, Women in Media, Rights of the Girl Child, Problems of Women at Work- Women’s Triple Role, Invisibility of Women’s Work, Glass Ceiling, Women and Self- Employment, Self- Help Groups Micro-Enterprises and Women’s Development.

Unit IV

Legislations Related to Women

Legal Rights of Women with Reference to Inheritance, Adoption, Education, Employment, Health, Marriage, Divorce and Maintenance, CEDAW – Convention on Elimination of All Forms of Discrimination Against Women and Girls.



Unit V

Empowerment Strategies for Women

Empowerment: Definition and Meaning, Types and Levels of Women's Empowerment, Needs of Women – Practical and Strategic Needs of Women (PGN/SGN), National Policy for Empowerment of Women 2001, Government Policies and Programmes, Social Work and Women's Empowerment

BOOKS FOR REFERENCE

- 1. Devandar, Kiran. Status and Positions of Women in India. New Delhi: Shakti Books, 1985.**
- 2. Kanhere U.S. Women and Socialisation. New Delhi: Mittal, 1980.**
- 3. Kaushik, Susheela. Women's Oppression – Patterns and Perspectives. New Delhi: Shakti Books, 1985.**
- 4. Kidwai M.H. Women under different Social and Religious Laws. New Delhi: Seema, 1979.**
- 5. Marilee Karl. Women and Empowerment - Participation and Decision Making. London: Zed, 1995.**
- 6. Marilyn Carr, Martha Chen, RenanaThabvala. Speaking Out: Women's Economic Empowerment in South Asia.London: IT Publications on behalf of Aga Khan Foundation Canada and UNIFEM, 1996.**
- 7. Neera Desai and MaitreyiKrishnaraj. Women and Society in India. New Delhi: Ajanta, 1987.**

SOCIAL WORK RESEARCH PROJECT AND STATISTICS

SUBJECT CODE:AW25C

CREDITS:4

Objectives:

- **To train the student to design a research study.**
- **To enable students to plan and execute a field based study**
- **To equip the students with skills to prepare and compile a project report.**

LEARNING OUTCOMES:

Student will:

- **Demonstrate knowledge and skills in conducting a small research study**
- **Demonstrates skills in punctuality and time bound activities**
- **Apply theoretical knowledge in the field.**

RESEARCH REPORT FORMAT

Title	Page
Acknowledgement	
Certificate Declaration	
Table of Contents List of Tables List of Charts	

Chapter I - Introduction

Chapter II –

Review of literature Chapter III-

Research Methodology

Chapter IV – Data Analysis and

Interpretation Chapter V-

Findings, Suggestions and Conclusion

Appendix

Bibliography

Tools for data collection Other important documents

RESEARCH GUIDELINES

The research report should be within 100 pages.

The report should be typed in “TIMES NEW ROMAN” font, Size 12, printed A4 size sheets to be used

Projects should be hardbound, and Cover/sleeves should be in uniform for all students (as prescribed) by the Department.

ELECTIVE-II(A): HEALTH CARE

SUBJECT CODE:AW46B

CREDITS: 3

TOTAL TEACHING HOURS: 60

Objectives

- To understand the concept and dimensions of health – physical, social, environmental and mental health.
- To give the student an insight into etiology, symptoms, treatment and prevention of communicable disease, non-communicable diseases, deficiency diseases and physical handicaps.
- To appreciate indigenous systems and their influence on holistic health

LEARNING OUTCOMES:

Student will:

- Apply knowledge of health concepts and diseases in the community
- Demonstrate knowledge on food and health food practices
- Link communities with health care services

Unit I (12 hrs)

Health Concepts

Health - Definition, Hygiene – importance of personal hygiene, Illness, Disease and Handicap, changing concepts of health, Dimensions - Physical, Social, Mental, Spiritual and Positive Health, determinants and philosophy of health.

Factors affecting health - Personal hygiene and health – importance, problems associated with lack of personal hygiene – eyes, nose, teeth, mouth, gums, nail, skin, ear, hair, clothing sunlight posture, sleep and personal sanitary habits, poverty, ignorance, superstition and beliefs, Sanitation – meaning and importance.

Unit II (12 hrs)

Diseases

Clinical aspects of major communicable diseases – leprosy, TB, STD, AIDS, Poliomyelitis, malaria, cholera, typhoid and diarrhoeal diseases.

Clinical aspects of major non-communicable diseases – cancer, diabetes, asthma, hypertension, cardiac disorders.



Unit III (12 hrs)

Nutrition

Malnutrition, Clinical aspects of deficiency diseases.

Environmental

Water, air, vector control, housing, noise, radiation, waste disposal.

Mental health

Mental Health - Definition, History, Characteristics of a Mentally Healthy Person, Types of Mental Illness – Definition, Meaning, Types, Causes, Symptoms, Treatment and Prevention - Major and Minor Mental Illnesses – Schizophrenia, MDP, Anxiety, Phobia, OCD, Hysteria)

Psycho-Physiological Disorders - Definition, Meaning, Types, Causes, Symptoms, Treatment and Prevention – Respiratory Disorders, Digestive Disorders



Unit IV (12 hrs)

Factors contributing to health

Food hygiene, balanced diet, Indigenous system of health – Siddha, Unani, Ayurveda, Yoga, Naturopathy, Relaxation Therapy, Meditation, Exercise.

Unit V

Health Care Services (12 hrs.)

Voluntary Health Agencies in India – Role of - Indian Red Cross Society, Indian Council for Child Welfare, Tuberculosis Association in India, Central Social Welfare Board, Family Planning Association of India

Health Programmes in India – Overview of National Malaria Eradication Programme, Diarrhoeal Diseases Control Programme, National Filariasis Control Programme, National Tuberculosis Control Programme, STD Control Programme

Role of International Organisations – WHO, UNICEF, FAO

BOOKS FOR REFERENCE

- 1. Abraham, Verghese. Introduction to Psychiatry. BI Pub, 1996.**
- 2. Bajpee. Textbook of Preventive and Social Medicine. New Delhi: Jaypee Brothers Medical Publishers, 1995.**
- 3. Chauhan, S., S. Mental Hygiene – A Science of Adjustment. New Delhi, 2009.**
- 4. Mangal, S., K. Introduction to Abnormal Psychology. New Delhi: Sterling Publishers, 2004.**
- 5. Park, J., E., and Park, K, Textbook of Preventive and Social Medicine. Jabalpur: Banarsidas, 2011.**
- 6. Park, K. Textbook of Prevention and Social Medicine. Jebelpur: Banaridas, 2011.**

CORE-I: SOCIAL WORK PROFESSION - HISTORY AND PHILOSOPHY

SUBCODE:AW211

OBJECTIVES OF THE COURSE

- To enable students to appreciate the history, philosophy and the emergence of Social Work as a profession.
- To facilitate comprehension of underlying ideologies, theories and approaches
- To develop an understanding of the methods and fields of Social Work practice.

COURSE LEARNING OUTCOMES:

- Gain knowledge of the history and growth of Social Work as a Profession
- Demonstrate and apply knowledge on ideologies, theories and approaches
- Practice the values, beliefs and principles of Social Work Profession

UNIT I

Social Work Profession

Social Work Profession: Meaning and Definition of Social Work as a Profession, Origin and Growth of Social Work Profession in India, Goals and Functions, Principles and Scope of Social Work Profession, Beliefs and Values, Code of Ethics (NASW)

UNIT II

Historical Development of Social Work Profession

Overview of Historical Development of Social Work in UK and USA; Historical Development of Social Work in India - Social Service and Traditional Social Institutions; Contribution of Social Reformers – Raja Ram Mohan Roy, Sarojini Naidu, Periyar, Gandhi, Contributions of Religious thought to Social Work, Contributions of Christian Missionaries to social development, Role of INGOs, NGOs and civil society organisations.

UNIT III

Introduction to Social Work and Social Work Theories

Social Service, Social Security, Social Change, Social Welfare, Social Policy, Social Planning, Social Action, Social Development, Empowerment; Social Work Theory- Conceptual understanding of Theory, Importance of Theory in Social Work, Major Theories in Social Work - Problem Solving Model, Behaviour Modification Model, and Crisis Intervention Model.

UNIT IV

Fields of Social Work Practice



Social Work in Communities – rural, urban and tribal, Social Work in Family settings – Family social work, Social work with vulnerable groups – differently abled, Social work and Addictions, Gender and Social Work, Social work with children, youth and elderly, Social Work in Health Settings, Mental Health, Legal and Correctional Settings, Rehabilitation, School Social Work, Industrial Social Work, Environmental Social Work.

UNIT V

Social Work Education

Social Work Education in India, Importance of Field Work and Supervision in Social Work Education, Professional Associations - International Federation of Social Workers (IFSW), The National Association of Social Workers (NASW), National Association of Professional Social Workers in India (NAPSWI), and the Professional Social Worker's Association (PSWA)

BOOKS FOR REFERENCE

- 1. Adams, R. Social Work and Empowerment. New York: Palgrave Macmillan, 2003.**
- 2. Alston, M. and Mckinnon, J. Social Work – Fields of Practice. Australia: Oxford U P, 2003.**
- 3. Banks, S. Ethics and Values in Social Work. New York: Palgrave Macmillan, 2001.**
- 4. Black, K., J. Development in Theory and Practice- Paradigms and Paradoxes. Jaipur: Rawat, 2007.**
- 5. Bogo, M. Social Work Practice- Concepts, Processes and Interviewing. New York: Columbia University Press, 2006.**
- 6. Clark, L., C. Social Work Ethics – Politics, Principles and Practice. New York: Palgrave Macmillan, 2001.**
- 7. Desai, M. Ideologies and Social Work- Historical and Contemporary Analyses. Jaipur: Rawat, 2006.**
- 8. Doel, M. and Shardlow, M., S. Modern Social Work Practice- Teaching and Learning in Practice Settings. London: Ashgate, 2005.**
- 9. Dominelli, L. Social Work-Theory and Practice for a Changing Profession. New Delhi: Rawat, 2005.**
- 10. Joshi, S., C. Handbook of Social Work. New Delhi: Akansha, 2004.**
- 11. Payne, M. Modern Social Work Theory. New York: Palgrave MacMilan, 2005.**
- 12. Payne, M. The Origins of Social Work - Continuity and Change. New York: Palgrave Macmillan, 2005**
- 13. Subhedar, T. S. Field Work Training in Social Work. Jaipur: Rawat, 2001.**
- 14. SumitDutta. Social Work and Social Development. New Delhi: Wisdom Press, 2013.**
- 15. Thompson, N. Understanding Social Work- Preparing and Practice. New York: Palgrave Macmillan, 2002.**

CORE-III: SOCIAL WORK PRACTICE WITH INDIVIDUALS (SOCIAL CASE WORK)

SUBCODE:AW221

OBJECTIVES OF THE COURSE

- To initiate an understanding of the evolution of the methods of Social Work and Case Work as the primary method in Social Work.
- To equip students with skills in Case Work practice.
- To develop the necessary skills to apply Case work in working with individuals

LEARNING OUTCOMES:

Student will:

- Understand the method of working with individuals as a primary method of Social Work
- Comprehend the various models and approaches of working with individuals
- Display skill sets appropriate in working with individuals

Unit I

Introduction to working with individuals

Introduction to the methods of Social Work – Definition, Meaning - Case Work, Group Work, Community Organisation, Social Action, Social Work Administration and Social Work Research as practice methods . Integrated Method of Social Work, Shifts in focus of practice – from expert/professional to collaborative partner

Unit II

Social Case Work

Historical Evolution of Case Work - Objectives, Principles, Philosophy, Values, Skills and Techniques of Case Work, Components of Social Case Work – Person, Place, Problem, Process, (4p's) and Case work Relationship.

Unit III

Models of Social Case Work

Meaning of Theory and Model, Psychosocial Model, Client Centered Model, Life Model perspective in Social Case Work.

Unit IV

The Helping Process

Phase I- Psychosocial Study, Psychosocial Assessment

Phase II- Intervention Plan and Goal Setting, Intervention

Phase III- Termination, Evaluation and Follow up

Unit V

Recording and Supervision in Social Case Work



**Recording in Social Case Work – Definition, Types, Need and Importance of Recording
Supervision in Case Work – Meaning, Need and Importance
Role of a Social Case Worker in different settings – Medical, Child Guidance Clinics,
Correctional Settings, Family and Child Welfare Settings and Geriatric Care.**

BOOKS FOR REFERENCE

- 1. Bhattacharya, Sanjay. Social Work, An Integrated Approach. New Delhi: Deep & Deep, 2004. DatarSudha, Ruma, Bawikar et al. Skill Training for Social Workers- A Manual. New Delhi:Sage, 2010.**
- 2. Hamilton, Gordon, Theory & Practice of Social Case Work 2nd Edition. Jaipur: Rawat, Indian Reprint, 2013.**
- 3. Hepworth, D.H. & J.A. Larsen. Direct Social Work Practice: Theory and Skills. Dorsey Press, 1993.**
- 4. Hollis, F. Case Work: A Psychosocial Therapy. New York: Randam House, 1964. Mathew, Grace. An Introduction to Social Casework. Mumbai TISS, 1992.**
- 5. Misra, P.D. & Beena Misra. Social Work Profession in India. Lucknow: New Royal Book, 2004.**
- 6. Perlman, Helen Harris, Social Casework, Chicago: The University of Chicago Press, 1957.**
- 7. Pippins, J. Developing Case Work Skills. USA: Sage, 1980.**
- 8. Trevithick, Pamela. Social Work Skills – A Practice Handbook. 2nd Edition. Jaipur: Rawat, 2009.**



CORE-VIII: FIELD WORK - IV

SUBCODE:AW251

CONCURRENT FIELD WORK

Students will be exposed to various GOs/ INGOs who work directly in urban communities. Students will be required to understand the functioning of an organisation (NGO, Institution, Agency) its vision, mission, aims and objectives, policies, nature of work and functioning, community (geographical location of work) and intervention strategies and the resources available in the NGO and Community. This should enable the student to draw up an agency profile and a community profile.

OBJECTIVES OF FIELD WORK

- To understand the vision, mission, aim and objectives, policies, nature of work, functioning of the agency/development organisation working directly for communities
- To identify leadership patterns and community resources
- To draw up a community mapping using participatory techniques
- To critically evaluate an agency/development organisation and its intervention strategies

LEARNING OUTCOMES:

Student will:

- Display skills in observation and communication
- Ability to write analytical reports
- Identify community leadership and resources
- Draw up a community profile.

METHODS OF ASSESSMENT

- 1. In relation to task and personal growth.**
- 2. An internal viva voce will be conducted.**

ECONOMIC AND POLITICAL SYSTEMS AND PROCESSES

CREDITS: 5 TOTAL TEACHING HOURS: 60

Objectives

- Understand the importance of economics and politics for social work.
- Understand the Indian political and economic system and be able to examine problem situations in the field.
- Develop skills in analyzing the political & economic processes in the context of development/under development.
- To know the performance of Five Year Plans in India and to realize the significance of economic & political aspects of planning.

LEARNING OUTCOMES:

Student will:

- Understand the relevance of Economics and Politics in Social Work
- Identify characteristics of developed and developing economies
- Analyse developmental issues from a socio-political and economic perspective

Unit I

Introduction to Economic and Political Systems (12 hrs)

Relationship between economics, politics & social work; Economic concepts for social work: Poverty, unemployment, Rural and Urban Economy, Rural-Urban Gaps, Urbanisation and Industrialisation as economic processes. Concept of Development and Underdevelopment, economic growth. Indicators of Development: Human Development Index, Human Poverty Index, Gender Development Index. Millennium Development Goals (MDG). Sustainable Development Goals (SDGs).

Unit II (12 hrs)

Economic systems: Types of Economy: Capitalists, Socialists and Mixed economy. The Indian economic system, Concept of welfare in relation to economic development; Economic planning under the constitution, Five Year Plans- an overview, poverty and under development in the third world countries with special reference to India.

Unit III (12 hrs)

Political concepts for Social Work: Politics, State, Power and Authority, Government, Nation and Nationality; Political Socializations, Participation and Culture; Political Parties; Political system: Definition, types of political system based on power and authority; Centre and State relations in Indian Federation. Officials of the Political System - President, Prime Minister, Council of Ministers – Cabinet Ministers of State – Governor, Chief Minister, Comptroller and Auditor General of India

Unit IV (12 hrs)

The Indian Constitution: features, fundamental rights and Duties, Directive Principles of state policy. Demographic governance, rural and urban, administrative patterns, role of civil societies in promoting development.

Unit V (12 hrs)



Thiruthangal Nadar College
Knowledge is Power

NAAC CYCLE III – AQAR

1.3.2 & 1.3.3 Experiential Learning & Students Internship

1.3 Curriculum Enrichment

Year: 2022-2023

Overview of problems in the economic and political system of India – systemic / structural and functional. Analysis of economic and political policies.



BOOKS FOR REFERENCE

- 1. Agarwal, A.N. Indian Economy: Nature, Problem and Progress. New Delhi: VikasNiraj**
- 2. Prakash, 1994**
- 3. Bhat, Anil. Development and Social Justice - Micro Action by Weaker Section. New Delhi: Sage Publications, 1989.**
- 4. Bhattacharya, S. Social Work Administration and Development. Jaipur: Rawat, 2006.**
- 5. Dahiwala, S. M. Understanding Indian Society - The Non-Brahmanic Perspective. Jaipur: Rawat Publications, 2006.**
- 6. Dutt, Ruddar, Sundharam, K.P. M. Indian Economy. New Delhi: Chand & Company, 2006.**
- 7. Kumar, H. Social Work and Developmental Issues. New Delhi: Aakar Books, 2005.**
- 8. Jogdand, P.G. and Michael. S. M. Globalisation and Social Movements - Struggle for a Humane Society. Jaipur: Rawat Publications,2006.**
- 9. Pant, S.K. Human Development- Concept and Issues in the Context of Globalisation. Jaipur; Rawat, 2006.**
- 10. Papalia, D. Wendkos, S. and Feldman, R.D. Human Development. New Delhi: Tata McGraw - Hill, 2004.**
- 11. Phadke, V. S. and Banerjee, Guha, S. Urbanisation Development and Environment. Jaipur: Rawat, 2007.**
- 12. Radhakrishna, R. and Shovan, Ray. Handbook of Poverty in India - Perspectives, Policies and Programmes. New Delhi: Oxford University Press, 2006.**
- 13. Verma, K. Manish. Development, Displacement and Resettlement. Jaipur: Rawat, 2004**

BSCCOMPUTERSCIENCE

WEB TECHNOLOGY THEORY AND PRACTICALS

SUBJECT CODE:SAE61

Course Objectives

To give knowledge of creating static and dynamic web pages.

UNIT – I

Internet Basic – Introduction to HTML – List – Creating Table – linking document – frames – graphics to HTML Doc- Creating simple static pages.

UNIT – II

Introduction to JavaScript – Advantage of Java script – java script syntax – Data type – variable – array – operator and expression – looping constructor – function – Dialog box

UNIT – III

JavaScript document object model – introduction – object in HTML – event handling – window object – browser object – form object – navigator object – build in object – cookies.

UNIT – IV

ASP.NET: Language Structure – page structure – page event, properties - compiler directives. HTML server controls – Anchor, Tables, Forms - Basic Web server controls – label, textbox, button, image, links, check & radio button, hyperlink.

UNIT – V

Request and Response objects - Working with data – OLEDB connection class, Command class Transaction class, data adaptor class, data set class. Security: Authentication, IP Address, Secure by SSL & Client Certificates.

1. BOOKS FOR STUDY AND REFERENCE:

- 1. I. Bayross, Web Enable Commercial Application Development Using HTML, DHTML, javascript, Perl CGL. BPB Publications, 2000.**
- 2. G. Buczek, ASP.NET Developers Guide, TMH, 2002 3. A.Russell Jones, Mastering Active Server Pages 3, BPB Publications. HTML, JAVA SCRIPT and ASP.NET 1. Creation of a personal web page (with links) 2. Preparation of a bio data 3. Prepare a train time table using row/column span**
- 3. Create an array of 10 elements and display it.**
- 4. Write a program outputs the squares, roots and cubes of integers between 1 and 100**
- 5. Read a string and looks it character by character.**
- 6. Design a Simple calculator.**
- 7. Create a web form for a library application with necessary controls. Note: The practical examination will be conducted by an internal examiner and an external examiner jointly.**



MINI PROJECT

SUBCODE:

OBJECTIVES:

The aim of the mini project is that the student has to understand the real time software development environment. The student should gain a thorough knowledge in the problem, he/she has selected and the language / software, he/she is using. Project planning: B.Sc (Computer Science / Software Application)/BCA Major Project is an involved exercise, which has to be planned well in advance. The topic should be chosen in the beginning of final year itself. Related reading training and discussions of first internal project viva voce should be completed in the first term of final year.

I Selection of the project

work Project work could be of three types. a) Developing solution for real life problem In this case a requirement for developing a computer-based solution already exists and the different stages of system development life cycle is to be implemented successfully. Examples are accounting software for particular organization, computerization of administrative function of an organization, web based commerce etc. b) System Software Project Projects based on system level implementation. An example is a Tamil language editor with spell checker, compiler design. b) Research level project These are projects which involve research and development and may not be as a structured and clear cut as in the above case. Examples are Tamil character recognition, neural net based speech recognizer etc. This type of projects provides more challenging opportunities to students.

II Selection of team

To meet the stated objectives, it is imperative that major project is done through a team effort. Though it would be ideal to select the team members at random and this should be strongly recommended, due to practical consideration students may also be given the choice of forming themselves into teams with three members. A team leader shall be selected. Team shall maintain the minutes of meeting of the team members and ensure that tasks have been assigned to every team member in writing. Team meeting minutes shall form a part of the project report. Even if students are doing project as groups, each one must independently take different modules of the work and must submit the report.

III Selection of Tools No restrictions shall be placed on the students in the choice of platform/tools/languages to be utilized for their project work, though open source is strongly recommended, wherever possible. No value shall be placed on the use of tools in the evaluation of the project.

IV Project management Head of the Department / Principal of the college should publish the list of student's project topic, internal guide and external organization and teams agreed before the end of July. Changes in this list may be permitted for valid reasons and shall be considered favorably by the Head of the department / Principal of the college any time before commencement of the project. Students should submit a fortnightly report of the progress, which could be indication of percentage

of completion of the project work. The students should ideally keep a daily activity book. Team meeting should be documented and same should be submitted at the end of the project work.

V Documentation

Three copies of the project report must be submitted by each student (one for department library, one for the organization where the project is done and one for the student himself/herself). The final outer dimensions of the project report shall be 21cm X 30 cm. The color of the flap cover shall be light blue. Only hard binding should be done. The text of the report should be set in 12 pt, Times New Roman, 1.5 spaced. Headings should be set as follows: CHAPTER HEADINGS 16 pt, Arial, Bold, All caps, Centered. 1. Section Headings 14 pt Bookman old style, Bold, Left adjusted.

1.1 Section Sub-heading 12 pt, Bookman old style. Title of figures tables etc are done in 12 point, Times New Roman, Italics, centered. Content of the Project should be relevant and specify particularly with reference to the work. The report should contain the requirement specification of the work, Analysis, Design, Coding, testing and Implementation strategies done.

- Organizational overview (of the client organization, where applicable)

- Description of the present system
 - Limitations of the present system
 - The Proposed system - Its advantages and features
 - Context diagram of the proposed system
 - Top level DFD of the proposed system with at least one additional level of expansion
 - Program List (Sample code of major functions used)
 - Files or tables (for DBMS projects) list. List of fields or attributes (for DBMS projects) in each file or table.
 - Program – File table that shows the files/tables used by each program and the files are read, written to, updated, queried or reports were produced from them.
 - Screen layouts for each data entry screen.
 - Report formats for each report.

PRACTICAL-II COMPUTER ORGANIZATION LAB

SUBJECT CODE: SE221

I YEAR/II SEM

OBJECTIVES:

To understand the programming features and operations of assembly language programs using 8085 microprocessor kit or Simulator

OUTCOMES:

Implement the arithmetic operations in assembly language programming
Understand the programming logic of 8085 in various aspects

LIST OF EXERCISES:

I: Addition and Subtraction

1. 8-bit addition
2. 16-bit addition
3. 8-bit subtraction
4. BCD subtraction

II: Multiplication and Division

1. 8-bit multiplication
2. BCD multiplication
3. 8-bit division

III: Sorting and Searching

1. Searching for an element in an array.
2. Sorting in ascending order.
3. Finding largest and smallest elements from an array
4. Reversing array elements
5. Block move
6. Sorting in descending order

IV: Code Conversion

1. BCD to Hex and Hex to BCD
2. Binary to ASCII and ASCII to binary
3. ASCII to BCD and BCD to ASCII

V Applications

1. Square of a single byte Hex number
2. Square of a two digit BCD number
3. Square root of a single byte Hex number

Square root of a two digit BCD number

DATA STRUCTURES USING JAVA LAB

SUBJECT CODE: SE231

II YEAR / III SEM

OBJECTIVES:

- To implement linear and non-linear data structures
- To understand the different operations of search trees
- To implement graph traversal algorithm

OUTCOMES:

- Write functions to implement linear and non-linear data structure operations.
- Suggest appropriate linear and non-linear data structure operations for solving

LIST OF EXERCISES:

1. Write a Java program to implement the Stack ADT using a singly linked list.
2. Write a Java program to implement the Queue ADT using a singly linked list.
3. Write a Java program for the implementation of circular Queue.
4. Write a Java program that reads an infix expression, converts it into postfix form.
5. Write a Java program to evaluate the postfix expression (use stack ADT).
6. Write a Java program to insert an element into a binary search tree.
7. Write a Java program to delete an element from a binary search tree.
8. Write a Java program to search for a key element in a binary search tree.
9. Write a Java program for the implementation of BFS for a given graph.
Write a Java program for the implementation of DFS for a given graph.

WEBTECHNOLOGYLAB

SUBJECT CODE: SE241

IIYEAR/IVSEM

OBJECTIVES:

1. The objectives of this course are to have a practical understanding about how to write PHP code to solve problems.
2. Display and insert data using PHP and MySQL.
3. Test, debug, and deploy web pages containing PHP and MySQL.
4. It also aims to introduce a practical session to develop simple applications using PHP and MySQL.

OUTCOMES:

- On the completion of this laboratory course, the students sought to
- Obtain knowledge and develop application programs using Python.
- Create dynamic Web applications such as content management, user registration, and e-commerce using PHP and to understand the ability to post and publish a PHP website.
- Develop a MySQL database and establish connectivity using MySQL.

LIST OF PRACTICALS

1. Write a PHP program which adds up columns and rows of a given table
2. Write a PHP program to compute the sum of first n given prime numbers
3. Write a PHP program to find a valid email address
4. Write a PHP program to convert a number written in words to a digit.
5. Write a PHP script to delay the program execution for the given number of seconds.
6. Write a PHP script, which changes the colour of the first character of a word
7. Write a PHP program to find the multiplication table of a number.
8. Write a PHP program to calculate the factorial of a number.
9. Write a PHP script to read a file, reverse its contents, and write the result back to a new file
10. Write a PHP script to look through the current directory and rename all the files with extension .txt to extension .xtx.
11. Write a PHP script to read the current directory and return a file list sorted by last modification time. (*using filemtime()*)
12. Write a PHP code to create a student marks sheet table. Insert, delete, and modify records.
13. From an XML document (email.xml), write a program to retrieve and print all the email addresses from the document using XML
14. From an XML document (tree.xml), suggest three different ways to retrieve the text value 'John' using the DOM:



Write a program that connects to a MySQL database and retrieves the contents of any one of its tables as an XML file. Use the DOM.

ALLIED PHYSICS-I & II – (PRACTICALS)

SUBJECT CODE:SR3A1

- **Young's Modulus by Non-uniform bending using Pin and Microscope**
- **Young's Modulus by Non-uniform bending using Optic lever–Scale and telescope**
- **Rigidity modulus by Static torsion method.**
- **Rigidity modulus by Torsional oscillations without mass**
- **Surface tension and Interfacial Surface tension–Drop Weight method**
- **Comparison of Viscosities of two liquids–Burette method**
- **Specific heat Capacity of a liquid–Half time correction**
- **Sonometer–Determination of a.c frequency**
- **Newton's rings-Radius of curvature**
- **Air wedge–Thickness of a wire.**
- **Spectrometer–Grating–Wavelength of Mercury lines–Minimum deviation method**
- **Potentiometer–Voltmeter Calibration**
- **P.O. Box–Specific resistance**
- **B.G.–Figure of Merit (table galvanometer)**
- **Construction of AND, OR, NOT gates–using diodes and Transistor**
- **Zener Diode–Characteristics**
- **NAND gate as a universal gate**

**BCOM GERERAL
HUMAN RESOURCE MANAGEMENT**

SUBJECT CODE:

OBJECTIVES

- To facilitate the students to know about the importance of Human Resources.
- To make the students to understand the various aspects of the Human Resources Management.

OUTCOME:

- Understanding of basic concepts, functions and functioning of Human resource department of the organisations

UNIT I: Introduction

Nature and Scope of Human Resources Management – Differences between Personnel Management and HRM – Environment of HRM- HRM Accounting– Human Resource Planning –Recruitment – Selection – Methods of Selection – Uses of various Tests – Interview techniques in Selection and Placement.

UNIT II: Training

Meaning – Induction – Methods – Techniques – Identification of the Training needs – Training and Development – Performance appraisal – Transfer – Promotion and Termination of services – Career Development.

UNIT III: Compensation &Labour Relation

Cost to Company – CTC Fixed and FlexiblePay - Components – Incentives – Benefits – Motivation – Talent Retention- Welfare and Social Security Measures - Opportunities, Challenges, and Recent Trends in Compensation.



Need – Functions of Trade Unions – Forms of Collective bargaining – Workers Participation in management - Types and effectiveness. Industrial Disputes and Settlements (laws excluded)-Social Ethics and Responsibility .

UNIT IV: Human Resource Accounting & Audit

Human Resource Accounting- Meaning- Objectives- Need & Limitations.

Human Resource Audit – Nature – Benefits – Scope – Approaches.

UNIT V: Corporate Ethics & Corporate Social Responsibility

Business Ethics – Concept, Characteristics, Importance and Need for ethics- Sources of Ethics, Concept of Corporate Ethics, code of Ethics- Guidelines for developing code of ethics, Ethics in Human Resource Management

Corporate Social Responsibility: Concept, Scope & Relevance and Importance of CSR in Contemporary Society. CSR towards employees and workers- CSR and environmental concerns- Role of HR professionals in CSR.

TEXT BOOK

1. Rao, VSP, Human Resource Management, Excel Books

REFERENCE BOOKS:

1. Ashwathappa, Human Resource Management, Himalaya Publishing House

2. Garry Deseler, Human Resource Management, Prentice Hall

3. Prasad, LM, Human Resource Management, Sultan Chand & Sons

4. Tripathi, Human Resource Management, Prentice Hall

5. Sundar & Srinivasan, Essentials of Human Resource Management, Vijay Nicole Imprints Pvt.Ltd. Chennai

WEB RESOURCE:

- www.whatishumanresource.com
- www.managementstudyguide.com
- www.humanresources.about.com

- www.managementhelp.org

INCOMETAX LAW AND PRACTICE-I

SUBJECT CODE:

OBJECTIVES:

- To provide a detailed understanding of the various provisions of I.T. Act.
- To enable the students to about the Assessment Procedures and Tax Planning

Outcome:

- The students will understand the concepts of Income tax, Types of filing and computation of tax from various head.

UNIT I: INTRODUCTION

Meaning of Income – Features of Income Tax – Types – Important Definitions Under the Income Tax Act – Assessee – Types – Rates of Tax – Residential Status – Scope of Total Income –Incomes Exempt from tax.

UNIT II: Income from Salary

Definition – Allowances – Valuation of perquisites – Deductions from Salary – Gratuity –Pension – Commutation of Pension – Leave Salary – Profits in lieu of Salary - Provident Funds– Deductions under Sec. 80.

UNIT III: Income from House Property

Annual Value – Meaning and Computation – Deductions from Annual Value – Legal Provisions.

UNIT IV: Profits and Gains from Business or Profession

Income from Business or Profession – Allowable expenses – Not allowable expenses - General deductions – Provisions relating to Depreciation – Deemed Business Profits - Undisclosed



incomes – Investments – Compulsory maintenance of Books of accounts – Audit of Accounts of certain persons – Special provisions for Computing Incomes on estimated basis – Computation of Income from Business or Profession.

UNIT V: E-filing & Submission of Returns

E-filing – Concept – Procedure - 26AS – TDS – Traces – Filing of Return – Various Returns –Permanent Account Number (PAN) – Usage of PAN – Concept of Transfer Pricing –Fundamentals

TEXT BOOKS:

- 1. Naveen Mittal – Principles of Income Tax Law & Practice – Cengage New Delhi**
- 2. T. Srinivasan – Income Tax & Practice –Vijay Nicole Imprints Private Limited , Chennai**
- 3. Vinod, K.Singhania, Students Guide to IncomeTax, Taxman Publications Pvt. Ltd.**
- 4. Mehrotra- Income Tax Law&Accounts, Goyal, Sathiya Bhavan Publications.**

REFERENCE BOOKS:

- 1. Gaur & Narang, Income Tax Law & Practice, Kalyani Publishers.**
- 2. Reddy,T.S.& Hariprasad Reddy, Y, Income Tax Theory, Law & Practice, Margham Publications, Chennai.**
- 3. Murthy.A, Income Tax Law & Practice, Vijay Nicole Imprints Pvt.Ltd.Chennai**
- 4. Hariharan N, Income Tax Law & Practice, Vijay Nicole Imprints Pvt. Ltd. Chennai**

WEB REFERENCE:

- 1. www.incometaxindia.gov.in**
- 2. www.incometaxindiaefiling.gov.in**
- 3. www.onlineservices.tin.egov-nsdl.com**
- 4. www.cleartax.in**

INCOMETAX LAW AND PRACTICE-II

SUBJECT CODE:

OBJECTIVES

- **To help the students to understand the relevance and significance of Tax.**
- **To facilitate the students in understanding the various Provisions I.T. Act.**

OUTCOME:

- **The students will understand the procedure for computing taxable income from different heads, clubbing of income, Setoff and carry forward of losses and Deductions applicable to an individual.**

UNIT I: Income from Capital Gain

Capital Gain – Meaning – Short term and Long term Capital Gains – Certain Transactions not included as transfer – Cost of Acquisition – Cost of Improvement – Indexation – Capital Gain under different circumstances – Exempted Capital Gains – Computation of Capital Gains.

UNIT II: Income from other sources

Computation – Grossing up – Deductions in Computing Income under the head and other related provisions.

UNIT III: Clubbing of Incomes and Set off / Carry forward and Set – Off of losses

Clubbing of Incomes under various situations – Deemed Incomes – Simple Problems on clubbing of incomes – Setoff – Carry forward and set off of losses.

UNIT IV: Deductions from Gross Income

Permissible Deductions from Gross Total Income Sec.80C, 80CCC, 80CCCD, 80D, 80DD,

80DDB, 80E, 80G, 80GG, 80GGA, 80QQB, 80RRB, 80U. Assessment of Individual – Computation of Tax.

UNIT V: Income Tax Authorities and Procedure of Assessment



Income Tax Authorities – Powers of the Central Board of Direct Taxes (CBDT), Commissioners of Income Tax and Income Tax officers. Assessment Procedures - Self Assessment – Best Judgement Assessment – Income Escaping Assessment (Reassessment)-

Advance Payment of Tax – Meaning and Due dates.

TEXT BOOKS:

- 1. Naveen Mittal – Principles of Income Tax Law & Practice – Cengage New Delhi**
- 2. T. Srinivasan – Income Tax & Practice –Vijay Nicole Imprints Private Limited , Chennai**

REFERENCE BOOKS:

- 1. Vinod, K. Singhania, Students Guide to Income Tax, Taxman Publications Pvt. Ltd.**
- 2. Mehrotra- Income Tax Law &Accounts, Goyal, Sathiya Bhavan Publications.**
- 3. Gaur & Narang, Income Tax Law & Practice, Kalyani Publishers.**
- 4. Murthy.A, IncomeTaxLaw&Practice,Vijay Nicole Imprints Pvt.Ltd.Chennai**
- 5. Hariharan N, IncomeTaxLaw&Practice,Vijay Nicole Imprints Pvt.Ltd.Chennai**
- 6. Reddy,T.S.&HariprasadReddy,Y,Income Tax Theory,Law&Practice,Margham Publications, Chennai.**

WEB RESOURCE:

- www.incometaxindia.gov.in
- www.incometaxindiaefiling.gov.in
- www.onlineservices.tin.egov-nsdl.com
- www.cleartax.in

BANKING THEORY LAW AND PRACTICE

SUBJECT CODE:

Objectives:

- To facilitate the understanding of the origin and the growth of the Indian Banking System
- To understand the modern day Developments in Indian Banking Sector.

Out Comes:

- After completion of this subject students understand the growth of Indian Banking Systems and their Modern Day Development.

UNIT-I : Introduction to Banking

History of Banking- Components of Indian banking -Indian Banking System-Phases of development-Banking structure in India-Payment banks and small banks-Commercial Banking-Definition-Classification of banks. Banking System- Universal banking- Commercial Banking-functions-Role of Banks in Economic Development. Central Banking-Definition –Need-Principles- Central Banking Vs Commercial banking- Functions of Central bank.

UNIT-II: RBI

Establishment-objective-Legal framework-Functions-SBI-Origin and History- Establishment-

Indian subsidiaries-Foreign subsidiaries-Non-Banking-Subsidiaries-Personal banking- International banking-Trade Financing-Correspondent banking.Co-operative banks- Meaning and definition-Features-Co-operative banks vsCommercial banks-Structure.- NBFC-Role of NBFC-RBI Regulations-Financial sector reforms-Sukhmoy committee 1985-Narasimham committee I and II-Prudential norms: capital adequacy norms- classification of assets andprovisioning.



UNIT-III: E-Banking

Meaning-Services-e-bankingandFinancialservices-Initiatives-Opportunities-Internet banking-Meaning-InternetbankingVsTraditionalbanking-Services-Drawbacks-Frauds in Internet banking.Mobile banking–Anywhere Banking-Any Time Banking-Electronic MobileWallets. ATM-Evolution -Concept-Features - Types-. Electronicmoney-Meaning-Categories-Meritsofe-money-ElectronicFunds Transfer (EFT)system - Meaning- Steps–Benefits-Monetary policies- final sector reforms- sakmoychakrevarthycommittee 1985- Narasiman Committee I & II-prudential norms capital adequacy norms- classification of assets & provisionary meaning-Structure of Interest rates (short and long term)-impacts on saving and borrowings.

UNIT IV: Bank Account

Opening – Types of Accounts-FDR-Steps in opening Account-Saving vs Current Account-‘Donatio Mortis Causa’ - Passbook-Bank Customer Relationship-Special Types of currents-KYCnorms. Bank Lending –Lending Sources-Bank Lending Principles-Forms of lending-Loan evaluation process-securities of lending-Factors influencing bank lending – Negotiable Instruments –Meaning –Characteristics-Types. Crossing –Definition –Objectives- Crossing and negotiability-Consequences of Crossing.

UNIT-V: Endorsement

Meaning-Components-Kinds of Endorsements-Cheques payable to fictitious person-Endorsement by legal representative –Negotiation bank-effect of endorsement-Rules regarding endorsement.Paying banker-Banker’s duty-Dishonoring of Cheques Dischargeof paying banks-Payments of a crossed cheque payment. Collecting bankers-Statutory protection under section 85-Refusal of cheques Payment. Collecting Banker-Statutory protection under section 131-Collecting bankers’ duty –RBI instruction –



Paying Banker Vs Collecting Banker- Customer grievances-Grievance redressal – Banking Ombudsman.

TEXT BOOKS

- 1. Michael W. Brandi – Money, Banking, Financial Markets and Institutions –Cengage , New Delhi**
- 2. Gurusamy S, Banking Theory : Law and Practice, Vijay Nicole Publication, 2015, Chennai**

SUGGESTED READINGS

- 1. Clifford Gomez, Banking and finance, Theory, Law and practice, Jain Book Agency, 2010
Mumbai**
- 2. Gupta, R K Banking Law and Practice, Jain Book Agency, 2001, New Delhi.**
- 3. Sundaram and Varshney, Banking Theory Law and Practice, Sultan Chand Co, 2010, New Delhi.**
- 4. Maheswari, S.N. Banking Theory Law and Practice, Kalyani Publications, 2011, Mumbai.**
- 5. Santhanam.B, Banking Theory Law and Practice, Margam Publications.**
- 6. Nirmala Prasad, Banking and Financial Services, Himalaya Publications.**

E-RESOURCES

www.lawcommissionofindia.nic.in

www.rbi.org

www.bankingombudsman.org

COMPANY LAW

SUBJECT CODE:

- To make the students aware on the recent amendments to companies Act.
- To enlighten the students on the provisions governing the company law.

OUTCOME:

- The students will gain knowledge on Company Law provisions and amendments.

UNIT I: Joint Stock Company

Meaning-Kinds of companies (Special Provisions with respect to Private Company, Public Company, One Person Company, Small Company, Dormant Company)

Formation – Memorandum of Association- Contents- Restriction on “Other Objects”- Doctrine of Ultra

Vires- Articles of Association-Contents- Prospectus-contents-Types(Statement in Lieu of

Prospectus, Shelf Prospectus, Red Herring Prospectus)-Underwriting-Book Building Process-

Green Shoe option- E-Flying – Dematerialisation.

UNIT II: Share Capital and Debentures

Meaning of Shares – Kinds of Shares- Voting rights – Issue of Shares at a Premium and Discount – Partly paid shares- Bonus Shares- Rights shares – Sweat Equity Shares.

Debentures –

Meaning–Types.

UNIT III- Managerial Personnel

Directors – Women Directors – Independent Directors- director Identification Number- Other

Key Managerial Personnel- Related Party Transactions.



UNIT IV- Meetings and Resolutions

Meeting - Statutory Meeting – Annual general meeting – Extraordinary general

Meeting -

Notice of meeting- Quorum- Proxy- Board of Directors Meeting- committee- Types of

Committee- Corporate Social Responsibility committee. Resolutions – Ordinary &

Special -

Resolution requiring special notice.

UNIT V- Winding up of company

Modes of winding up – winding up by the court – Voluntary winding up – Types –

Members’

voluntary winding up – Creditors’ voluntary winding up. National company Law-

Appellate

Tribunal.

TEXT BOOKS

1. Reena Chadha ,Sumant Chadha – Company Law –Cengage, New Delhi

REFERENCE BOOKS

1. Business Laws – N.D. Kapoor, Sultan Chand and Sons

2. Business Laws – M.R. Sreenivasan, Margam Publications

3. Business Laws – M.V. Dhandapani, Sultan Chand and Sons

4. Company Law – Avtar Singh

5. Company Law N.D. Kapoor

6. M.C.Shukla and S.S. Gulshan – Principles of Company Law

7. S.M.Shah – Lectures on Company Law

8. S.Badri Alam and Saravanavel - Company Law- Himalaya Publications

9. P.P.S. Gogna – Text Book of Company Law – S.Chand

CORE-VIII: MARKETING

SUBCODE:

Objectives:

- **To facilitate the students to understand the importance and the relevance of marketing in today's Business world**
- **To enable the students to understand the features of the Indian Marketing**

Out Come:

The Students will understand the basic concepts of Marketing, Market Segmentation Marketing Mix and Recent trends in Marketing.

UNIT I

Introduction to Marketing –Meaning – Definition and Functions of Marketing – Marketing Orientation – Role and Importance of Marketing – Classification of Markets

UNIT II

Market Segmentation – Concept – Benefits – Basis and Levels. Introduction to Consumer Behaviour – Need for study – Consumer buying decision process – Buying motives.

UNIT III

Marketing mix. Product – Meaning – Introduction to Stages of New Product Development – Types – Introduction to PLC – Product Mix – Price – Pricing Policies and Methods.

UNIT IV

Channels of Distribution (Levels) – Channel Members – Promotion – Communication Mix – Basics of Advertising, Sales promotion and personal selling.

UNIT V

Recent Trends in Marketing. A Basic understanding of E – Marketing, Consumerism, Market Research, MIS and Marketing Regulations.

RECOMMENDED BOOKS:

1. Dawn iacobucci , Anupama Vohra – Marketing Management – CENGAGE, New Delhi.
2. William M.pride , O.C.Ferrell –Principles of marketing - CENGAGE, New Delhi.
3. Atreyee Ganguly ,JoyetaBhadury - Principles of marketing - CENGAGE, New Delhi.



REFERENCES

- 1. Marketing Management by Rajan Saxena**
- 2. Marketing by William J Stanton**
- 3. Principles of Marketing by Philip Kotler**
- 4. Marketing Management by Still and Cundiff**
- 5. Marketing Management by Dr. K. Nirmala Prasad and Sherlaker**

**BCA COMPUTER APPLICATION
MULTIMEDIA AND ITS APPLICATIONS**

SUBJECT CODE:SU45B

OBJECTIVES:

To understand the basic concepts of Multimedia Systems

To learn representations, perceptions and applications of Multimedia

OUTCOMES:

To understand the technologies behind multimedia applications

UNIT- I

**Definition - Classification - Multimedia application -Multimedia Hardware -
Multimedia software - CDROM - DVD.**

UNIT-II

**Multimedia Audio: Digital medium - Digital audio technology - sound cards - recording
- editing - MP3 - MIDI fundamentals - Working with MIDI - audio file formats -
adding sound to Multimedia project.**

UNIT-III

**Multimedia Text: Text in Multimedia -Multimedia graphics: coloring - digital imaging
fundamentals - development and editing - file formats - scanning and digital
photography**

UNIT-IV

**Multimedia Animation: Computer animation fundamentals - Kinematics - morphing -
animation s/w tools and techniques. Multimedia Video : How video works - broadcast
video standards - digital video fundamentals – digital video production and editing
techniques - file formats.**

UNIT-V

**Multimedia Project : stages of project - Multimedia skills - design concept - authoring -
planning and costing –Multimedia Team. Multimedia-looking towards Future: Digital**



Communication and New Media, Interactive Television, Digital Broadcasting, Digital Radio, Multimedia Conferencing T

EXT BOOKS:

- 1. S.Gokul, “Multimedia Magic”, BPB Publications, 2nd Edition.**
- 2. Tay Vaughen , “Multimedia Making it Work”, TMH, 6th Edition.**

REFERENCE BOOKS:

- 1. Kiran Thakrar, Prabhat k.andleigh, “Multimedia System Design”, Prentice Hall India.**
- 2. Malay k Pakhira, “Computer graphics, Multimedia and Animation”, Prentice Hall India, 2 nd Edition.**

WEB REFERENCES:

NPTEL–& MOOC courses titled Multi media

<https://nptel.ac.in/courses/106105163/>

W3schools.com/html/html-media.asp

OPEN SOURCE TECHNOLOGIES

SUBJECT CODE:SE25B

OBJECTIVES:

- To provide a basic idea of Open source technology, their software development process to understand the role and future of open source software in the industry along with the impact of legal, economic and social issues for such software.

OUTCOMES:

- To recognize the benefits and features of Open Source Technology and to interpret, contrast and compare open source products among themselves

UNIT- I

Introduction – Why Open Source – Open Source –Principles, Standards Requirements, Successes – Free Software – FOSS – Internet Application Projects

UNIT- II

Open source – Initiatives, Principles, Methodologies, Philosophy, Platform, Freedom, OSSD,

Licenses – Copy right, Copy left, Patent, Zero Marginal Technologies, Income generation

opportunities, Internalization

UNIT- III

Case Studies – Apache, BSD, Linux, Mozilla (Firefox), Wikipedia, Joomla, GCC, Open Office.

UNIT- IV

Open Source Project –Starting, Maintaining –Open Source – Hardware, Design, Teaching &

Media

UNIT- V



Open Source Ethics – Open Vs Closed Source – Government – Ethics – Impact of Open source

Technology – Shared Software – Shared Source

TEXT BOOK:

1. Kailash Vadera, Bhavyesh Gandhi, “Open Source Technology”, Laxmi Publications Pvt Ltd 2012, 1st Edition.

REFERENCE BOOK:

1. Fadi P. Deek and James A. M. McHugh, “Open Source: Technology and Policy”, Cambridge Universities Press 2007.

WEB REFERENCES:

- Coursera online course – Open Source Software Development Methods - <https://www.coursera.org/learn/open-source-software-development-methods>

CORE-XIV: SOFTWARE ENGINEERING

SUBCODE:SE25A

OBJECTIVES:

- **To introduce the software development life cycles**
- **To introduce concepts related to structured and objected oriented analysis & design co**
- **To provide an insight into UML and software testing techniques**

OUTCOMES:

- **The students should be able to specify software requirements, design the software using tools**
- **To write test cases using different testing techniques.**

UNIT- I

Introduction – Evolution – Software Development projects – Emergence of Software Engineering. Software Life cycle models – Waterfall model – Rapid Application Development – Agile Model – Spiral Model

UNIT- II

Requirement Analysis and Specification – Gathering and Analysis – SRS – Formal System Specification

UNIT- III

Software Design – Overview – Characteristics – Cohesion & Coupling – Layered design – Approaches Function Oriented Design – Structured Analysis – DFD – Structured Design – Detailed design

UNIT- IV

Object Modeling using UML – OO concepts – UML – Diagrams – Use case, Class, Interaction, Activity, State Chart – Postscript

UNIT- V

Coding & Testing – coding – Review – Documentation – Testing – Black-box, White-box, Integration, OO Testing, Smoke testing.

TEXT BOOK:



1. Rajib Mall, “Fundamentals of Software Engineering”, PHI 2018, 5th Edition.

REFERENCE BOOKS: 1. Roger S. Pressman, “Software Engineering - A Practitioner’s Approach”, McGraw Hill 2010, 7th Edition.

2. Pankaj Jalote, “An Integrated Approach to Software Engineering”, Narosa Publishing House 2011, 3rd Edition.

WEB REFERENCES:

NPTEL online course – Software Engineering –
<https://nptel.ac.in/courses/106105182/>

BCOM BANKING MANAGEMENT PORTFOLIO MANAGEMENT

SUBJECT CODE:

OBJECTIVES

To acclimate the students on the concept of Portfolio Management.

- To facilitate the students to know the techniques of Portfolio Management.**

OUTCOME

- On completion of syllabus student will understand the basic concepts of Portfolio Management and the techniques of Portfolio Management.**

UNIT I: Introduction

Portfolio - Meaning - Objectives - Terms relating to Portfolio - Securities - Risk – Return -

Introduction to Portfolio Management – Role of Portfolio Managers.

UNIT II: Value of Money

Time value- Computation of Present Value Interest Factor(PVIF), Future Value Interest

Factor(FVIF), Present Value Interest Factor at an Annuity(PVIFA) - Future Value Interest Factor

at an Annuity (FVIFA) Simple Problems relating to it.

UNIT III: Portfolio Analysis

Planning – Selection – Evaluation – Revision -Various Steps involved in Portfolio Development

Theories relating to Portfolio Analysis.

UNIT IV: Risk & Return

Interpretation of Risk & Return – Mean – Variance Analysis - B(Beta) Measures. Portfolio

Diversification – Bond Valuation.

UNIT V: Need and Importance of Portfolio Management



Portfolio Management Vs Wealth Management – Introduction to Derivatives – Futures Options

– Swaps – SEBI Regulations relating to Portfolio Operations.

Note: Questions in Sec.A, B & C shall be in the proportion of 80:20 between Theory and Problems.

TEXT BOOK:

1. Francis-Management of Investments, McGraw Hill.
2. Gurusamy S, Security Analysis and Portfolio Management, Vijay Nicole Imprints, Chennai

REFERENCE BOOKS:

1. V.K. Bhalla- Investment Management, S Chand & Co
2. Fisher & Jordan-Security Analysis & Portfolio Management, prentice Hall
3. Punithaathi Pandian- Security Analysis & Portfolio Management, Vikas Publishing House

WEB RESOURCE:

1. www.portfoliomanagement.in
2. www.sebi.gov.in
3. www.moneycontrol.com
4. www.pms.sharekhan.com

CUSTOMER RELATIONSHIP MANAGEMENT IN BANKS

SUBJECT CODE:

COURSE OBJECTIVES

- 1. To impart skill based knowledge of Customer Relationship Management**
- 2. To understand the concepts and principles of CRM**
- 3. To understand the need and importance of maintaining a good customer relationship**
- 4. To gain knowledge of strategic customer acquisition and retention techniques in CRM**
- 5. To teach the conceptual aspects of service quality**

OUTCOME:

- The students will be able to understand the concepts and principles of CRM and the conceptual aspects of service quality**

UNIT I Understanding customers:

**Goals requiring CRM in Banks-CRM opportunities and challenges in Banks-
Customer information**

**Database – Customer Profile Analysis – Customer perception- Expectations analysis –
Customer**

**Behavior in relationship perspectives; individual and group customers – Customer life
time value –**

Selection of Profitable customer segments

UNIT II CRM structures:

**Elements of CRM – CRM Process – Strategies for Customer acquisition in banks –
Retention and**

**Prevention of defection in banks– Models of CRM – CRM road map for business
applications in banks-**

Benefits of CRM to banks.

UNIT III CRM Planning and Implementation:

Strategic CRM planning process – Implementation issues – CRM Tools- Analytical CRM – Operational

CRM – Collaborative CRM -Call centre management – Role of CRM Managers – CRM Implementation

Road Map- Developing a Relationship Orientation – Customer-centric Marketing Processes – Customer retention plans

UNIT IV Service quality:

Concept of Quality – Meaning and Definition of Service Quality - Factors influencing customer

expectations and perceptions – Types of Service Quality – Service Quality Dimensions – Service Quality

Gaps – Measuring Service Quality – Service Quality measurement Scales-Quality circles in Banks-Nature

and Types of Customer - Customer Service Committees - Talwar, Goiporia.

Damodaran Committee and

such other committees's recommendations- Customer Service Committee, Customer Day - Complaint

Redressed Methods- Copra Forum – Ombudsman.

UNIT V Trends in CRM:

e CRM- CRM Solutions – Data Warehousing – Data mining for CRM – CRM software packages – The

Technological Revolution: Relationship Management – Changing Corporate Cultures.

Suggested Readings

1. Alok Kumar et al, (2015), Customer Relationship Management: Concepts and Applications, Biztantra

2. Jim Cathcart, (2016), The Eight Competencies of Relationship selling, Macmillan India



- 3. Peeru H Mohamed and A Sahadevan, (2017), Customer Relationship Management, Vikas Publishing**
- 4. Shainesh, Jagdish, N.Sheth, (2015), Customer Relationships Management Strategic Perspective, Macmillan**
- 5. Zikmund, (2001), Customer Relationship Management, Wiley**

INDIAN ECONOMY

SUBJECT CODE:

Objectives:

- To have the fundamental knowledge of Economic Developments.
- To teach the Economic problems and five year Plans.

Outcomes:

- After completion of the syllabus students well versed with the features of Indian economy and known the five year plan

UNIT I: Economic Growth and Economic Development- Transition on Indian Economy--

Indian Economy from 1950 .- Indicators of economic development- National Income- Basic Concepts and computation of national income.

UNIT II: Major problems of Indian Economy- Human Development Index. Present Scenarios of population, unemployment, Poverty and inequality. Demographic trends in

Population. Measures to control the population-Foreign trade

UNIT III: Agriculture: Contribution to economic development- Green Revolution- Organic

farming- Food policy and Public distribution system.

UNIT IV: Industry- Role of industries in economic development-Large scale industries and

small scale industries- New Economic Policy 1991- Industrial development before and after

globalization in India.



UNIT V: Five year plans in India- Achievement and strategy and failures- Nidhi Aayog.

RECOMMENDED TEXTS

- 1. I.C. Dingra, Indian Economy**
- 2. Ruddar Datt & K.P.M. Sundharam, Indian Economy - S.Chand& Sons - New Delhi.**
- 3. K.N. Agarwal, Indian Economy – Problem of Development of Planing - Wishwa Prakasan - New Age of International Ltd.**
- 4. S.K.Misra&V.K.Puri, Indian Economy – Its Development - Himalaya Publishing House
- Mumbai.**
- 5. T Aryamala, Indian Economy – Vijay Nicole Imprints Private Ltd.,**

BUSINESS ECONOMICS

SUBJECT CODE:CZ31A

OBJECTIVES:

- To facilitate the students to understand the concept of Communication.**
- To Know the basic techniques of the modern forms of communication**

OUTCOME:

- Students understand the concept of communication and familiarise with modern form of communication.**

UNIT-I

Introduction to Economics – Wealth, Welfare and Scarcity Views on Economics - Positive

and Normative Economics - Definition – Scope and Importance of Business Economics -

Concepts: Production Possibility frontiers – Opportunity Cost – Accounting Profit and Economic Profit – Incremental and Marginal Concepts – Time and Discounting Principles –

Concept of Efficiency- Business Cycle:- Inflation, Depression, Recession, Recovery, Reflation and Deflation.

UNIT-II

Demand and Supply Functions: - Meaning of Demand – Determinants and Distinctions of

demand – Law of Demand – Elasticity of Demand – Demand Forecasting – Supply concept

and Equilibrium

UNIT-III

Consumer Behaviour : Law of Diminishing Marginal utility – Equimarginal Utility – Indifference Curve – Definition, Properties and equilibrium.

UNIT-IV



Production: Law of Variable Proportion – Laws of Returns to Scale – Producer’s equilibrium

– Economies of Scale - Cost Classification – Break Even Analysis

UNIT-V

Product Pricing: Price and Output Determination under Perfect Competition,

Monopoly –

Discriminating monopoly – Monopolistic Competition – Oligopoly – Pricing objectives and

Methods-

RECOMMENDED TEXTS

1. S.Shankaran, Business Economics - Margham Publications - Ch -17

2. P.L. Mehta, Managerial Economics – Analysis, Problems & Cases - Sultan Chand & Sons - New Delhi – 02.

3. Francis Cherunilam, Business Environment-Himalaya Publishing House -Mumbai– 4.

4. Peter Mitchelson and Andrew Mann, Economics for Business - Thomas Nelson Australia -Can -004603454.

5. C.M.Chaudhary, Business Economics - RBSA Publishers - Jaipur - 03.

6. H.L.Ahuja, Business Economics–Micro & Macro-Sultan Chand & Sons-New Delhi.

7. T. Aryamala – Business Economics- Vijay Nicole Imprints Private Ltd.,

MARKETING OF BANKING SERVICES

SUBJECT CODE:

Objectives

To make the students understand the concept of role of Banking sector in the services of Banks.

To enable the students to understand the application of Marketing Principles in Banking Sector.

Out Come:

The Students will understand the basic concepts of Marketing Principles in Banking Sector and services

UNIT I: Introduction

Marketing concepts and their Application to Banking Industry-Marketing Concepts and elements-Why Marketing?-Special features of Bank Marketing-Product and Service Marketing.

..

UNIT II: Environmental Banking

Environmental Scanning - Assessment and Management of Competition - Macro and Micro factors influencing the market goods and services - Applicability to Banking - Banking regulation and its impact on Bank marketing strategies - Understanding competition - Identification of competition and their focus - Strategic benefits of Good competition - What makes a good competitor?.



UNIT III: Consumers on Modern Banking

Customer Need Analysis and Customer Care: Customer Focus-Understanding

Customer Need -

**Customer Care - Consumer motivation and Buying behaviour - Perception I
behaviour-Other**

**factors affecting buying behaviour-Decision making process-Individual and
Organizational-**

Selective exposure-Selective distortion-and effect on consumer behaviour.

UNIT IV: Marketing & Banking Services

**Market Segmentation (banking) - Product Designing - Marketing - Feedback and
Review -**

**Purpose and content of product I Market expansion - Mass Marketing and Marketing
Segmentation - Definition of Market Segmentation - Characteristics of a Viable Market
Segment-BenefitsfromMarketSegmentation-Disadvantages-MarketSegmentation**

Techniques for

personal and corporate customers.

UNIT V: MIR

**Market information Research- Definition of Marketing Research and Market
Research-**

**Differences - Contributions of Marketing Research to a Bank - Types of data - Primary
and**

**Secondary-Management Information System and Marketing Research-Need for
situation analysis**



- Steps involved in the development of a Situation Analysis - objective, strategies and tactics-

sources of information for situation analysis.

RECOMMENDED BOOKS:

- 1. Dawn iacobucci , Anupama Vohra – Marketing Management – CENGAGE, New Delhi.**
- 2. William M.pride , O.C.Ferrell –Principles of marketing - CENGAGE, New Delhi.**
- 3. Atreyee Ganguly ,JoyetaBhadury - Principles of marketing - CENGAGE, New Delhi.**

REFERENCES

- 1. Marketing Management by Rajan Saxena**
- 2. Marketing by William J Stanton**
- 3. Principles of Marketing by Philip Kotler**
- 4. Marketing Management by Still and Cundiff**
- 5. Marketing Management by Dr. K. Nirmala Prasad and Sherlaker**

E-Resources

www.rbi.org

www.vikalpa.com

www.academia.edu

www.onlinelibrary.wiley.com

www.emeraldinsight.com

BCOM ACCOUNTING FINANCE MARKETING

SUBJECT CODE:

Objectives:

To facilitate the students to understand the importance and the relevance of marketing in to-day's Business world

To enable the students to understand the features of the Indian Marketing

Out Come:

The Students will understand the basic concepts of Marketing, Market

Segmentation,

Marketing Mix and Recent trends in Marketing.

UNIT I

Introduction to Marketing – Meaning – Definition and Functions of Marketing – Marketing

Orientation – Role and Importance of Marketing – Classification of Markets

UNIT II

Market Segmentation – Concept – Benefits – Basis and Levels. Introduction to Consumer

Behaviour – Need for study – Consumer buying decision process – Buying motives.

UNIT III

Marketing mix. Product – Meaning – Introduction to Stages of New Product Development –

Types – Introduction to PLC – Product Mix – Price – Pricing Policies and Methods.

UNIT IV

Channels of Distribution (Levels) – Channel Members – Promotion – Communication Mix –



Basics of Advertising, Sales promotion and personal selling.

UNIT V

Recent Trends in Marketing. A Basic understanding of E – Marketing, Consumerism, Market

Research, MIS and Marketing Regulations.

RECOMMENDED BOOKS:

- 1. Dawn iacobucci , Anupama Vohra – Marketing Management – CENGAGE, New Delhi.**
- 2. William M.pride , O.C.Ferrell –Principles of marketing - CENGAGE, New Delhi.**
- 3. Atreyee Ganguly ,JoyetaBhadury - Principles of marketing - CENGAGE, New Delhi.**

REFERENCES

- 1. Marketing Management by Rajan Saxena**
- 2. Marketing by William J Stanton**
- 3. Principles of Marketing by Philip Kotler**
- 4. Marketing Management by Still and Cundiff**
- 5. Marketing Management by Dr. K. Nirmala Prasad and Sherlaker**



FINANCIAL PLANNING AND PERFORMANCE

SUBJECT CODE:

- 1. Achieve an understanding of strategic planning, forecasting and budgeting, recall the models of strategic planning with the process, classify the forecasting techniques and demonstrate the budget.**
- 2. To make use of budget to prepare an annual profit plan, analyze performance by using flexible budgets und compare actual results to planned results.**
- 3. To explain the importance and use of standard cost systems, propose performance measures and discuss key performance indicators.**

Unit I: Strategic Planning

Analysis of external and internal factors affecting strategy - Long-term mission and goals -

Alignment of tactics with long-term strategic goals - Strategic planning models and analytical

techniques - Characteristics of successful strategic planning process.

Unit II: Budgeting and Forecasting

Operations and performance goals - Characteristics of a successful budget process – Resource

allocation - Regression analysis - Learning curve analysis - Expected value - Annual business

plans (master budgets) - Project budgeting - Activity-based budgeting - Zero-based budgeting -

Continuous (rolling) budgets - Flexible budgeting - Annual profit plan and supporting schedules

- Operational budgets - Financial budgets - Capital budgets - Pro forma income – Financial

statement projections - Cash flow projections.

Unit III: Cost and Variance Measures

Comparison of actual to planned results - Use of flexible budgets to analyze performance -

Management by exception - Use of standard cost systems - Analysis of variation from standard

cost expectations.

Unit IV: Responsibility centers and reporting segments

Types of responsibility centers - Transfer pricing - Reporting of organizational segments

Unit V: Performance Measures:

Product profitability analysis - Business unit profitability analysis - Customer profitability

analysis - Return on investment - Residual income - Investment base issues - Key performance

indicators (KPIs) - Balanced scorecard

RECOMMENDED TEXT BOOKS:

1. Wiley CMAexcel Learning System, Part 1: Financial Planning, Performance & Analytics

REFERENCE BOOKS:

1. Strategic Management and Business Policy: Globalization, Innovation and Sustainability; Thomas

Wheelen, J. David Hunger, Alan N. Hoffman, and Chuck Bamford; Pearson

2. Cost Management: A Strategic Emphasis; Edward Blocher, David Stout, Paul Juras, and Gary

Cokins; McG raw Hill

3. Cost Accounting: A Managerial Emphasis; Charles Homgren, Srikant Datar, and Madhav Rajan;

Pearson



4. Quantitative Methods for Business; David Anderson, Dennis Sweeney, Thomas Williams, Jeffrey Camm, and James Cochran; Cengage Learning

BUSINESS STATISTICS

SUBJECT CODE:

OBJECTIVES

To Facilitate Understanding Relevance and Need Of Statistics in Current Scenario

To Customize the Importance of Business Statistics for the Commerce Students

UNIT-I Introduction

Meaning and Definition of Statistics- Collection and Tabulation of Statistical Data-

Presentation of Statistical Data-Graphs and Diagrams

UNIT-II Measures of Central Tendency and Measures of Variation

Measures of Central Tendency- Arithmetic Mean, Median, Mode, Harmonic Mean and

Geometric Mean. Measures of Variation- Standard Deviation -Mean Deviation-

Quartile

Deviation-Skeweness and Kurtosis- Lorenz Curve

UNIT-III Correlation and Regression Analysis

Simple Correlation-Scatter Diagram- Karl Pearson's Correlation- Spearman's Rank

Correlation- Regression- Meaning-Linear Regression.

UNIT- IV Time Series

Analysis of Time Series-Causes of Variation in Time Series Data -Components of Time

Series- Additive and Multiplicative Models- Determination of Trend By Semi Average,

Moving Average and Least Square(Linear Second Degree And Exponential) Methods-

Computation of Seasonal Indices By Simple Average, Ratio to Moving Average, Ratio

to

Trend and Link Relative Methods

UNIT-V Index Numbers



**Meaning and Types of Index Numbers-Problems in Construction of Index Numbers-
Methods of Construction of Price and Quantity Indices- Test of Adequacy- Errors in
Index**

**Numbers- Chain Base Index Numbers- Base Shifting -Splicing -Deflation -Customer
Price**

Index and Its Uses- Statistical Quality Control

SUGGESTED READINGS

- 1. Dhingra IC & MP Gupta, Lectures In Business Statistics, Sultan chand and Sons,
New Delhi
2009**
- 2. Gupta SP and Archana Agarwal, Business Statistics (Statistical Methods) Sultan
chand and Sons,
New Delhi, 9th Edition 2013**
- 3. Gupta SC, Fundamentals of Statistics, Himalaya Publishing House**
- 4. Richard Levin and David Rubin, Statistics for Management, Prentice Hall Of India,
New Delhi,
2011,7th Edition**
- 5. Sharma J K,Fundamentals of Business Statistics, Second Edition, Vikas Publishing
House
Private Limited,2013**
- 6. Siegel, Andrew, Practical Business Statistics, Irwin Mcgraw Hill International
Edition 4th**
- 7. Rajagopalan SP and Sattanathan R B Business Statistics and Operations Research,
Vijay Nicole
Imprint Private Limited, Chennai**



OPERATING SYSTEM

OBJECTIVES:

- To understand the fundamental concepts and role of Operating System.
- To learn the Process Management and Scheduling Algorithms
- To understand the Memory Management policies
- To gain insight on I/O and File management techniques

OUTCOMES:

- Understand the structure and functions of Operating System
- Compare the performance of Scheduling Algorithms
- Analyze resource management techniques

UNIT-I

Introduction: Views - Types of System - OS Structure – Operations - Services – Interface-System Calls-System Structure-System Design and Implementation. Process Management: Process - Process Scheduling - Inter-process Communication. CPU Scheduling: CPU Schedulers-Scheduling Criteria-Scheduling Algorithms.

UNIT- II

Process Synchronization: Critical-Section Problem- Synchronization Hardware Semaphores-Classical Problems of Synchronization- Monitors. Deadlocks: Characterization- Methods for Handling Deadlocks - Deadlock Prevention- Avoidance-Detection-Recovery.

UNIT- III

Memory Management: Hardware - Address Binding – Address Space - Dynamic Loading and Linking – Swapping – Contiguous Allocation - Segmentation - Paging – Structure of the Page Table.

UNIT-IV

Virtual Memory Management: Demand Paging - Page Replacement Algorithms- Thrashing. File System: File Concept-. Access Methods- Directory and Disk Structure - Protection - File System Structures - Allocation Methods - Free Space Management.

UNIT-V

I/O Systems: Overview - I/O Hardware - Application I/O Interface - Kernel I/O Subsystem- Transforming I/O Requests to Hardware Operations- Performance. System Protection: Goals - Domain - Access matrix. System Security: The Security Problem - Threats – Encryption- User Authentication.

TEXTBOOK:

1. Abraham Silberschatz, Peter B Galvin, Greg Gagne, “*Operating System Concepts*”, Wiley India Pvt. Ltd 2018, 9th Edition,.

REFERENCES:

1. William Stallings, “*Operating Systems Internals and Design Principles*”, Pearson, 2018, 9th Edition.

Andrew S. Tanenbaum, Herbert Bos, “*Modern Operating Systems*”, Pearson



RELATIONAL DATABASE MANAGEMENT SYSTEM

SUBCODE:

OBJECTIVES:

- Gain a good understanding of the architecture and functioning of Database Management Systems
- Understand the use of Structured Query Language (SQL) and its syntax.
- Apply Normalization techniques to normalize a database.
- Understand the need of transaction processing and learn techniques for controlling the consequences of concurrent data access.

OUTCOMES:

- Describe basic concepts of database system
- Design a Data model and Schema in RDBMS
- Competent in use of SQL
- Analyze functional dependencies for designing robust Database

UNIT-I

Introduction to DBMS– Data and Information - Database – Database Management System–Objectives

- Advantages – Components - Architecture. ER Model: Building blocks of ER Diagram – Relationship Degree – Classification – ER diagram to Tables – ISA relationship – Constraints– Aggregation and Composition–Advantages

UNIT- II

Relational Model: CODD's Rule- Relational Data Model - Key - Integrity –Relational Algebra Operations–Advantages and limitations– Relational Calculus–Domain Relational Calculus-QBE.

UNIT- III

Structure of Relational Database. Introduction to Relational Database Design -Objectives– Tools – Redundancy and Data Anomaly– Functional Dependency- Normalization – 1NF – 2NF – 3NF – BCNF. Transaction Processing – Database Security.

UNIT-IV

SQL: Commands–Data types– DDL - Selection, Projection, Join and Set Operations–Aggregate Functions–DML–Modification-Truncation- Constraints–Subquery.

UNIT-V PL/SQL: Structure - Elements – Operators Precedence – Control Structure –Iterative Control - Cursors - Procedure - Function - Packages – Exceptional Handling-Triggers.



TEXTBOOK:

1. S. Sumathi, S. Esakkirajan, “*Fundamentals of Relational Database Management System*”, Springer International Edition 2007.

REFERENCEBOOKS:

1. Abraham Silberchatz, Henry F. Korth, S. Sudarshan, “*Database System Concepts*”, McGraw Hill 2019, 7th Edition.
2. Alexis Leon & Mathews Leon, “*Fundamentals of DBMS*”, Vijay Nicole Publications 2014, 2nd Edition.

WEBREFERENCES:

- NPTEL & MOOC courses titled Relational Database Management Systems
- <https://nptel.ac.in/courses/106106093/>
- <https://nptel.ac.in/courses/106106095/>

ALLIED PHYSICS-I

SUBCODE:

UNIT I: Properties of Matter Young's modulus – Rigidity modulus – Bulk modulus – Poisson's ratio (definition alone) – Bending of beams – Expression for Bending Moment – Determination of Young's Modulus – Uniform and Non-Uniform bending. Expression for Couple per unit twist – Work done in twisting a wire – Torsional oscillations of a body– Rigidity modulus of a wire and M.I. of a disc by Torsion Pendulum.

UNIT II: Viscosity Viscosity – Viscous force – Co-efficient of Viscosity – Units and Dimensions – Poiseuille's formula for co-efficient of viscosity of a liquid – determination of co-efficient of viscosity using burette and comparison of Viscosities - Bernoulli's theorem – Statement and proof – Venturi meter – Pitot tube.

UNIT III: Conduction, Convection and Radiation Specific heat Capacity of Solids and Liquids – Dulong and Petit's law – Newton's law of Cooling – Specific Heat Capacity of a Liquid by Cooling – Thermal Conduction –Coefficient of Thermal Conductivity by Lee's disc Method. Convection Process – Lapse Rate – Green House Effect – Black Body Radiation – Planck's Radiation Law – Rayleigh Jean's Law, Wien's Displacement Law – Stefan's Law of Radiation. (No Derivations).

UNIT IV:

Thermodynamics Zeroth and I Law of Thermodynamics – II law of Thermodynamics – Carnot's engine and Carnot's cycle – Efficiency of a Carnot's Engine – Entropy – Change in Entropy in Reversible and Irreversible Process – Change in entropy of a perfect gas – Change in Entropy when Ice is converted into steam.

UNIT V:

Optics Interference – Conditions for Interference Maxima and Minima – Air Wedge – Thickness of A Thin Wire – Newton's Rings – Determination of Wavelength Using Newton's Rings. Diffraction – Difference Between Diffraction and Interference – Theory of Transmission Grating – Normal Incidence – Optical Activity – Biot's Laws – Specific Rotatory Power – Determination of Specific Rotatory Power Using Laurent's Half Shade Polarimeter.

BOOKS FOR STUDY:

1. Properties of matter, Brijlal and Subramanyam, Eurasia Publishing co., New Delhi, III Edition 1983



2. **Element of properties of matter, D.S.Mathur, S.Chand& Company Ltd, New Delhi, 10th Edition 1976**
3. **Heat and Thermodynamics, Brijlal&Subramanyam, S.Chand& Co, 16th Edition 2005**
4. **Heat and Thermodynamics, D.S. Mathur, Sultan Chand& Sons, 5th Edition 2014.**
5. **Optics and Spectroscopy, R.Murugesan, S.Chand and co., New Delhi, 6thEdition 2008.**
6. **A text book of Optics, Subramanyam and Brijlal, S. Chand and co., New Delhi, 22nd Edition 2004.**
7. **Optics, Sathya Prakash, Ratan PrakashanMandhir, New Delhi, VII Edition 1990.**

BCOM COMPUTER APPLICATION

OFFICE AUTOMATION THEORY & PRACTICLASTHEORY

SUBCODE:

OBJECTIVES:

- The major objective in introducing the Computer Skills course is to impart training for students in Microsoft Office which has different components like MS Word, MS Excel and Powerpoint.
- The course is highly practice oriented rather than regular classroom teaching.
- To acquire knowledge on editor, spreadsheet and presentation software.

OUTCOMES:

- Understand the basics of computer systems and its components.
- Understand and apply the basic concepts of a word processing package.
- Understand and apply the basic concepts of spreadsheet software.
- Understand and apply the basic concepts of database management system.
- Understand and create a presentation using PowerPoint tool.

UNIT– I

Introductory concepts: Memory unit–CPU-Input Devices: Keyboard, Mouse and Scanner. Output devices: Monitor, Printer. Introduction to Operating systems & its features: DOS–UNIX –Windows. Introduction to Programming Languages.

UNIT–II

Word Processing: Open, Save and close word document; Editing text–tools, formatting, bullets; Spell Checker- Document formatting–Paragraph alignment, indentation, headers and footers, numbering; printing–Preview, options, merge.

UNIT–III

Spreadsheets: Excel – opening, entering text and data, formatting, navigating; Formulas – entering, handling and copying; Charts – creating, formatting and printing, analysis tables, preparation of financial statements, introduction to data analytics.

UNIT–IV

Database Concepts: The concept of data base management system; Data field, records, and files, Sorting and indexing data; Searching records. Designing queries, and reports; Linking of data files; Understanding Programming environment in DBMS; Developing menu drive applications in query language (MS–Access).

UNIT–V

Powerpoint: Introduction to Powerpoint-Features– Understanding slide types and viewing slides–

creatingslideshows.Applyingspecialobject– includingobjects&pictures–
Slidetransition–Animationeffects,audioinclusion,timers.

TEXTBOOK:

1.PeterNorton,“IntroductiontoComputers”–TataMcGraw-

Hill.REFERENCEBOOK:

1. JenniferAckermanKettel,GuyHat-Davis,CurtSimmons,“Microsoft2003”,Tata
McGraw-Hill.

OFFICEAUTOMATIONPRACTICALS- (3HRS)

MS-WORD

1. **TextManipulation:WriteaparagraphaboutyourinstitutionandChangethefontsizeandtype,Spellcheck,AligningandjustificationofText**
2. **Biodata:PrepareaBio-datausingtemplate**
3. **FindandReplace:Writeaparagraphaboutyourselfanddothefollowing.FindandReplac**
eplace
- **UseNumberingBullets,FooterandHeaders.**
4. **Tablesandmanipulation:Creation,Insertion,Deletion(ColumnsandRows).Cr**
eamarksheet.
5. **MailMerge:Prepareaninvitationtoinviteyourfriendstoyourbirthdayparty.Pr**
epareatleastfiveletters.

MS-EXCEL

1. **Datasorting-AscendingandDescending(bothnumbersandalphabets)**
2. **Marklistpreparationforastudent**
3. **IndividualPayBillpreparation.**
4. **InvoiceReportpreparation.**
5. **DrawingGraphs.Takeyourowntable.**
6. **CreationofBalanceSheet**

MS-ACCESS

1. **CreateadatabaseusingStudentsMarkdetails.**
2. **PerformtheSortoperationusingthestudentdatabase.**
3. **CreateadatabaseusingEmployeeedetailsandgenerateaFormtogettheinputforthet**
able.
4. **CreateadatabaseusingLibraryInformationSystemwithappropriatefieldsand**
generateareportto displaythe availabilityofbooksinthelibrary.

MS-POWERPOINT

1. **Createaslideshowpresentationforaseminar.**
PreparationofOrganizationCharts
3. **Createaslideshowpresentationtodisplaypercentageofmarksineachsemesterf**
orallstudents
4. **Usebarchart(X-axis:Semester, Y-axis:%marks).**



5. Usedifferentpresentationtemplatedifferenttransitioneffectforeachslide.

INTERNET

- 1. WWW(Browsing)**
- 2. E-mail**



CORE-XI: E-COMMERCE

SUBCODE:

OBJECTIVES:

- To enable the student to understand basics of E-Commerce
- To gain a practical orientation to E-Commerce and E- Business management

OUTCOME:

- Understand the basic concepts and technologies used in the field of management information systems

UNIT I – Introduction to E- commerce: Meaning and concept – E- commerce v/s Traditional Commerce- E- Business & E- Commerce – History of E- Commerce – EDI – Importance , features & benefits of E- Commerce – Impacts, Challenges & Limitations of E- Commerce – Supply chain management & E – Commerce

UNIT II – Business models of E – Commerce: Business to Business – Business to customers – customers to customers - Business to Government – Business to employee – E – Commerce strategy – Influencing factors of successful E- Commerce – E- Business Infrastructure – The internet – Intranets and Extranets – World Wide Web – Voice over IP (VoIP) – The Internet Standards – The HTTP Protocol – Audio and Video Standards – Managing E- Business Infrastructure – Web services and Serviceoriented architecture – (SOA) – New access devices – future of the internet infrastructure.

UNIT III – Marketing strategies & E – Commerce: Website – components of website – Concept & Designing website for E- Commerce – Corporate Website – Portal – Search Engine – Internet Advertising – Emergence of the internet as a competitive advertising media- Models of internet advertising – Weakness in Internet advertising – Mobile Commerce.

UNIT IV – Electronic Payment system: Introduction – Online payment systems – prepaid and postpaid payment systems – e- cash, e - cheque, Smart Card, Credit Card , Debit Card, Electronic purse – Security issues on electronic payment system – Solutions to security issues – Biometrics – Types of biometrics- EDP and business plan



**UNIT V – Legal and ethical issues in E- Commerce: Security issues in E- Commerce-
Regulatory frame work of E- commerce.**

TEXT BOOKS:

- 1. Turban, Efraim, David King et. el.: Electronic Commerce: A Managerial Perspective, Pearson Education Asia, Delhi.**
- 2. Dave Chaffey: E-Business and E-Commerce Management, Pearson Education.**
- 3. Kalakota, Ravi: Frontiers of Electronic Commerce, Addison - Wesley, Delhi**

REFERENCE BOOKS:

- 1. Rayport, Jeffrey F and Jaworksi, Bernard J: Introduction to E-Commerce, Tata McGraw Hill, New Delhi.**
- 2. Smantha Shurety,: E-Business with Net Commerce, Addison - Wesley, Singapore.**
- 3. Rich, Jason R: Starting an E-Commerce Business, IDG Books, Delhi.**
- 4. Laudon, Kenneth C and Carol Guercio Traver : E-Commerce business. Technology. Society, Pearson Education, Delhi.**
- 5. Stamper David A, and Thomas L.Case: Business Data Communications, Pearson Education, New Delhi.**
- 6. Willam Stallings: Business Data Communications, Pearson Education, New Delhi. WEB**

REFERENCES:

- 1. https://www.tutorialspoint.com/e_commerce/e_commerce_tutorial.pdf**
- 2. <https://irp-cdn.multiscreensite.com/1c74f035/files/uploaded/introduction-to-ecommerce.pdf>.**

CORE-VIII: OBJECT ORIENTED PROGRAMMING USING C ++ THEORY AND PRACTICAL

SUBCODE:

UNIT I: Principles of object oriented programming, object-oriented programming paradigm. Applications of OOPs. OOPs concepts – OOPs Languages. Models:-Class Model-State Model and Interaction Model.

UNIT II: Introduction to C++ - Tokens, Keywords-Identifiers-Variables-OperatorsManipulators-Expressions-Control Structures.

UNIT III: Functions - Main Function - Function Prototyping - Inline Functions - Friend and Virtual Functions-Parameters Passing in Functions-Values Return by Functions, file concepts.

UNIT IV: Classes and Objects; Constructors and Destructors; and Operator Overloading and Type Conversions - Type of Constructors - Function overloading.

UNIT V: Inheritance: Single Inheritance - Multilevel Inheritance - Multiple Inheritance - Hierarchical Inheritance - Hybrid Inheritance. Virtual Functions and Polymorphism; Managing Console I/O operations.

RECOMMENDED BOOKS

- 1. R.S. Bichkar – Programming with C -- University Press , Hyderabad**
- 2. K.Sasi Kala Rani - Programming in C - Vijay Nicole Imprint Private Limited,Chennai**

Reference Books:

- 1. E. Balagurusamy, Object Oriented Programming with C++, Tata McGraw-Hill Publishing Company Ltd, 6th edition 2013.**
- 2. H. Schildt. C++ the Complete reference. T M H.1998.**

C++ PRACTICALS

- 1. Simple programs like Area of a circle and square and Temperature conversion, to revise C++ fundamentals**



- 2. Constructor and constructor overloading**
- 3. Friend function**
- 4. Inline Function**
- 5. Function and Function prototyping**
- 6. Function overloading**
- 7. Operator overloading**
- 8. Inheritance, multiple inheritances**
- 9. Virtual Functions**
- 10. File program**

**BSCPHYSICS
APPLIED ELECTRONICS**

SUBJECT CODE :

- 1. Young's modulus -Non-uniform Bending-Koenig's method.**
 - 2. Kundt's Tube–Determination of velocity of sound in solid- Young's modulus.**
 - 3. Spectrometer-Small angled prism-Normal incidence and emergent refractive index of the material of prism.**
 - 4. Spectrometer -(i-i') curve-refractive index.**
 - 5. Spectrometer-Cauchy's constant.**
 - 6. Newton's rings -R₁, R₂ and μ of convex lens.**
 - 7. Spectrometer–Grating N and λ -Normal incidence method**
 - 8. Field along axis of a circular coil-Deflection magnetometer-BH and M.**
 - 9. Field along axis of a circular coil-vibration magnetic needle-BH.**
 - 10. Potentiometer-Calibration of high range voltmeter**
 - 11. Potentiometer-Temperature coefficient of resistance of a thermistor**
 - 12. Potentiometer-EMF of a thermocouple.**
 - 13. Thermoemf-Mirror galvanometer (or) spot galvanometer**
 - 14. B.G-Figure of merit (quantity of charge)**
 - 15. B.G-Internal resistance of a cell**
 - 16. B.G-High Resistance by leakage**
 - 17. B.G-Absolute capacitance**
 - 18. B.G-Comparison of mutual inductances**
 - 19. B.G-Absolute mutual inductance**
- B.G-Self-inductance-Anderson method.**

BASIC ELECTRONICS

SUBJECT CODE:

1. Microprocessor–8085–8-bitAddition
2. Microprocessor–8085–8-bitSubtraction
3. Microprocessor–8085–8-bitMultiplication
4. Microprocessor–8085–8-bitDivision
5. Microprocessor–8085–AdditionofNNumberofsinglebytenumbers
6. Microprocessor–8085–Sortingofgivensetofnumbersinascendingorder
7. Microprocessor–8085–Sortingofgivensetofnumbersindescendingorder
8. Microprocessor–8085–Findingthelargestno.inagivensetofnumbers.
9. Microprocessor–8085–Findingthesmallestno.inagivensetofnumbers.
10. Opamp741-Inverting,Non-Invertingamplifier,unityfollower.
11. Opamp741-Summinganddifferenceamplifier
12. Opamp741–Differentiator,integrator
13. OPamp741–Solvingsimultaneousequations
14. Opamp741–Wein’sBridgeoscillator
15. Opamp741-PhaseShiftoscillator
16. 555-Timer-SchmittTrigger
17. 555-Timer-Astableoperation
18. 555-Timer-Monostable
19. D/A Converter–

4bit,binaryweightedresistormethodBooksfortheStudy&Reference:

1. PracticalPhysicsbyD.Chattopadhyay,P.C.Rakshit,NewCentralBookAgency (p)Ltd.Kolkata(2007).
2. PracticalPhysicsandElectronicsbyC.C.Ouseph,U.J.RaoandVijayendran,S.Viswanathan(Printers&Publishers)Pvt.,Ltd(2007).

PracticalPhysicsbyCLArora,S.Chand&Co.,NewDelhi(2008).

ALLIED PHYSICS PAPER-I

SUBJECT CODE:

Unit 1: Waves and Oscillations

Simple harmonic motion – composition of two simple harmonic motion at right angles (periods in the ratio 1:1) – Lissajou's figures – uses – laws of transverse vibrations of strings – Melde's string – transverse and longitudinal modes – determination of a.c frequency using sonometer (steel and brass wires) – ultrasonics – production – application and uses – reverberation – factors for good acoustics of hall and auditorium.

Unit 2: Properties of Matter

Elasticity : Elastic constants – bending of beam – Young's modulus by non-uniform bending – energy stored in a stretched wire – torsion in a wire – determination of rigidity modulus by torsional pendulum – static torsion.

Viscosity : Coefficient of viscosity – Poiseuille's formula – comparison of viscosities – burette method – Stoke's law – terminal velocity – viscosity of highly viscous liquid – lubrication.

Surface tension: Molecular theory of surface tension – excess of pressure inside a drop and bubble – variation of surface tension with temperature – Jaeger's method.

Unit 3: Thermal Physics

Joule-Kelvin effect – Joule-Thomson porous plug experiment – theory and application – liquefaction of gases – Linde's process – Helium I and II – adiabatic demagnetization. Thermodynamic equilibrium – laws of thermodynamics – entropy change of entropy in reversible and irreversible processes.

Unit 4: Electricity and Magnetism

Capacitor – energy of a charged capacitor - loss of energy due to sharing of charges – magnetic field due to a current carrying conductor – Biot Savart's Law – Field along the axis of the coil carrying current – peak, average and RMS values of ac current and voltage – power factor and current values in an ac circuit – circuit control and protective devices – switch and its types – fuse circuit breaker and relays.

Unit 5: Geometrical Optics

Refraction – Refractive index by microscopy – air cell – refraction at grazing incidence and grazing emergence in prisms – combination of two small angled prisms to produce dispersion without deviation and deviation without dispersion – direct vision prism – constant deviation prism – defects of images – coma – distortion – spherical and chromatic aberration in lenses.

Books for study

1. Allied Physics by R. Murugesan, S. Chand & Co, New Delhi (2008).
2. Waves and Oscillations by Brij Lal and N. Subramanyam, Vikas Publishing house, New Delhi (2001).

1. Properties of Matter by Brij Lal and N. Subramaniam, S. Chand & Co.,



New Delhi (1994).

2. Heat and Thermodynamics by J.B.Rajam and C.L.Arora, S.Chand & Co., 8th edition, New Delhi (1976).

Optics and Spectroscopy by R.Murugesan, S.Chand & Co, New Delhi (2005).

Books for Reference

- 1. Fundamentals of Physics by Resnick Halliday and Walker, John Wiley and Sons, Asia Pvt.Ltd., 6th edition, Singapore.**
- 2. Textbook of Sound by V.R.Khanna and R.S.Bedi, Kedharnaath Publish & Co, 1st edition, Meerut (1998).**
- 3. Electricity and Magnetism by N.S.Khare and S.S.Srivastava, Atma Ram & Sons, 10th Edition, New Delhi (1983).**

Optics by D.R.Khanna and H.R.Gulati, S. Chand & Co., New Delhi (1979).

B.SC(CHEMISTRY)

CORE-XV: MAJOR PRACTICAL-V

SUBCODE:SD263

Physical Chemistry Experiments

1. Critical Solution Temperature
2. Effect of impurity on critical solution temperature of phenol-water system [NaCl]
3. Rast method
4. Transition temperature
5. Heat of neutralization
6. Phase diagram (Simple Eutectic)
7. Kinetics of saponification
8. Kinetics of acid catalyzed ester hydrolysis
9. Kinetics of Persulphate- Iodide reaction.
10. Partition coefficient and Equilibrium constant of $KI + I_2 \rightarrow KI_3$
11. Determination of cell constant, specific conductance and equivalent conductance of strong electrolyte.
12. Estimation of HCl by conductometric titration
13. Estimation of acetic acid conductometric titration
14. Estimation of BaCl₂ by conductometric titration.
15. Estimation of HCl by potentiometric titration
16. Estimation of FAS by potentiometric titration

Books for Reference

1. Venkateswaran, V. Veeraswamy R., Kulandaivelu A.R., Basic Principles of Practical Chemistry, 2nd ed., Sultan Chand & Sons, 1997.
2. Daniels et al., Experimental Physical Chemistry, 7th ed., McGraw Hill, 1970
3. Findlay, A., Practical Physical Chemistry, 7th ed., Longman, 1989.
4. Ahluwalia, V.K., Dingra, S. and Gulati, A. College Practical Chemistry, Orient Longman Pvt. Ltd., Hyderabad 2005.
5. Sharma, K.K. and Sharma, D.S. Introduction to Practical Chemistry, Vikas Publishing House, New Delhi, 2005

CORE-XIV: MAJOR PRACTICAL – IV

Organic analysis preparation

SUBCODE:SD262

ORGANIC PREPARATIONS

Preparation of Organic compounds involving the following chemical conversions

- 1. Oxidation of benzaldehyde**
- 2. Reduction of nitrobenzene**
- 3. Esterification of salicylic acid**
- 4. Acetylation of aniline**
- 5. Hydrolysis of methyl salicylate**
- 6. Nitration of phenol**
- 7. Bromination of acetanilide**

Books for Reference

- 1. Venkateswaran V, Veeraswamy R and Kulandaivelu AR, Basic Principles of Practical Chemistry, 2nd ed., New Delhi, Sultan Chand & Sons (1997).**
- 2. Furniss, B.S., et al. Vogel's Textbook of Practical Organic Chemistry, 5th ed., Prentice Hall, 1989.**
- 3. College Practical Chemistry, V K Ahluwalia; Sunita Dhingra; Adarsh Gulati, Universities Press Private Limited, Chennai, 2005**
- 4. Comprehensive Practical Organic Chemistry: Preparations and Quantitative Analysis, V K Ahluwalia; Renu Aggarwal, Universities Press Private Limited, Chennai, 2004**

Inorganic Quantitative Analysis Gravimetric Analysis

SUBCODE:SD261

- 1. Estimation of Lead as Leadchromate**
- 2. Estimation of Barium as Barium chromate**
- 3. Estimation of Nickel as Nickel - DMG complex.**
- 4. Estimation of Calcium as Calciumoxalate**
- 5. Estimation of Barium as Barium sulphate**
- 6. Estimation of Sulphate as Bariumsulphate.**
- 7. Estimation of Aluminium as Aluminiumoxinate (for demonstration)**
- 8. Estimation of Silver as Silver chloride (fordemonstration)**

Books for References

- 1. Venkateswaran, V. Veeraswamy R. Kulandaivelu A.R., Basic Principles of Practical Chemistry, 2nd Edition, New Delhi, Sultan Chand & Sons,(1997).**
- 2. Jeffery G.H., Bassett J., Mendham J. And Denney R.C, Vogel's Text book of Quantitative Chemical Analysis, 5th ed., John Wiley & Sons Inc., New York,1989**

ALLIED BOTANY I & II – (PRACTICAL)

SUBCODE:SW3A1

Learning outcomes:

- **On completion of this course, the students will be able to:**
- **To study the internal organization of algae.**
- **Identify fungi thallus.●**
- **Develop critical understanding on morphology, anatomy and reproduction of**
- **Bryophytes, Pteridophytes and Gymnosperms.**
- **To study the classical taxonomy with reference to different parameters.**
- **Understand the fundamental concepts of plant anatomy and embryology.**
- **To study the effect of various physical factors on photosynthesis**
 1. **Make suitable micro preparation of types prescribed in Algae, Fungi, Bryophytes, Pteridophytes and Gymnosperms.**
 2. **Micro photographs of the cell organelles ultra structure.**
 3. **Simple genetic problems.**
 4. **To describe in technical terms, plants belonging to any of the family prescribes and to identify the family.**
 5. **To dissect a flower, construct floral diagram and write floral formula.**
 6. **Demonstration experiments**
 1. **Ganong's Light screen**
 2. **Ganong's respiroscope**
 7. **. To make suitable micro preparations of anatomy materials prescribed in the syllabus.**

ALLIED PHYSICS-I & II

SUBJECT CODE:SR3A1

- 1. Young's Modulus by Non-uniform bending using Pin and Microscope**
- 2. Young's Modulus by Non-uniform bending using Optic lever–Scale and telescope**
- 3. Rigidity modulus by Static torsion method.**
- 4. Rigidity modulus by Torsional oscillations without mass**
- 5. Surface tension and Interfacial Surface tension–Drop Weight method**
- 6. Comparison of Viscosities of two liquids–Burette method**
- 7. Specific heat Capacity of a liquid–Half time correction**
- 8. Sonometer–Determination of a.c frequency**
- 9. Newton's rings-Radius of curvature**
- 10. Air wedge–Thickness of a wire.**
- 11. Spectrometer–Grating–Wavelength of Mercury lines–Minimum deviation method**
- 12. Potentiometer–Voltmeter Calibration**
- 13. P.O. Box–Specific resistance**
- 14. B.G.–Figure of Merit (table galvanometer)**
- 15. Construction of AND, OR, NOT gates–using diodes and Transistor**
- 16. Zener Diode–Characteristics**
- 17. NAND gate as a universal gate**

BSCPLANTBIOLOGY&BIOTECHNOLOGY PLANT DIVERSITY-I

SUBJECT CODE :

Learning outcomes:

On completion of this course, the students will be able to:

- Increase the awareness and appreciation of human friendly algae and their economic importance.**
- Conduct experiments using skills appropriate to subdivisions.**
- Understand core concepts and fundamentals of various levels of algal growth.**
- Translate various algal technologies for benefit of the ecosystem.**
- Demonstrate algal growth in different types of natural water.**
- Analyze emerging areas of Algal Biotechnology for identifying commercial potentials of algal products and their uses.**

UNIT - I

Introduction, general characteristics, major classes, range of thallus structure, life cycle patterns and economic importance of algae. Classification of algae - Fritsch (1945) system.

UNIT- II

Range of thallus structure, reproduction and life history of the following: Anabaena, Nostoc, Spirulina, Scenedesmus, Caulerpa, Chara and Diatoms.

UNIT- III

Internal structure of thallus; morphology, reproduction and life-cycle of Sargassum and Gracilaria.

UNIT- IV

Algal cultivation methods, Algal production systems; indoor cultivation methods and large-scale cultivation of algae, harvesting of algae.

UNIT- V

Resource potential of algae - Application of algae as fuel, food (fish, poultry and animals), agriculture and, pharmaceutical. Phycoremediation, Sewage disposal and waste treatment of industrial effluent.

References:

1. Vashishta B.R., Sinha A.K and Singh V.P. 2008. Botany for Degree Students. Algae. S Chand and Co, New Delhi.



- Sahoo, D. 2000. Farming the ocean: seaweeds cultivation and utilization. Aravali International, New Delhi.
3. Sambamurty, A.V.S.S. 2015. A Textbook of Algae. S Chand. New Delhi.
4. Sharma, O.P. 2011. Diversity of Microbes and Cryptogams/Algae. Tata Mc Graw Hill Education Private Ltd, New Delhi.
5. Dinabandhu Sahoo and B.D. Kaushik. 2012. Algal Biotechnology and Environment. I.K. International, New Delhi.
6. Mihir Kumar Das. 2010. Algal Biotechnology. Daya Publishing House, New Delhi.
7. Vashishta, P.C. 2014. S.Chand & Company Ltd, New Delhi.
8. Ian Morris. 1977. An introduction to the algae. Hutchinson & Co (Publishers) Ltd. London.
9. Kumar, H.D. 1999. Introductory Phycology. Affiliated East-West Press, Delhi.
10. Hoek, C. Van, D. 1999. An Introduction to Phycology. Cambridge University Press.
11. Bold, H.C and Wynne, M.J. 1985. Introduction to the Algae. Prentice Hall of India, New Delhi.
12. Fritsch, F.E. 1945. Structure and reproduction of Algae. Cambridge University press.
13. Round, FE. 1984. The Ecology of Algae. Cambridge University Press.
14. Lee, R.D. 2008. Phycology 4th Edition, Cambridge University Press, New York

Web Resources:

1. <https://www.crcpress.com/Therapeutic-and-Nutritional-Uses-of-Algae/Pereira/p/book/9781498755382>
2. <https://www.crcpress.com/Algae-Anatomy-Biochemistry-and-Biotechnology-Second-Edition/Barsanti-Gualtieri/p/book/9781439867327>
3. <https://www.crcpress.com/Marine-Algae-Biodiversity-Taxonomy-Environmental-Assessment-and-Biotechnology/Pereira-Neto/p/book/9781466581678>
4. <https://www.kopykitab.com/Botany-For-Degree-Students-ALGAE-by-B-R-Vashishta-Dr->



A-K-Sinha-Dr-V-P-Singh

5. <https://www.wileyindia.com/a-textbook-of-algae.html>

6. <https://www.kobo.com/in/en/ebook/algae-biotechnology>

7. <https://www.ikbooks.com/books/book/life-sciences/botany/a-textbook-algae/9788188237449/>



PAPER-VII-GYMNOSPERMS,PALEOBOTANYANDEVOLUTION

UNIT-I

General characters and Classification of Gymnosperms (Sporne,1954). Wood structureandeconomicimportanceinGymnosperms.

UNIT- II

Morphology,structureandreproductionofCycas,PinusandGnetum(Nodevelopmental studies)–Comparativestudy.

Unit- III

Geologicaltimescale–era,period,epoch.Fossilizationmethod-Fossiltypesimpression, casts, mold and coal ball, Radio carbon dating. Contribution of BirbalSahni.

Unit-IV

Studyofthefollowingfossilformgenera*Medullosa*and*Pentoxylon*.

Unit-V

Evolution – origin of life, theories of evolution Darwin, Lamark and De veries, modernsynthetictheory.Variation–Adaptationandselection.

Referencebooks

1. Sporne. K.R., 1954- Morphology of Gymnosperms, Hutchinson UniversityLibrary.
2. Gupta.M.N.,1972,-
TheGymnosperms(2ndEdition)ShivaLalAgarwala&Co.,Agra.
3. Vashista,P.C .,1976, Gymnosperms,S.Chand&Co.
4. Sporne,K.R.1991.TheMorphologyofGymnosperme.B.I.Publications,NewDelhi

Bhatnagar,S.P.andMoitra,A.1996.Gymnosperms,NewAgeInt.Pvt.Ltd.,New Delhi

6. Stewart,W.N.andRathwell,G.W.1993.PaleobotanyandtheEvolutionofPlants. CambridgeUniversityPress.

PRACTICAL-GYMNOSPERMS,PALEOBOTANY ANDEVOLUTION

Study of morphology, anatomy and structure of the vegetative and reproductive organsofCycasand Gnetum.–2Hrs

Study of morphology, anatomy and structure of the vegetative and reproductive organsof Pinus and Fossil slides of Lepidodendron.Lepidocarpon, Calamites.

Photograph ofevolutionscientists.–2Hrs

Hours:6

PAPER -V-



BRYOPHYTES AND PTERIDOPHYTES UNIT-I

General characters of Bryophytes, classification

(Watson), lifecycle, origin and evolution of Bryophytes. Spore dispersal mechanisms in bryophytes.

UNIT- II

General characters of Hepaticopsida, Anthocerotopsida and Bryopsida.

Detailed study of structure and reproduction of

- a) Riccia, b) Anthoceros, c) Polytrichum (no developmental studies)

UNIT-III

General characters, classification (Reimer, 1954), apogamy, apospory, homospory and heterospory. Origin and evolution of Pteridophytes.

UNIT-IV

Detailed study of morphology, anatomy, reproduction and lifecycle of following genera:-

- a) Lycopodium, b) Equisetum, c) Dicranopteris, d) Marsilea (no developmental studies)

UNIT-V

Stelar evolution, sporangial organization and evolution in Pteridophytes. Fossil types – Calamites and Lepidodendron.

Reference Books

1. Eames, A., 1963 – Morphology of lower vascular plant, McGraw Hill
2. Forster and Gifford, 1959 – Comparative morphology of vascular plants.
3. Pandey B.R., 1977 – A text book of Botany, Pteridophytes and Gymnosperms, K. Nath & Meerut.
4. Parihar, N.S., 1967 – An introduction of Embryophyta, Vol. III – Pteridophyta, Central book depot, Allahabad.
5. Smith, G.M., 1955 – Cryptogamic Botany, Volume-II – McGraw Hill
6. Sporne, K.L., 1976 – Morphology of Pteridophytes, 4th edition, B.I. Publication.
7. Vashista, P.C., 1971 – Botany for Degree students: Pteridophyta, S. Chand & Co.
8. Watson, E.V. The structure and Life of Bryophytes
9. Prem Puri, 1973. Bryophytes - A broad perspective, Atma Ram & Sons, New Delhi
10. Parihar, N.S. 1991. Bryophytes. Central Book Depot, Allahabad.
11. Parihar, N.S. 1996. The Biology and Morphology of Pteridophytes. Central Book Depot, Allahabad.
14. Puri, P. 1980. Bryophytes. Atma Ram & Sons, New Delhi. Sporne, K.R. 1991. The Morphology of Pteridophytes. B.I. Publ. Pvt. Ltd.

VI – PRACTICAL – III – BRYOPHYTES AND PTERIDOPHYTES

Study of morphology, anatomy and structure of the vegetative and reproductive



Thiruthangal Nadar College
Knowledge is Power

NAAC CYCLE III – AQAR

1.3.2 & 1.3.3 Experiential Learning & Students Internship

1.3 Curriculum Enrichment

Year: 2022-2023

organs of Bryophyte genera and fossils included in the theory syllabus – 2 Hrs
Study of morphology, anatomy and structure of the vegetative and reproductive organs of Pteridophyte genera included in the theory syllabus – 2 Hrs

ALLIED ZOOLOGY – I (THEORY)

SUBJECT CODE: SW3A1

Learning Outcomes

Students will be able to

- (i) Know the general classification of invertebrates and chordates
- (ii) Depict the structural diversity of various animal phyla and their significance

Unit – I

Introduction: Invertebrata-General characters and classification.

Protozoa :Type study: Entamoeba histolytica, Plasmodium vivax and Paramecium caudatum

Porifera :Type Study: Scypha (sycon)

Coelenterata :Type study: Obelia geniculata

Platyhelminthes :Type study: Fasciola hepatica, Taenia solium

Unit – II

Annelida :Type study: Hirudinaria(Leech)

Arthropoda :Type study: Penaeus (Prawn)

Mollusca :Type study: Unio

Echinodermata :Type study: Asterias (Star fish)

Unit –III

Chordata :General characters & Classification

Prochordates :Type study: Amphioxus – Structure and affinities

Vertebrates -Pisces :Type study: Shark

Unit – IV

Amphibians :Type study: Frog

Reptiles :Type study: Calotes

Unit –V

Aves :Type study- Pigeon

Mammalia :Type study- Rabbit

Suggested Readings



- **Ekambaranatha Ayyar, M and Ananthakrishnan,T.N, 1993, Outlines of Zoology, vol .I and II, Viswanathan and O.Madras**
- **P.S.Dhami and J.K.Dhami, Invertebrate Zoology-S.Chand and Co.New Delhi.**
- **Jordan, E.K. and P.S.Verma,1993, Chordate zoology, 12th Edition, S. Chand & Co Ltd, Ram Nagar, New Delhi**

MASTER OF COMMERCE (M.Com.) CUSTOMER RELATIONSHIP MANAGEMENT

SUBCODE: KDACG

Objective:

The paper will provide skill based knowledge of Customer Relationship Management. The Syllabus describes the entire aspects of CRM. The objective of the syllabus is to make the students aware of the concepts and practices of CRM in modern businesses.

Unit I Introduction, Meaning and definitions of CRM- Objective of CRM -benefits of CRM CRM concept: Acquiring customers, customer Retention, loyalty, and optimizing the customer experience. Types of CRM.

Unit II CRM in Marketing: One-to-One and Relationship Marketing.. Cross Selling & Up Selling. Behaviour Predicting, customer Profitability & Value Modeling, Channel Optimization, Event-based Marketing.

Unit III CRM and Customer Service: The Call Centre and customer care, call routing. Call Scripting, Customer Satisfaction-meaning, definition and significance- Customer Satisfaction Measurement.

Unit IV Sales Force Automation Sales Process Management, Contact Management, Lead Management and Knowledge management. Field Force Automation. SFA and mobile CRM-E CRM in business, Analytical CRM: Data warehousing and Data Mining concepts; Data analysis.

Unit V Customer relationship management practice in retail industry, hospitality industry. Banking industry, Insurance industry, telecom industry, aviation industry and education.

Suggested Readings

- 1. Stanley A. Brown: Customer relationship management. John Wiley & Sons Canada, Ltd. Jagdish Seth, Et al:**
- 2. Customer relationship management Paul Greenberg: CRM at the speed of light: capturing and keeping customer in internet real time Jill Dyche:**
- 3. Ramaswamy, et al: Harvard business review on customer relationship management Bernd H Schmitt: customer experience management: a revolutionary approach to connecting with your customer**

Consumer Behaviour

SUBCODE:KDACB

Objective: To develop knowledge and skill in the application of marketing research tools and techniques and to develop an understanding of consumer behavior

Unit I The consumer behavior-Meeting Changes and Challenges-Perspectives towards the study of consumer behavior - Understanding about the dark side of the consumer-various consumer behavior models- Consumer behavior and marketing strategy

Unit II Internal influences on Consumer behavior-Personality-self image and Life style-Consumer motivation-Consumer involvement-Consumer perception- Consumer Learning and knowledge Consumer attitude and change

Unit III External influences on consumer behavior-The Influences of Culture on Consumer Behaviour Subcultures and Consumer Behaviour Social Class and Consumer Behaviour-Reference Groups and Family- Consumer Influence and the Diffusion of innovations

Unit IV The consumer decision process, prospect theory, heuristics, persuasion- Consumer decision making processes- Need recognition Information search Consumer Evaluation process - Purchase decision- Post purchase decision-Marketing strategies involved in each stage of the process

Unit V Family and Household Decision making The role of Reference group in purchase decisions Word of Mouth (WOM)-Demographics and psychographics in consumer purchase decision of the Consumer- Global consumer and diffusion and innovations Consumer behavior and social marketing Consumer and public policy

Book References

- 1. Leon G Schiffman, Lesle Latar Kinok, "Consumer Behaviour, Pearson Education, New Delhi**
- 2. David L Loudon, Albert J Della Bitta, "Consumer Behaviour, McGraw Hill, New Delhi**



3. JayD.Lindquist and M. Josephsirgy. "Shopper, buyer & consumer Behaviour, Theory and Marketing application, Biztantra Publication, New Delhi

4. Sheth Mittal, Consumer Behaviour A Managerial Perspective". Thomson Asia (P) Ltd, Singapore

5. Srivastava K Consumer Behaviour an Indian Context", Goal Gota Publishing Co, New Delhi

6. Gupta SL & Sumitra Pal "Consumer Behaviour an Indian Perspectives", Sultan Chand, New Delhi

7. Bajju, Dominique Xavedel, "Consumer behaviour, Concepts Applications and cases" Vikas publishing house (P) Ltd, New Delhi

8. Henry Assael Consumer behaviour strategic approach Biztantra, New Delhi
Web References

www.marketingpower.com

www.tutoru.net www.marketingprofs.com

Consumer Rights and Education

SUBCODE:KDACC

Unit I Consumer Movement in India Profile of Indian Consumer -Problems of Indian Consumers -Consumerism- illeffects of consumerism/Limitation of 'Buyer Beware' concept

Unit II Right of Consumers-Responsibilities of Consumers -Consumer Education & awareness building-unfair trade practices-Caveat emptor

Unit III Consumer Protection Act- Main Provisions-Redressal forums-District Level-State Level and National Level -Powers & Functions -Filing of Complaints Procedure Regulatory Authorities & OMBUDSMAN

Unit IV Consumer pressure groups-voluntary consumer organizations- Consumer Protection Councils Remedy & Redressal of Grievances-Legal and non-legal

Unit V Consumer satisfaction and social Responsibility of Business Consumer Communication -ethics in advertisement-Consumer care mechanism in Private and Public Sector

Book References

1. Indian consumer protection Act

2 Law of consumer protection-Avatar Singh-Eastern Book Company

3. Consumer protection- Jurisprudence-Balakrishna Eradi-Lexis Nexis Butterworth Publishing

4. Commentary on the Consumer protection-

Universal Law Publication Web References

Advertising and Salesmanship

Objective: To enable students to learn the nuances of target

marketing and personal selling and public relations



UNIT 1 Introduction to integrated Marketing Communication - Components of Marketing communication-Advertising-Salesmanship and public relations-The role of Integrated Marketing communication in marketing process- Evaluation of marketing strategy and analysis.

Evaluating Social, Ethical and Economical aspects of advertising

UNIT 11 Identification of Target markets - Organization for Advertising and Salesmanship - The communication process Sources Message and channel factors- Advertising objectives and Budgeting- Determining the promotional objectives- DAGMAR approach - Media planning and strategy

UNIT III Determining different media strategy - Media mix- Evaluation of broadcast media - Evaluation of Print media and evaluation of other support media such as Home media and in-store media and Internet media

UNIT IV Direct Selling- Role of Salesmanship in direct selling- Evaluating the role of salesmanship and its effectiveness- The Internet and Interactive media- Measuring its effectiveness

UNIT V Personal selling and Public relations - The role of personal selling and public relations in Integrated Marketing communication Contribution of Personal selling with other media - Evaluating its effectiveness

Book References

- 1. George E. Belch and Michael A. Belch, Advertising and Promotion, McGraw Hill Company**
- 2. Ronald, Karen Whitehill King, and J. Thomas Russell, Kleppner's Advertising Procedure, Pearson Education International, Prentice Hall**
- 3. Sarangi, Advertising and Sales Promotion, Asian Books**
- 4. Gupta, Advertising and Sales Promotion,**

EPH Publisher Web References

www.marketingpower.com

www.tutor2u.net

www.marketingprofs.com

InternationalMarketing

SUBCODE:KDACB

Objective: To offer knowledge and expertise in the marketing business at global level and to provide exposure on marketing practices of business firms

UNIT I The concept of global marketing-Importance, Growth and Benefits-Scope and Challenge of international marketing-The dynamic environment of international marketing

UNIT II Developing Global Marketing strategies - Global marketing management -Planning and Organization - International Marketing Information System and Research -Understanding Global Consumers-Cultural Dynamics in assessing Global markets

UNIT III International product policy- Product positioning in foreign market-Product standardization and Adoption - Brands, Trademarks, Packaging and Labeling International marketing of services-International product pricing policy-Export pricing-Pricing for international markets

UNIT IV International promotional policy- International advertising - Developing International advertising strategy-international sales force and Their management-Other forms of promotion for global markets

UNIT V Overseas marketing channel policy -Managing international distribution channels Multinational retailers and Wholesalers-Global Logistics-Contemporary issues in international marketing-Future Prospects in International marketing

Raju M S and Dominique, Xardel, Marketing Management International Perspectives, Vijay Nicole imprints

Dana-

Nicoleta, Laseu, 'International Marketing', Biztantra 2

003 Vasudeva RK, 'international Marketing



Excelbooks,2004

**SrinivasanR,
InternationalMarketing'PrenticeHallIndiaWarrenJ.Keagan,MarkGreen,'GlobalMar
keting3/e,Prentice Hall**

**PhilipR.Caterora, JohnGraham, 'InternationalMarketing', Irvine–sagepublications,
2004**

**MichalR.Czinkota,IlkkaA.Ronkainen,'BestPracticesinInternationalMarketin
g,HarcourtCollege Publishers,2001**

**VernTerpstra,Ravisarathy,'InternationalMarketing',Harcourtcollegepublis
hers,2001Rathor,JaniRathor,'InternationalMarketing',Himalayapublishing
House**

**SherlekarSA,V.S.Sherkar,'GlobalMarketingManagement',
HimalayapublishingHouse**

WebReferences

www.emeraldinsight.com

www.taylorandfrancis.com

www.oxfordjournals.org



M.Sc.COMPUTERSCIENCE

Design and analysis of algorithm

SUBCODE:PSD1A

DivideandConquer :

- a. MergeSort
- b. QuickSort
- c. MaximumandMinimum

GreedyMethod:

- d. KnapsackProblem
- e. Treevertexsplitting
- f. JobSequencing

DynamicProming:

Multistage

- g. AllPairsShortestPaths
- h. StringEditing,
- i. BFSandDFS.

2. BackTracking:

- a. 8QueenProblems

HamiltonianCycles



AdvancedJavaProgrammingLab

SUBCODE:PSD2B

- 1. HTMLtoServletApplications**
- 2. ApplettoServletCommunication**
- 3. DesigningonlineapplicationswithJSP**
- 4. CreatingJSPprogramusingJavaBeans**
- 5. WorkingwithEnterpriseJavaBeans**
- 6. PerformingJavaDatabaseConnectivity.**
- 7. CreatingWebserviceswithRMI.**

CreatingandSendingEmailwithJavaBuildingweb applications

Practical – III:RDBMS Lab

SUBCODE:PSD21

- 1. LibraryInformationProcessing.**
 - 2. StudentsMarksheetprocessing.**
 - 3. Telephonedirectorymaintenance.**
 - 4. Gasbookinganddeliverysystem.**
 - 5. ElectricityBillProcessing.**
 - 6. BankTransactions (SB).**
 - 7. Payrollprocessing.**
 - 8. Inventory**
 - 9. QuestionDatabaseandconductingquiz.**
- Purchaseorderprocessing.**



**Practical–
IV:ImageProcessingusing
JavaLab**

SUBCODE:PSD22

- 1) **Basicimagemanipulation(reading,writing,quantization,subsampling)**
- 2) **BasicIntensitytransformation**
- 3) **HistogramProcessing**
- 4) **Filteringinspatialdomain-2DFFTandsmoothingfilters**
- 5) **ImagecodingusingtransformationswithSPIHTalgorithm
ColorimageEnhancementwithspatialsharpening.**

Principles of Compiler Design

SUBCODE: PSD3A

Unit 1: Introduction to Compilers - Finite Automata and lexical Analysis.

Unit-2: Syntax Analysis: Context free grammars - Derivations and parse trees – Basic parsing techniques

-LR parsing.

Unit 3: Syntax-directed translation, symbol tables.

Unit 4: Code optimization -

More about code optimization. Unit 5: Code generation -

Error detection and recovery.

Recommended Texts:

- 1) A.V.Aho, J.D.Ullman, 1985, Principles of Compiler Design, Narosa Pub-House.

Reference Books

- 1) D.Gries, 1979, Compiler Construction for Digital Computers, John Wiley & Sons

A.V.Aho, Ravi Sethi, and J.D.Ullman, 1986, Compilers Principles, Techniques and Tools, Addison Wesley Pub.Co.



Information Security

SUBCODE:PSD3B

**Unit 1: Introduction: Security- Attacks- Computer criminals- Method of defense
Program Security: Secure programs- Non-malicious program errors- Viruses and other malicious code- Targeted malicious code- Controls against program threats**

Unit 2: Operating System Security: Protected objects and methods of protection- Memory address protection- Control of access to general objects- File protection mechanism- Authentication: Authentication basics- Password- Challenge-response- Biometrics.

Unit 3: Database Security: Security requirements- Reliability and integrity- Sensitive data- Interface- Multilevel database- Proposals for multilevel security

Unit 4: Security in Networks: Threats in networks- Network security control- Firewalls- Intrusion detection systems- Secure e-mail- Networks and cryptography- Example protocols: PEM-SSL- Ipsec.

Unit 5: Administering Security: Security planning- Risk analysis- Organizational security policies- Physical security- Legal- Privacy- and Ethical Issues in Computer Security - Protecting programs and data- Information and law- Rights of employees and employers- Software failures- Computer crime- Privacy- Ethical issues in computer society- Case studies of ethics.

Recommended Text

- 1) **C.P. Pfleeger, and S.L. Pfleeger, Security in Computing, Pearson Education, 4th Ed, 2003**
- 2) **Matt Bishop, Computer Security: Art and Science, Pearson Education, 2003.**

Reference Books

- 1) **Stallings, Cryptography & Network Security: Principles and Practice, 4th Edition, 2**



006

Kaufman,Perlman,Speciner,NetworkSecurity,PrenticeHall,2ndEdition, 2003

- 3) **EricMaiwald,NetworkSecurity:ABeginner’s Guide, TMH,1999**
- 4) **MacroPistoia,JavaNetworkSecurity,PearsonEducation,2ndEdition,1999**
- 5) **Whitman, Mattord, Principles of informationsecurity,Thomson, 2ndEdition,2005**

Websiteand-LearningSource

- 1) <http://www.cs.gsu.edu/~cseyqz/courses/ai/aiLectures.html>
- 2) <http://www.eecs.qmul.ac.uk/~mmh/AINotes/>



Practical–V:MiniProject

SUBCODE:PSD4Q

Credit:2

Each student will develop and implement individually application software based on any emerging latest technologies.

Project&Viva-Voce

Credit:20

The project work is to be carried out either in a software industry or in an academic institution for the entire semester and the report of work done is to be submitted to the University.

BA CRIMINOLOGY AND POLICE ADMINISTRATION

CORE-XII: JUVENILE JUSTICE

SUBJECT CODE:AC25C

Learning Outcome:

- **Trace the history of the juvenile justice system in India.**
- **Define a child and delinquent and delinquent behaviours.**
- **Analyze the laws relating to delinquency and other child-related problems.**
- **Understand legal instruments such as the United Nations Convention on Child Rights, Fundamental Rights in the Constitution of India, other national and state-level commissions.**
- **Analyze the characteristics of juvenile delinquents with respect to socio-economic status, gender and family background and risk factors of recidivism.**
- **Explain the classical theories, psychological theories, sociological theories and control theories with respect to juvenile delinquency.**

Unit I: Introduction

Definition: Child – Delinquents; History of the juvenile justice system in India – Types of problem children: Ungovernable, neglected, destitute and deviant – *parens patriae* – *in loco parentis*.

Unit II: Rights of the Child

Basic rights – Child rights as human rights – United Nations Convention on the Rights of the Child (UNCRC) – Legal protection for children – Fundamental rights as defined by the Constitution of India – National Commission for Protection of Child Rights – State Commission for the Protection of Child Rights

Unit III: Risk Factors of Juvenile Delinquency

Gender – Socio-economic status – Family background – Neighbourhood – Childhood abuse and neglect – Peer group – School environment – Academic performance – Offence history – Addiction: Substance, alcohol, tobacco and social media

Unit IV: Theories of Juvenile Delinquency

Classical theories: Concept of free will – Rational choice theory; Social Disorganization theory by Shaw and McKay – Robert K. Merton's Strain theory; Control theories: Hirschi's Social control theory of crime – Self-control theory – Drift theory



Unit V: Juvenile Justice System in India

Juvenile Justice (Care and Protection of Children) Act, 2015 – Institutions for Children in Conflict with Law: Juvenile Justice Board (JJB) – Observation homes – Special home – Borstal school – Place of safety – Special Juvenile Police Unit; Institutions for Children in Need of Care and Protection: Child Welfare Committee (CWC) – Open shelter – Foster care – Children’s/Shelter homes – The Protection of Children from Sexual Offences Act, 2012

References:

1. Cox, S. M. (2017). *Juvenile justice: A guide to theory, policy and practice*. Los Angeles: SAGE.
2. Freeman, M. D. (2014). *The future of children’s rights*. Leiden, The Netherlands: Brill Nijhoff.
3. Juvenile Justice (Care and Protection of Children) Act, 2015 (Ind.).
4. Kumari, V. (2012). *The juvenile justice system in India*. New Delhi: Oxford University Press.
5. Kumari, V. (2017). *The Juvenile Justice (Care and Protection of Children) Act 2015: Critical analyses*. Gurgaon, Haryana, India: Universal Law Publishing, an imprint of LexisNexis.
6. Merlo, A. V., Benekos, P. J., & Champion, D. J. (2016). *The juvenile justice system: Delinquency, processing and the law*. Boston, MA: Pearson.
7. Thompson, K., & Morris, R. (2016). *Juvenile delinquency and disability*. New York: Springer Nature.
8. Whitehead, J. T., & Lab, S. P. (2013). *Juvenile justice: An introduction*. Waltham, MA: Lexis Nexis Matthew Bender.

CORE- XV: DISSERTATION

SUBJECT CODE:AC261

Learning Outcome:

- Provide a platform to conduct micro-level research based on the research methods, statistics and computer-oriented applications learned in the previous semester.
- Develop the skills to identify the research problem, and frame hypotheses and research questions.
- Understand the methodologies and techniques involved in investigating the research problem.
- Describe and present the outcome of the research in the form of a report.
- Develop presentation skills and the ability to defend questions during a *viva-voce* examination.

The students, under the guidance of a teacher, will take up a project on a relevant topic within the scope of Criminology or related subfields.

Learning Outcome:

- Provide a platform to conduct micro-level research based on the research methods, statistics and computer-oriented applications learned in the previous semester.
- Develop the skills to identify the research problem, and frame hypotheses and research questions.
- Understand the methodologies and techniques involved in investigating the research problem.
- Describe and present the outcome of the research in the form of a report.
- Develop presentation skills and the ability to defend questions during a *viva-voce* examination.

The students, under the guidance of a teacher, will take up a project on a relevant topic within the scope of Criminology or related subfields.

Details of the evaluation procedure:



(i) Each candidate should submit a project report and should appear for a public *viva voce* before a panel of internal and external examiners.

(ii) The project report will be evaluated at two levels.

(iii) At the first level, for continuous assessment, the teacher will evaluate the students for 40 marks on the following criteria:

- **Project review presentations (20 marks)**
- **Regularity in attending the discussions (10 marks)**
- **Quality of chapters (10 marks)**

(iv) At the second level, during the end semester examination, the evaluation will be conducted by a panel of examiners, including internal examiners, for 60 marks.

- **A public *viva voce*, where the first and second year students will be the audience.**
- **The students will be evaluated on the following criteria:**
- **Content of presentation (20 marks)**
- **Presentation skills (20 marks)**
- **Ability to defend the questions (20 marks)**

CORE-VIII: CONTEMPORARY FORMS OF CRIME

SUBCODE:AC24B

Learning Outcome:

- **Analyze the emergence, concept, nature and scope of contemporary forms of crime.**
- **Discuss the definitional evolution, causes, types, characteristics of white-collar crime and socio-economic offences in India.**
- **Describe the history, hierarchal organizational structure, patterns and characteristics of organized crime.**
- **Understand the emergence of transnational organized crime and terrorism.**
- **Discuss the globalization of crime, history, causes and consequences of terrorism.**
- **Analyze the evolution, types, extent, profile of computer criminals and cyber warfare.**

Unit I: Introduction

Concept of crime – Criminal behaviour – Nature and scope of contemporary crimes – Emergence of contemporary crimes

Unit II: White-collar Crime

Definitional evolution of white-collar crime – Causes for white-collar crime – Types of white-collar crimes – Characteristics of white-collar crime – Socio-economic offences in India

Unit III: Organized Crime

History of organized crime – Hierarchical organizational structures – Patterns of organized crimes – Characteristics of organized crimes – Drug trafficking – Smuggling of arms, persons, animals – Trafficking of persons, human organs, psychotropic substances – Prostitution – Environmental crime

Unit IV: Transnational Crime and Terrorism

Concept of transnational crime – Defining terrorism (international and domestic) – Causes and consequences – Characteristics of terrorism – Terrorism and organized crimes – Extremism – Insurgency

Unit V: Cybercrimes

History and nature of computer crimes – Definition and key concepts – Types of cybercrimes – Extent of cybercrime – Profile of computer criminals – Cyber warfare – Introduction to IT Act 2000



References:

1. Aas, K. (2013). *Globalization & crime*. London: SAGE.
2. Borowitz, A. (2005). *Terrorism for self-glorification* (1st ed.). Kent, OH: Kent State University Press.
3. Furst, G. (2009). *Contemporary readings in criminology*. Los Angeles, CA: SAGE.
4. Hill, J., & Marion, N. (2016). *Introduction to cybercrime*. Westport, CT: Praeger
5. Hynson, C. (2012). *Cybercrime*. Mankato, MI: Smart Apple Media.
6. Jewkes, Y., & Yar, M. (2013). *Handbook of Internet Crime*. Hoboken: Taylor and Francis.
7. Mishra, V. (2013). *Human trafficking*. New Delhi: Sage.
8. Mukherjee, J. (2005). *An insider's experience of insurgency in India's North-East* (1st ed.). Delhi: Anthem Press.
9. Nair, P. M. (2002). *Combating organised crime*. Konark Publishers.
10. Reichel, P., & Albanese, J. (2014). *Handbook of transnational crime and justice*. Thousand Oaks, CA: Sage.
11. Singh, B. V. (1993). *Communal violence*. New Delhi: Rawat Publications.
12. Strader, J. (2011). *Understanding white collar crime* (3rd ed.). New Providence, NJ: LexisNexis.
13. Walker, C. (1998). *Crime, criminal justice and the Internet*. London: Sweet & Maxwell.
14. Wright, A. (2011). *Organised crime*. London: Routledge.

CORE-VII: INTRODUCTION TO FORENSIC SCIENCE

SUBJECT CODE:AC4A

Learning Outcome:

- **Understand the definition, scope and basic principles of forensic science, exhibit the various tools and techniques utilized in the application of the subject.**
- **Understand the significance of evidence, types and classification of physical evidences such as blood, fibre, paint, firearms, fingerprints, etc.**
- **Examine the forensic documents, tools and techniques employed, types of forgeries, types of handwriting and its characteristics, etc.**
- **Understand the basic principles and stages involved in crime scene reconstruction.**
- **Describe the scope and importance of medical evidence such as oral and documentary, etc.**
- **Understand the importance of medico-legal autopsy and type and characteristics of wounds, etc.**

Unit I: Introduction – Forensic Science

Forensic Science: Conceptual definitions – Scope – Basic principles; Forensic tools and techniques – Application of forensic science

Unit II: Physical Evidence

Significance of evidence – Locard's principle – Types of evidence – Classification of physical evidence: Blood, fibre, paint, firearms, tyre marks, fingerprints, footprints, bite marks – DNA typing – Collection of evidence – Preservation of evidence – Forensic anthropology

Unit III: Forensic Document Examination

Questioned Documents: Definition and Types – Examination of altered documents – Tools and techniques for examination and identification – Types of forgeries, characteristics and detection – Determination of authorship of handwriting

Unit IV: Crime Scene Reconstruction (CSR)

Nature and importance of CSR – Basic principles and stages involved

– Types and classification of reconstruction – Role of logic in CSR –

Writing a reconstruction report – Cases of special importance



pertaining to forensic examination

Unit V: Forensic Medicine

Conceptual definitions – Scope – Medical evidence: Oral and documentary – Importance of medico-legal autopsy – Definition of wounds – Types of wounds – Characteristics of wounds – Medico-legal importance of injuries: Suicidal, accidental, homicidal wounds, firearm wounds, thermal injuries, electrical injuries

References:

1. Dekal, V. (2014). *Exam preparatory manual for undergraduates: Forensic medicine & toxicology (theory & practical)*. New Delhi: Jaypee Brothers Medical.
2. Gardner, R., & Bevel, T. (2009). *Practical crime scene analysis and reconstruction*. Boca Raton, FL: CRC Press.
3. Lewis, J. (2014). *Forensic document examination*. New York: Academic Press.
4. Nageshkumar, G. (2007). *Practical forensic medicine*. New Delhi: Jaypee Brothers Medical.
5. Nanda, B. & Tewari, R. (2001). *Forensic science in India: A vision for the twenty-first century*. New Delhi: Select Publishers.
6. Subrahmanyam, B. (2001). *Modi's medical jurisprudence & toxicology*. New Delhi: Butterworth India.
7. Turvey, B., & Crowder, S. (2017). *Forensic investigations – an introduction*. Academic Press.
8. Young, T., & Ortmeier, P. (2010). *Crime scene investigation*. Pearson.

CORE-VI: INTRODUCTION TO HUMAN RIGHTS

SUBJECT CODE:AC23B

Learning Outcome:

- **Describe the concept, evolution, classification and characteristics of human rights.**
- **Understand the human rights of various vulnerable groups.**
- **Explain the human rights of crime victims, accused/arrested persons, and prisoners' rights.**
- **Illustrate various international and national legal instruments pertaining to human rights.**
- **Understand the role of government organization to enforce human rights and non-governmental organization to protect human rights.**

Unit I: Introduction

Definition and Concepts – Evolution of human rights – Classification of human rights – Characteristics of human rights – Significance of human rights – Theories of human rights – Human rights' duties

Unit II: Human Rights of Vulnerable Groups

Human rights of women, children, elderly, physically & mentally challenged, migrants, indigenous groups, refugees, religious minorities, SC/STs – Specific legal provisions (IPC, CRPC & other SLL) to deal with violations against vulnerable groups – Policies and programmes to prevent atrocities

Unit III: Human Rights in the Criminal Justice System

Handcuffing – Torture – Custodial violence – Third degree method of interrogation – Procedural safeguards – Rights of the accused/arrested person – Rights of prisoners – Rights of women prisoners – Rights of victims of human rights violations – Judicial activism and review

Unit IV: Legal Instruments

Universal Declaration of Human Rights, 1948 – International

Covenants on Human Rights – International Covenant on Civil &

Political Rights (ICCPR), 1966 – International Covenant on Economic,

Social and Cultural Rights (ICESCR), 1966 – Constitution of India –

Fundamental duties (Part III) & Directive Principles of State Policy



(Part IV) – The Protection of Human Rights Act, 1993

Unit V: Protection and Enforcement of Human Rights

Role of Governmental & Non-Governmental Organizations in advocacy and redressal of grievances – National Human Rights Commission and State Human Rights Commission – United Nations Organization, Amnesty International, International Red Cross Society, Human Rights Watch, Peoples’ Watch, People’s Union for Civil Liberties (PUCL)

References:

1. Alston, P. (1992). *The United Nations and human rights: A critical appraisal*. Oxford, England: Clarendon Press.
2. Basu, P., & Rajendra Babu, S. (2007). *Law relating to protection of human rights under the Indian constitution and allied laws*. New Delhi: Modern Law Publications.
3. Begum, M. (2000). *Human rights in India: Issues and perspectives*. New Delhi: APH Publishing Corporation.
4. Dharmadhikari, D. (2016). *Human values & human rights* (2nd ed.). New Delhi: Universal Law Publishing Pvt Ltd.
5. Kumar, A. (2002). *Human rights: Global perspective*. New Delhi: Sarup & Sons.
6. Pande, G. S. (2002). *Constitutional law of India* (8th ed.). Allahabad: Allahabad Law Agency.
7. South Asia Human Rights Documentation Centre. (2010). *Handbook of human rights and criminal justice in India*. New Delhi: Oxford University Press.
8. Thilagaraj, R. (2000). *Human rights and criminal justice administration*. New Delhi: Manohar Publications.
9. Tomuschat, C. (2014). *Human Rights: Between Idealism and Realism* (3rd ed.). New York, NY: Oxford Univ. Press.

ALLIED-II: ABNORMAL PSYCHOLOGY

SUBJECT CODE:AC32B

Learning Outcome:

- **Define the concept of abnormal behaviour and explain the various types of abnormal behaviour.**
- **Understand the relationship between abnormal behaviour and criminality.**
- **Understand the various theoretical approaches to abnormality.**
- **Explain the classification of disorders under DSM-5.**
- **Describe the usage of various psychological tools.**
- **Discuss the concept and different types of psychotherapy.**

Unit I: Introduction

Concept of abnormal behaviour – Types of abnormal behaviour – Abnormal behaviour and criminality

Unit II: Theoretical Approaches to Abnormality

Psycho-dynamic approach – Sigmund Freud, Carl Jung, Alfred Alder – Humanistic approach: Carl Rogers, Abraham Maslow – Behavioural approach – Ivan Pavlov

Unit III: Psychological Disorders

Classification of disorders under DSM-5: Neuro-developmental disorders – Schizophrenia spectrum and other psychotic disorders – Bipolar and related disorders – Depressive disorders – Anxiety disorders – Obsessive-compulsive and related disorders – Trauma and stressor related disorders – Personality disorders and other disorders

Unit IV: Psychological Tools

CAGE Questionnaire (CAGE) – Buss-Perry Aggression Questionnaire (AGQ) – Hamilton Anxiety Rating Scale (HAM-A) – Liebowitz Social Anxiety Scale (LSAS) – Altman Self-Rating Mania Scale (ASRM) – Edinburgh Postnatal Depression Scale (EPDS) – Montgomery-Asberg Depression Rating Scale (MADRS) – Personality Type Indicator (PTI)

Unit V: Psychotherapy

Psychotherapy: Meaning, techniques, new developments in

Psychoanalysis – Gestalt Psychotherapy: Basic concepts,



techniques, evaluation – Positive psychotherapy – Group
psychotherapy – Cognitive Behavioural Therapy –
Hypnotherapy – Interpersonal psychotherapy – Integrative
psychotherapy

References:

1. Bartol, C., & Bartol, A. (2008). *Criminal behavior*. Upper Saddle River, N.J.: Pearson Prentice Hall.
2. Bryant, Clifton D. (2000). *Encyclopedia of criminal and deviant behaviour*(10th ed.). New York: Brunner Routledge Taylor & Frances Group.
3. Canter, D. (1997). *Criminal detection and the psychology of crime*. Aldershot, Hants, England: Dartmouth Pub.
4. Canter, D., & Youngs, D. (2009). *Investigative psychology: Offender profiling and the analysis of criminal action*. Chichester, West Sussex, UK: John Wiley & Sons.
5. Cassel, E., & Bernstein, D. (2007). *Criminal behaviour*(2nd ed.). Mahwah, NJ: L. Erlbaum Associates.
6. Hollin, C. R. (2013). *Psychology and crime: An introduction to criminological psychology* (2nd ed.). London: Routledge.
7. Howitt, D. (2002). *Forensic and criminal psychology*. UK: Prentice Hall.
8. Jones, D. W. (2008). *Understanding criminal behaviour: Psycho-social approaches to criminality*. Cullompton: Willan.
9. Miller, L. (2012). *Criminal psychology nature, nurture, culture: A textbook and practical reference guide for students and working professionals in the fields of law enforcement, criminal justice, mental health, and forensic psychology*. Springfield, Ill.: Charles C. Thomas.

B,SC MATHEMATICS

Programming Language ‘C’ with Practicals

SUBCODE:

THEORY

UNIT I

Introduction - Constants-Variables-Data-types -Operators, Precedence of operators – Managing Input and Output Operations .Chapters : 2,3 and 4.

UNIT II Decision making and branching: Simple if, if else, nested if, else if ladder and switch statement – conditional operator – go to statement. Decision making and looping : while, do while and for statement – nested for loops – jumps in loops (continue and break statements). Chapters : 5 and 6.

UNIT III Arrays : One dimensional and 2 dimensional arrays – declarations – initialization of arrays. Character Arrays and Strings: Declaration and Initialization of Strings - Reading and Writing strings - Operations on strings - String handling functions. Chapters: 7 and 8

UNIT IV Functions : Need for User defined functions- A Multi function Program- Elements of User defined functions - Function definition , Function Call and Function Declaration – Return Values and their types- Categories of functions – Nesting of Functions- Recursion . Pointers: Understanding Pointers-Accessing address of a variable- Declaration and Initialization of Pointers- Accessing a Variable through its Pointer- Function call by reference - call by value. Chapters : 9 and 11.

UNIT V File Management in C : Definition-Opening and Closing a file- Input/ Output operations on Files- Error Handling during I/O operations. Chapter 12.

Content and Treatment as in

“Programming in ANSI C”, 7th Edition, 2017, by E. Balagurusamy, McGraw Hill Education India Private Limited.

Reference:-

1. “Programming in C” by Venugopal.
2. “Programming with C” by Gottfried.B.S ,Schaum’s outline series, TMH 2001.
3. “Let us ‘C’” by YashvantKanitkar ,BPB Publications. 4. “Programming with C” by R.S.Bichkar,Universities Press (INDIA) Pvt.Ltd.

e-Resources:

1. [.https://www.w3schools.in/c-tutorial](https://www.w3schools.in/c-tutorial).
2. [.https://en.cppreference.com/w/c](https://en.cppreference.com/w/c).

M.PHIL COMMERCE

Paper I - Business Research Methods

SUBCODE:CAA01

Objectives:

- a. To impart knowledge on the various concepts, methods and tools of research**
- b. To enhance the skill needed for the interpretation of data and preparation of research report**

UNIT I: Research - meaning and purpose - essentials of scientific method - limitations in social and behavioural research - types of research: exploratory, pure, applied, analytical, descriptive, historical, experimental, survey, case study.

UNIT II: Hypothesis - meaning of hypothesis - types of hypothesis - sources of hypothesis - testing of hypothesis - errors in testing - sampling techniques: sampling theory - sampling error and data collection error - sample size - sampling methods and their application - testing the appropriateness of a sample - sample unit and sample size.

UNIT III: Data collection - primary and secondary data - observation - interview - questionnaire - telephone interviews - construction of interview schedule and questionnaire - scales - checklist, pre-test, pilot study - reliability testing and validating a questionnaire – attitude measurement - methods of scale construction - multidimensional scaling.

UNIT IV: Sampling distribution - testing of hypothesis - Z test, t test, F test - estimating parameter value - relational analysis - parametric and non-parametric - correlation and regression - association – Karl Pearson's 'r' - Kendall's tau and Spearman' rho – Chi-square test - Analysis of differences among variances and attributes - parametric analysis of variance (F-test - one way and two way analysis of variance) - non-parametric analysis of variance - Friedman test - Kruskal - Wallis test - Mann Whitney test - Wilcoxin test - using computer software - interpretation of findings - fallacies and pitfalls (theory and simple problems). Software Packages for data analysis – SPSS, etc



UNIT V: Processing and analysis of data: checking - editing - coding - transcription and tabulation – data processing through computers - report writing - target audience - types of reports - contents of a report - style and conventions in reporting - steps in drafting a report.

(Theory 60 % and Problems 40 %)

Suggested readings

- 1. Anderson J. Berry H.D. & Poole M., ‘Thesis and Assignment Writing’, Wiley Eastern Limited**
- 2. Claus Moser & Graham Kalton, Survey Methods in Social Investigation, Gower Publishing Co**
- 3. David Kaplan, The Sage Hand book of Quantitative Methodology, Sage Publications**
- 4. Robert G. Murdick, Business Research: Concepts and Practice, International Text Book Company**
- 5. Taylor,et al., Research Methodology: A Guide for Researchers in Management and Social Sciences, PHI Learning**
- 6. Uma Sekaran, Research Methods for Managers: A Skill Building Approach, John Wiley and Sons**
- 7. William C. Emory, Business Research Methods, R.D. Irwin Inc**

Online resources

- a. www.us.sagepub.com/en-us/nam/sage-research-methods
- b. www.sheffield.ac.uk/scharr/prospective_students/masters
- c. www.edutechwiki.unige.ch/en/Research_methodology_resources

PAPER II - ADVANCED FINANCIAL MANAGEMENT

SUBCODE:CAA02

Objectives:

- a. To enable students to learn the basic framework of financial management**
- b. To enable students to apply the financial theory to solve real world problems**

UNIT I: Financial management environment - corporate objectives vs. financial goals and functions - reconciliation of financial goals and social objectives - an outline of financial system in India – influence of corporate organisation and taxes on financial management - regulations of SEBI regarding capital issues and stock exchanges.

UNIT II: Firm's investment decisions - practical application of capital budgeting - modern analytical tools and project appraisal and evaluation methods - risk analysis in investment appraisal (theory and problems) – Cost of capital

UNIT III: Financing decisions and capital structure - characteristics of financing methods - analysis of internal and external financing methods - lease financing - determinants of capital structure - regulations relevant to long term financing - managing investments (theory and problems) – dividend policy - behavioural models of dividend policy - clientele effects - relationship between dividends and values (theory and problems)

UNIT IV: Capital asset pricing - Sharpe's (CAPM - security analysis and portfolio selection – Markowitz portfolio theory (theory only) - Financial management and market efficiency - random walk theory - Harry Roberts classification of market efficiency - capital markets in India - role of SEBI – investor protection (theory only). Merger and Acquisitions (M&A) – forms – motives-evaluating M&A – considerations in M&A negotiations – Implications of Leveraged buy-outs

UNIT V: International Financial Management – working of foreign exchange market – relationship between Interest rates, inflation rates and exchange rates – Techniques of



hedging foreign exchange risk – International capital budgeting – methods of financing

International operations

Suggested Readings

1. Babatosh Banerjee, **Financial Policy and Management Accounting**, the World Press, 1999
2. Brealey & Myers, **Principles of Corporate Finance**, McGraw Hill, 2002
3. Damodaran, **Corporate Finance – Theory and Practice**, John Wiley & Sons, Singapore, 2004
4. Gurusamy, s, **Security Analysis and Portfolio Management**, Vijay Nicole Imprints Ltd, 2017
5. Murthy, **Financial Management**, Margam Publications, 2016
6. Pandey, **Financial Management**, Vikas, 2017
7. Schall & Haley, **Financial Management**, McGraw Hill, 2010
8. Stephen Archer, **Financial Management**, John Wiley, 2001
9. Weston & Brigham, **Managerial Finance**, Holt Rinehart, 2005

Online resources

1. www.moneycontrol.com
2. www.investopedia.com
3. www.icaew.com