KRISHNA UNIVERSITY, MACHILIPATNAM

REVISED SYLLABUS OF B Com (GENERAL AND COMPUTER APPLICATIONS) UNDER CBCS FRAMEWORK WITH EFFECT FROM 2020-2021

Semester	Part	Courses	Name of Course (Each Course consists 5 Units with each Unit having 12 hours of class-work)	Hours/ Week	Credits	Marks CIA	Marks Seme End
I	II	1A	Fundamentals of Accounting	5	4	25	75
		1B	Business Organization and Management	5	4	25	75
		1C	Business Environment (Gen) / Information Technology (CA)	5	4	25	75
II	II	2A	Financial Accounting	5	4	25	75
		2B	Business Economics	5	4	25	75
		2C	Banking Theory & Practice (Gen) / E-commerce and Web Designing (CA)	5	4	25	75
III	II	3A	Advanced Accounting	5	4	25	75
		3B	Business Statistics	5	4	25	75
		3C	Marketing (Gen) / Programming with C & C++ (CA)	5	4	25	75
IV	II	4A	Corporate Accounting	5	4	25	75
		4B	Cost and Management Accounting	5	4	25	75
		4C	Income Tax	5	4	25	75
		4D	Business Laws	5	4	25	75
		4E	Auditing	5	4	25	75
		4F	Goods and Service Tax (Gen) / Data Base Management System (CA)	5	4	25	75
			Total	75	60	375	1125

Gen : B.Com General

CA: B.Com Computer Applications

I B.COM   I SEMESTER
Course 1A   FUNDAMENTALS OF ACCOUNTING

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to identify transactions and events that need to be recorded in the books of accounts. Equip with the knowledge of accounting process and preparation of final accounts of sole trader. Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP. Analyze the difference between cash book and pass book in terms of balance and make reconciliation. Critically examine the balance sheets of a sole trader for different accounting periods. Design new accounting formulas & principles for business organisations.

Unit-I – Introduction
Need for Accounting – Definition – Objectives, – Accounting Concepts and Conventions – GAAP - Accounting Cycle - Classification of Accounts and its Rules – BookKeeping and Accounting - Double Entry Book-Keeping - Journalizing - Posting to Ledgers, Balancing of Ledger Accounts (including Problems).

Unit-II: S**ubsidiary Books:**
Types of Subsidiary Books - Cash Book, Three-column Cash Book- Petty Cash Book (including Problems).

Unit-III: **Trial Balance and Rectification of Errors:**
Preparation of Trial balance - Errors – Meaning – Types of Errors – Rectification of Errors – Suspense Account (including Problems).

Unit-IV: Bank Reconciliation Statement:
Need for Bank Reconciliation - Reasons for Difference between Cash Book and Pass Book Balances- Preparation of Bank Reconciliation Statement - Problems on both Favourable and Unfavourable Balance (including Problems).

Unit -V: Final Accounts:
Preparation of Final Accounts: Trading account – Profit and Loss.

Reference Books:
1. R.L. Gupta & V.K. Gupta, Principles and Practice of Accounting, Sultan Chand
2. T. S. Reddy and A. Murthy - Financial Accounting, Margham Publications.
3. S.P. Jain & K.L Narang, Accountancy - I Kalyani Publishers.
4. Tulsan, Accountancy-I - Tata McGraw Hill Co
5. V.K. Goyal, Financial Accounting Excel Books
6. T.S. Grewal, Introduction to Accountancy, Sultan Chand & Co.
7. Haneef and Mukherjee, Accountancy-I,Tata McGraw Hill
8. Arulanandam, Advanced Accountancy, Himalaya Publishers
9. S.N.Maheshwari&V.L.Maheswari, Advanced AccountancyI,Vikas Publishers.

I B.COM   I SEMESTER
Course 1B   BUSINESS ORGANIZATION AND MANAGEMENT

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will be able to understand different forms of business organizations. Comprehend the nature of Joint Stock Company and formalities to promote a Company. Describe the Social Responsibility of Business towards the society. Critically examine the various organizations of the business firms and judge the best among them. Design and plan to register a business firm. Prepare different documents to register a company at his own. Articulate new models of business organizations.

Unit-I: Introduction Concepts of Business, Trade, Industry and Commerce: Business – Meaning, Definition, Features and Functions of Business - Trade Classification – Aids to Trade – Industry Classification and Commerce - Factors Influencing the Choice of Suitable form of Organisation.

Unit –II: **Forms of Business Organizations:** Features, Merits and Demerits of Sole Proprietor Ship and Partnership Business - Features Merits and Demits of Joint Stock Companies - Public Sector Enterprises (PSEs) - Multinational Corporations (MNCs)- Differences between Private Limited Public Limited Company.

Unit-III: Company Incorporation: Preparation of Important Documents for Incorporation of Company - Certificate of Incorporation and Certificate of Commencement of Business - Contents of Memorandum and Articles of Association - Contents of Prospectus.

Unit-IV: Management: Meaning Characteristics - Fayol's 14 Principles of Management - Administration Vs Management - Levels of Management.

Unit-V: Functions of Management: Different Functions of Management - Meaning – Definition – Characteristics Merits and Demits of Planning - Principles of Organisation – Line and staff of Organisation.

Reference Books:
1. Industrial Organization and Management,C.B.Guptha, Sultan Chand.
2. Business Organization - C.D.Balaji and G. Prasad, Margham Publications, Chennai.
3. Business Organization -R.K.Sharma and Shashi K Gupta, Kalyani Publications.
4. Business Organization & Management: Sharma Shashi K. Gupta, Kalyani Publishers
5. Business Organization & Management: C.R. Basu, Tata McGraw Hill
6. Business Organization & Management: M.C. Shukla S. Chand,
7. Business Organisation and Management, Dr.NeeruVasishth, Tax Mann Publications.
8. Business Organisation and Management, Dr B E V L Naidu, Seven Hills International Publishers, Hyderabad

I B.COM   I SEMESTER
Course 1C   **BUSINESS ENVIRONMENT**

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to; understand the concept of business environment. Define Internal and External elements affecting business environment. Explain the economic trends and its effect on Government policies. Critically examine the recent developments in economic and business policies of the Government. Evaluate and judge the best business policies in Indian business environment. Develop the new ideas for creating good business environment.

Unit-I:Overview of Business Environment: Business Environment – Meaning – Characteristics – Scope -Macro and Micro Dimensions of Business Environment - Environmental Analysis.

Unit-II: Economic Environment: Economic Environment – Nature of the Economy – Structure of Economy – Economic Policies & Planning the Economic Condition – NITI Ayog – National Development Council – Five Year Plans.

Unit-III: Economic Policies: Economic Reforms and New Economic Policy – New Industrial Policy – Competition Law – Fiscal Policy – Objectives and Limitations – Monetary Policy and RBI

Unit-IV: Social, Political and Legal Environment: Concept of Social Responsibility of Business towards Stakeholders - Demonetisation, GST and their Impact - Political Stability - Legal Changes.

Unit-V: Global Environment : Globalization – Meaning – Role of WTO – WTO Functions - IBRD– Trade Blocks, BRICS, SAARC, ASEAN in Globalisation.

Reference Books:
1. K. Aswathappa : Essentials of Business Environment, Himalaya Publishing House
2. Francis Cherunilam : Business Environment,Himalaya Publishing House
3. Dr S Sankaran: : Business Environment, MarghamPublications
4. S.K. Mishra and V.K. Puri : Economic Environment of Business, HPH
5. Rosy Joshi and Sangam Kapoor : Business Environment, Kalyanai Publications
6. A C Fernando: Business Environment, Pearson
7. Dr V Murali Krishna, Business Environment, Spectrum Publications
8. Namitha Gopal, Business Environment, McGraw Hill

I B.COM   I SEMESTER
Course 1C   INFORMATION TECHNOLOGY

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

A. Remembers and states in a systematic way (Knowledge*)
   1. Describe the fundamental hardware components that make up a computer's hardware and the role of each of these components
   2. understand the difference between an operating system and an application program, and what each is used for in a computer
   3. Use technology ethically, safely, securely, and legally
   4. Use systems development, word-processing, spreadsheet, and presentation software to solve basic information systems problems

B. Explains (Understanding*)
   5. Apply standard statistical inference procedures to draw conclusions from data
   6. Retrieve information and create reports from databases
   7. Interpret, produce, and present work-related documents and information effectively and accurately

C. Critically examines, using data and figures (Analysis and Evaluation**)
   8. Analyze compression techniques and file formats to determine effective ways of securing, managing, and transferring data
   9. Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing based systems.
   10. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
   11. Identify and analyze computer hardware, software

D. Working in 'Outside Syllabus Area' under a Co-curricular Activity(Creativity)
   Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

E. Efficiently learn and use Microsoft Office applications.

Syllabus

Unit-I: Introduction:
Computer Definition - Characteristics and limitations of computer Hardware - Generations of Computer, Classification of Computers, Applications of Computer, Basic Components of PC, Computer Architecture - primary and secondary memories-input and output devices-operating system-function of operating system-types of operating system-languages and its types

Unit-II: MS word:
Word processing-Features-Advantages and Applications-parts of word window-Toolbar-Creating, saving, closing, opening and editing of a document-Moving and Coping a text-Formatting of Text and paragraph-bullets and Numbering-Find and Replace-Insertion of objects-Headers and footers-page formatting-auto correct-spelling and grammar-mail merge-macros

Unit-III: MS Excel:
Features – spread sheet-Workbook-Cell-Parts of a window-Saving, closing, opening of a work book-Editing-advantages-formulas-types of function-templates-macros-sorting- charts - filtering-consolidation-grouping-pivot table

Unit-IV: MS Power point:
Introduction – Starting-parts-Creating of tables-create presentation-templates-Auto content Wizard-Slide show-Editing of presentation-Inserting objects and charts

Unit-V: MS Access:
Orientation to Microsoft Access - Create a Simple Access Database - Working with Table Data - Modify Table Data - Sort and Filter Records - Querying a Database - Create Basic Queries - Sort and Filter Data in a Query - Perform Calculations in a Query - Create Basic Access Forms - Work with Data on Access Forms - Create a Report - Add Controls to a Report - Format Reports

Reference Books:
1. P.Mohan computer fundamentals- HimalyaPublications.
2. R.K.Sharma and Shashi K Gupta, computer fundamentals - Kalyani Publications
3. Fundamentals of Computers by Balagurusamy, Mcgraw Hill
4. Computer Fundamentals Anita Goel Pearson India
5. Introduction to Computers Peter Norton
6. Fundamentals of Computers Rajaraman V Adabala N
7. Office 2010 All-in-One For Dummies Peter Weverka
8. MS-Office S.S.Shrivastava
9. MS-OFFICE 2010 Training Guide Prof. Satish Jain, M. Geetha, Kratika BPB Publications.

I B.COM   II SEMESTER
Course 2A   FINANCIAL ACCOUNTING

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course the student will able to; understand the concept of consignment and learn the accounting treatment of the various aspects of consignment. Analyze the accounting process and preparation of accounts in consignment and joint venture. Distinguish Joint Venture and Partnership and to learn the methods of maintaining records under Joint Venture. Determine the useful life and value of the depreciable assets and maintenance of Reserves in business entities. Design an accounting system for different models of businesses at his own using the principles of existing accounting system.

Unit-I: Depreciation: Meaning and Causes of Depreciation - Methods of Depreciation: Straight Line – Written Down Value –Annuity and Depletion Method (including Problems).

Unit-II: Provisions and Reserves: Meaning – Provision vs. Reserve – Preparation of Bad Debts Account – Provision for Bad and Doubtful Debts – Provision for Discount on Debtors – Provision for Discount on Creditors - Repairs and Renewals Reserve A/c (including Problems).

Unit-III: Bills of Exchange: Meaning of Bill – Features of Bill – Parties in the Bill – Discounting of Bill – Renewal of Bill – Entries in the Books of Drawer and Drawee (including Problems).

Unit-IV: Consignment Accounts: Consignment - Features - Proforma Invoice - Account Sales – Del-credere Commission - Accounting Treatment in the Books of Consigner and Consignee - Valuation of Closing Stock - Normal and Abnormal Losses (including Problems).

Unit-V: Joint Venture Accounts: JointVenture - Features - Difference between Joint-Venture and Consignment – Accounting Procedure – Methods of Keeping Records–One Vendor Keeps the Accounts and Separate Set off Books Methods (including Problems).

Reference Books:
1. Ranganatham G and Venkataramanaiah, **Financial Accounting-II,** S Chand Publications, New Delhi.
2. T. S. Reddy and A. Murthy - **Financial Accounting**, Margham Publications.
3. R.L. Gupta & V.K. Gupta, **Principles and Practice of Accounting**, Sultan Chand.
4. SN Maheswari and SK Maheswari – **Financial Accounting**, Vikas Publications.
5. S.P. Jain & K.L Narang,**Accountancy-I**, Kalyani Publishers.
6. Tulsan, **Accountancy-I**, Tata McGraw Hill Co.
7. V.K. Goyal, **Financial Accounting**, Excel Books
8. T.S. Grewal, **Introduction to Accountancy**, Sultan Chand & Co.
9. Haneef and Mukherjee, **Accountancy-I**, Tata McGraw Hill.
10. Arulanandam and Ramana, **Advanced Accountancy**, Himalaya Publishers.
11. S.N.Maheshwari&V.L.Maheswari, **Advanced Accountancy-I**, Vikas Publishers.
12. Prof E Chandraiah, **Financial Accounting**, Seven Hills International Publishers.

I B.COM   II SEMESTER
Course 2B   **BUSINESS ECONOMICS**

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to; Describe the nature of economics in dealing with the issues of scarcity of resources. Analyze supply and demand analysis and its impact on consumer behaviour. Evaluate the factors, such as production and costs affecting firms behaviour. Recognize market failure and the role of government in dealing with those failures. Use economic analysis to evaluate controversial issues and policies. Apply economic models for managerial problems, identify their relationships, and formulate the decision making tools to be applied for business.

Unit-I: Introduction: Meaning and Definitions of Business Economics - Nature and Scope of Business Economics -Micro and Macro Economics and their Interface.

Unit-II: Demand Analysis: Meaning and Definition of Demand – Determinants to Demand – Demand Function -Law of Demand – Demand Curve – Exceptions to Law of Demand - Elasticity of Demand – Measurements of Price Elasticity of Demand.

Unit – III: Production, **Cost and Revenue Analysis**: Concept of Production Function – Law of Variable Proportion -Law of Returns to Scale - Classification of Costs -Break Even Analysis – Advantages.

Unit-IV: Market Structure: Concept of Market – Classification of Markets -Perfect Competition – Characteristics – Equilibrium Price -Monopoly – Characteristics – Equilibrium Under Monopoly.

Unit-V: National Income: Meaning – Definition – Measurements of National Income - Concepts of National Income -Components of National Income-Problems in Measuring National Income.

References:

1. Business Economics -S.Sankaran, Margham Publications, Chennai.
2. Business Economics - Kalyani Publications.
3. Business Economics - Himalaya Publishing House.
4. Business Economics - Aryasri and Murthy, Tata McGraw Hill.
5. Business Economics -H.L Ahuja, Sultan Chand & Sons
6. Principles of Economics -Mankiw, Cengage Publications
7. Fundamentals of Business Economics -Mithani, Himalaya Publishing House
8. Business Economics -A.V. R. Chary, Kalyani Publishers, Hyderabad.
9. Business Economics -Dr K Srinivasulu, Seven Hills International Publishers.

I B.COM   II SEMESTER
Course 2C   BANKING THEORY AND PRACTICE

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to; understand the basic concepts of banks and functions of commercial banks. Demonstrate an awareness of law and practice in a banking context. Engage in critical analysis of the practice of banking law. Organize information as it relates to the regulation of banking products and services. Critically examine the current scenario of Indian Banking system. Formulate the procedure for better service to the customers from various banking innovations.

Unit-I: Introduction:
Meaning & Definition of Bank – Functions of Commercial Banks – Credit Creation with Examples - Kinds of Banks – Central Banking Vs. Commercial Banking.

Unit-II: Banking Systems:
Unit Banking, Branch Banking, Investment Banking - Innovations in Banking – E banking - Online and Offshore Banking, Internet Banking - Anywhere Banking - ATMs – RTGS- NEFT – Mobile Banking.

Unit-III: Types of Banks:
Indigenous Banking - Cooperative Banks, Regional Rural Banks, SIDBI, NABARD - EXIM bank.

Unit-IV: Banker and Customer:
Meaning and Definition of Banker and Customer – Types of Customers – General Relationship and Special Relationship between Banker and Customer - KYC Norms.

Unit-V: Collecting Banker and Paying Banker:
Concepts **-** Duties & Responsibilities of Collecting Banker – Holder for Value – Holder in Due Course – Statutory Protection to Collecting Banker - Responsibilities of Paying Banker - Payment Gateways.

References:
1. Banking Theory: Law &Practice : K P M Sundram and V L Varsheney, Sultan Chand &Sons.
2. Banking Theory, Law and Practice : B. Santhanam; Margam Publications.
3. Banking Theory and Practice, Seven Hills International Publishers, Hyderabad.
4. Banking and Financial Systems: Aryasri, Tata McGraw-Hill Education India.
5. Introduction to Banking :VijayaRaghavan,Excel books.
6. Indian Financial System :M.Y.Khan, McGraw Hill Education.
7. Banking Theory and Practice, Jagroop Singh, Kalyani Publishers.

I B.COM   II SEMESTER
Course 2C   E-COMMERCE & WEB DESIGNING

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the students are expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

A. *Remembers and states in a systematic way (Knowledge*)*
1. Understand the foundations and importance of E-commerce
2. Define Internet trading relationships including Business to Consumer, Business-to-Business, Intra-organizational.
3. Describe the infrastructure for E-commerce.
4. Discuss legal issues and privacy in E-Commerce.
5. Understand the principles of creating an effective web page, including an in-depth consideration of information architecture

B. *Explains (Understanding**
1. Recognize and discuss global E-commerce issues.
2. Learn the language of the web: HTML and CSS.

C. *Critically examines, using data and figures (Analysis and Evaluation**)*
1. Analyze the impact of E-commerce on business models and strategy.
2. Assess electronic payment systems
3. Exploring a web development framework as an implementation example and create Dynamically generated web site complete with user accounts, page level security, modular design using css

D. Working in 'Outside Syllabus *Area' under a Co-curricular Activity* (Creativity)
   Use the Systems Design Approach to implement websites with the following steps:
- Define purpose of the site and subsections
- Identify the audience
- Design and/or collect site content
- Design the website theme and navigational structure
- Design & develop web pages including: CSS Style Rules, Typography, Hyperlinks, Lists, Tables, Frames, Forms, Images, Behaviors, CSS Layouts

E. Build a site based on the design decisions and progressively incorporate tools and techniques covered

Syllabus

Unit I: Introduction:

Meaning, nature, concepts, advantages, disadvantages and reasons for transacting online, types of E-Commerce, e-commerce business models (introduction , key elements of a business model and categorizing major E-commerce business models), forces behind e-commerce.

Technology used in E-commerce: The dynamics of World Wide Web and internet (meaning, evolution and features); Designing, building and launching e-commerce website (A systematic approach involving decisions regarding selection of hardware, software, outsourcing vs. in-house development of a website)

Unit II: Security and Encryption:

Need and concepts, the e-commerce security environment: (dimension, definition and scope of e-security), security threats in the E-commerce environment (security intrusions and breaches, attacking methods like hacking, sniffing, cyber-vandalism etc.), technology solutions (Encryption, security channels of communication, protecting networks and protecting servers and clients)

Unit III: E-payment System:

Models and methods of e–payments (Debit Card, Credit Card, Smart Cards, e-money), digital signatures (procedure, working and legal position), payment gateways, online banking (meaning, concepts, importance, electronic fund transfer, automated clearing house, automated ledger posting), risks involved in e-payments.

Unit IV: On-line Business Transactions:

Meaning, purpose, advantages and disadvantages of transacting online, E-commerce applications in various industries like {banking, insurance, payment of utility bills, online marketing, e-tailing (popularity, benefits, problems and features), online services (financial, travel and career), auctions, online portal, online learning, publishing and entertainment} Online shopping (Amazon, Snap deal, Alibaba, Flipkart, etc.)

Unit V: Website designing

Designing a home page, HTML document, Anchor tag Hyperlinks, Head and body section, Header section, Title, Prologue, links, colorful pages, comment, body section, heading horizontal ruler, paragraph, tabs, images and pictures, lists and their types, nested lists, table handling.

Frames: Frameset definition, frame definition, nested framesets, Forms and form elements. DHTML and Style Sheets: defining Styles, elements of styles, linking a style sheet to a HTML document, inline styles, External style sheets, internal Style sheets & Multiple Style Sheets.

References:
1. E-commerce and E-business   Himalaya publishers
2. E-Commerce by Kenneth C Laudon, PEARSON INDIA
3. Web Design: Introductory with MindTap Jennifer T Campbell, Cengage India
4. HTML & WEB DESIGN:TIPS & TECHNIQUES JAMSA, KRIS, McGraw Hill
5. Fundamentals Of Web Development by Randy Connolly, Ricardo Hoar, Pearson
6. HTML & CSS: COMPLETE REFERENCE POWELL,THOMAS, McGraw Hill

II B.COM   III SEMESTER
Course 3A   ADVANCED ACCOUNTING

Syllabus
Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Understand the concept of Non-profit organisations and its accounting process, Comprehend the concept of single-entry system and preparation of statement of affairs, Familiarize with the legal formalities at the time of dissolution of the firm, Prepare financial statements for partnership firm on dissolution of the firm and Employ critical thinking skills to understand the difference between the dissolution of the firm and dissolution of partnership

Unit-I:Accounting for Non Profit Organisations: Non Profit Entities- Meaning - Features of Non-Profit Entities –Provisions as per Sec 8 - Accounting Process- Preparation of Accounting Records - Receipts and Payments Account- Income and Expenditure Account - Preparation of Balance Sheet (including problems).

Unit-II: Single Entry System: Features – Differences between Single Entry and Double Entry – Disadvantages of Single Entry- Ascertainment of Profit and Preparation of Statement of Affairs (including Problems).

Unit-III:Hire Purchase System: Features –Difference between Hire Purchase and Instalment Purchase Systems - Accounting Treatment in the Books of Hire Purchaser and Hire Vendor - Default and Repossession (including Problems).

Unit-IV: Partnership Accounts-I: Meaning – Partnership Deed - Fixed and Fluctuating Capitals-Accounting Treatment of Goodwill - Admission and Retirement of a Partner(including problems).

Unit-V: Partnership Accounts-II: Dissolution of a Partnership Firm – Application of Garner v/s Murray Rule in India – Insolvency of one or more Partners (including problems).

References:

1. Advanced Accountancy: T S Reddy and A Murthy by Margham Publications.
2. Financial Accounting: SN Maheswari& SK Maheswari by Vikas Publications.
3. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
4. Advanced Accountancy: R.L.Gupta&Radhaswamy, Sultan Chand &Sons..
5. Advanced Accountancy (Vol-II): S.N.Maheshwari&V.L.Maheswari, Vikas publishers.
6. Advanced Accountancy: Dr. G. Yogeshwaran, Julia Allen - PBP Publications.
7. Accountancy–III: Tulasian, Tata McGraw Hill Co.
8. Accountancy–III: S.P. Jain & K.L Narang, Kalyani Publishers.
9. Advanced Accounting (IPCC): D. G. Sharma, Tax Mann Publications.
10. Advanced Accounting: Prof B Amarnadh, Seven Hills International Publishers.
11. Advanced Accountancy: M Shrinivas& K Sreelatha Reddy, Himalaya Publishers.

Course 3B   BUSINESS STATISTICS

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Understand the importance of Statistics in real life, Formulate complete, concise, and correct mathematical proofs, Frame problems using multiple mathematical and statistical tools, measuring relationships by using standard techniques, Build and assess data-based models, Learn and apply the statistical tools in day life and Create quantitative models to solve real world problems in appropriate contexts.

Unit 1: Introduction to Statistics: Definition – Importance, Characteristics and Limitations of Statistics -Classification and Tabulation – Frequency Distribution Table -Diagrams and Graphic Presentation of Data (including problems)

Unit 2: Measures of Central Tendency: Types of Averages – Qualities of Good Average - Mean, Median, Mode, and Median based Averages-Geometric Mean – Harmonic Mean(including problems)

Unit 3: Measures of Dispersion: Meaning and Properties of Dispersion – Absolute and Relative Measures - Types of Dispersion-Range - Quartile Deviation (Semi – Inter Quartile Range) -Mean Deviation - Standard Deviation - Coefficient of Variation. (including problems).

Unit 4: Skewness and Kurtosis: Measures of Skewness: Absolute and Relative Measures-Co-efficient of Skewness: Karl Pearson's, Bowley's and Kelly's - Kurtosis: Meso kurtosis, Platy kurtosis and Leptokurtosis (including problems)

Unit 5: Measures of Relation: Meaning and use of Correlation – Types of Correlation - Karlpearson's Correlation Coefficient - Probable Error-Spearman's Rank-Correlation (including problems).

Suggested Readings:

1. Business Statistics, Reddy C.R., Deep Publications.
2. Statistical Methods: Gupta S.P.Sultan Chand & Sons.
3. Statistics-Problems and Solutions: Kapoor V.K, Sultan Chand &Sons.
4. Fundamentals of Statistics: Elhance. D.N
5. Business Statistics, Dr.P.R.Vittal, Margham Publications
6. Business Statistics, LS Agarwal, Kalyani Publications.
7. Statistics: Dr V Murali Krishna, Seven Hills International Publishers.
8. Fundamentals of Statistics: Gupta S.C. Sultan Chand &Sons.
9. Statistics-Theory, Methods and Applications: Sancheti, D.C. & Kapoor V.K.
10. Business Statistics: J.K. Sharma, Vikas Publishers.
11. Business Statistics: Bharat Jhunjhunwala, S Chand Publishers.
12. Business Statistics: S.L.Aggarval, S.L.Bhardwaj and K.Raghuveer, Kalyani Publishers.

Course 3C   MARKETING

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Develop an idea about marketing and marketing environment, Understand the consumer behaviourand market segmentation process, Comprehend the product life cycle and product line decisions, Know the process of packaging and labeling to attract the customers, Formulate new marketing strategies for a specific new product, Develop new product line and sales promotion techniques for a given product and Design and develop new advertisements to given products.

Unit-I: **Introduction:** Concepts of Marketing: Need, Wants and Demand - Marketing Concepts – Marketing Mix - 4 P's of Marketing – Marketing Environment.

Unit-II: **Consumer Behaviour and Market Segmentation:** Buying Decision Process – Stages – Buying Behaviour – Market Segmentation –Bases of Segmentation - Selecting Segments – Advantages of Segmentation.

Unit-III: Product Management: Product Classification – Levels of Product - Product Life Cycle - New Products, Product Mix and Product Line Decisions - Design, Branding, Packaging and Labelling.

Unit-IV: Pricing Decision: Factors Influencing Price – Determination of Price - Pricing Strategies: Skimming and Penetration Pricing.

Unit-V: Promotion and Distribution: Promotion Mix - Advertising - Sales promotion - Publicity – Public Relations - Personal Selling and Direct Marketing - Distribution Channels – Online Marketing

References:

1. Philip Kotler, Marketing Management, Prentice Hall of India.
2. Philip Kotler & Gary Armstrong, Principles of Marketing, Pearson Prentice Hall.
3. Stanton J. William & Charles Futrel, Fundamentals of Marketing, McGraw Hill.
4. V.S. Ramaswamy S. NamaKumari, Marketing Management – Planning, McMillan.
5. The Consumer Protection Act 1986 and Consumer Protection Act 2019.
6. Dhruv Grewal and Michael Levy,Marketing, McGraw Hill Education.
7. Dr L Natarajan, Financial Markets, Margham Publications.
8. Dr M Venkataramanaiah, Marketing, Seven Hill International Publishers.
9. C N Sonanki, Marketing, Kalyani Publications.

Course 3C   PROGRAMMING WITH C & C++

Hours per week: 5   **Credits: 4**

Learning Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

- B. *Remembers and states in a systematic way (Knowledge*)*
  - 12. Develop programming skills
  - 13. Declaration of variables and constants use of operators and expressions
  - 14. learn the syntax and semantics of programming language
  - 15. Be familiar with programming environment of C and C++
  - 16. Ability to work with textual information (characters and strings) & arrays

- C. *Explains (Understanding*)*
  - 17. Understanding a functional hierarchical code organization
  - 18. Understanding a concept of object thinking within the framework of functional model
  - 19. Write program on a computer, edit, compile, debug, correct, recompile and run it

- D. *Critically examines, using data and figures (Analysis and Evaluation**)*
  - 20. Choose the right data representation formats based on the requirements of the problem
  - 21. Analyze how C++ improves C with object-oriented features
  - 22. Evaluate comparisons and limitations of the various programming constructs and choose correct one for the task in hand.

- D. Working in 'Outside Syllabus *Area' under a Co-curricular Activity*(Creativity) Planning of structure and content, writing, updating and modifying computer programs for user solutions

- E. Exploring C programming and Design C++ classes for code reuse (Practical skills***)

Syllabus

Unit – I: Introduction and control structures:

History of 'C' - Structure of C program – C character set, tokens, constants, variables, keywords, identifiers – C data types - C operators - Standard I/O in C - Applying if and switch statements - use of while, do while and for loops - use of break and continue statements

Unit – II: Arrays and functions:

Array notation and representation - manipulating array elements - using multi dimensional arrays - Declaration and initialization of string variables - string handling functions -defining functions - function call -, call by value, call by reference – recursion

Unit – III: Classes and Objects:

Introduction to OOP and its basic features - C++ program structure - Classes and objects -   Data members - member functions - Friend Functions- Static Functions – Function over loading

Unit – IV: Constructors and Operator Overloading:

Constructor – Types of constructors – Destructors - Operator overloading- Overloading Unary Operators, Overloading binary operators - Rules for Operator Overloading

Unit – V: Inheritance:

Inheritance - Types of Inheritance -Types of derivation- Public – Private - Protected Hierarchical Inheritance - Multilevel Inheritance – Multiple Inheritance - Hybrid Inheritance

References:

1. E. Balagurusamy "Object oriented programming with C++
2. R.Ravichandran "Programming with C++"
3. Mastering C by K R Venugopal and Sudeep R Prasad, McGraw Hill
4. Expert C Programming: Deep Secrets Kindle Edition Peter van der Linden
5. Let Us C Yashavant Kanetkar
6. The C++ Programming Language Bjarne Stroustrup
7. C++ Primer Stanley B.Lippman,Josee Lajoie,Barbara E.Moo

Practical Component: @ 2 hours/week/batch

1. Write C programs for
   a. Fibonacci Series
   b. Prime number
   c. Palindrome number
   d. Armstrong number.
2. 'C' program for multiplication of two matrices
3. 'C' program to implement string functions
4. 'C' program to swap numbers
5. 'C' program to calculate factorial using recursion
6. 'C++' program to perform addition of two complex numbers using constructor
7. Write a program to find the largest of two given numbers in two different classes using friend function
8. Program to add two matrices using dynamic contructor
9. Implement a class string containing the following functions:
   a. Overload + operator to carry out the concatenation of strings.
   b. Overload == operator to carry out the comparison of strings.
10. Program to implement inheritance.

II B.COM IV SEMESTER
Course 4A CORPORATE ACCOUNTING

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Understand the Accounting treatment of Share Capital and aware of process of book building, Demonstrate the procedure for issue of bonus shares and buyback of shares, Comprehend the important provisions of Companies Act, 2013 and prepare final accounts of a company with Adjustments, Participate in the preparation of consolidated accounts for a corporate group Understand analysis of complex issues, formulation of well-reasoned arguments and reaching better conclusions and Communicate accounting policy choices with reference to relevant laws and accounting standards.

Unit-I:
Accounting for Share Capital: Kinds of Shares – Types of Preference Shares – Issue of Shares at Par, Discount and Premium - Forfeiture and Reissue of Shares (including problems).

Unit-II:
Issue and Redemption of Debentures and Issue of Bonus Shares: Accounting Treatment for Debentures Issued and Repayable at Par, Discount and Premium -Issue of Bonus Shares - Buyback of Shares - (including problems).

Unit-III:
Valuation of Goodwill: Need and Methods - Average Profit Method, Super Profits Method – Capitalization Method and Annuity Method (Including problems).

Unit –IV:
Valuation Shares: Need for Valuation - Methods of Valuation - Net Assets Method, Yield Basis Method, Fair Value Method (including problems).

UNIT – V:
Company Final Accounts: Provisions of the Companies Act, 2013 - Preparation of Final Accounts – Adjustments Relating to Preparation of Final Accounts – Profit and Loss Account and Balance Sheet – (including problems with simple adjustments).

Reference Books:
1. Corporate Accounting – T.S Reddy and Murthy, MarghamPublications, Chennai.
2. Advanced Accounts: M C Shukla, T S Grewal and S C Gupta, S Chand Publications
3. Corporate Accounting – Haneef & Mukherji, Tata McGraw Hill Publications.
4. Corporate Accounting – RL Gupta & Radha Swami,Sultan Chand & sons
5. Corporate Accounting – P.C. Tulsian, S.Chand Publishers
6. Advanced Accountancy: Jain and Narang,,Kalyani Publishers
7. Advanced Accountancy: R.L. Gupta and M.Radhaswamy, S Chand.
8. Advanced Accountancy :Chakraborthy, Vikas Publishers
9. Corporate Accounting: S.N. Maheswari, S.K. Maheswari, Vikas Publishing House.
10. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand & Company
11. Corporate Accounting: Umamaheswara Rao, Kalyani Publishers
12. Corporate Accounting: Dr ChandaSrinivas, SevenHills International Publishers,

Course 4B   COST AND MANAGEMENT ACCOUNTING

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Understand various costing methods and management techniques, Apply Cost and Management accounting methods for both manufacturing and service industry, Prepare cost sheet, quotations, and tenders to organization for different works, Analyze cost-volume-profit techniques to determine optimal managerial decisions, Compare and contrast the financial statements of firms and interpret the results and Prepare analysis of various special decisions, using relevant management techniques.

UNIT-I: Introduction:
Cost Accounting: Definition – Features – Objectives – Functions – Scope – Advantages and Limitations - Management Accounting: Features – Objectives – Functions – Elements of Cost - Preparation of Cost Sheet (including problems)

UNIT-II: Material and Labour Cost:
Techniques of Inventory Control – Valuation of Material Issues: FIFO - LIFO - Simple and Weighted Average Methods. Labour: Direct and Indirect Labour Cost – Methods of Payment of Wages- Incentive Schemes -Time Rate Method, Piece Rate Method, Halsey, Rowan Methods and Taylor Methods only (including problems)

UNIT-III: Job Costing and Batch Costing:
Definition and Features of Job Costing – Economic Batch Quantity (EBQ) – Preparation of Job Cost Sheet – Problems on Job Cost Sheet and Batch Costing (including problems)

UNIT-IV: Financial Statement Analysis and Interpretation:
Financial Statements - Features, Limitations. Need, Meaning, Objectives, and Process of Financial Statement Analysis- Comparative Analysis – Common Size Analysis and Trend Analysis (including problems)

UNIT-V: Marginal Costing:
Meaning and Features of Marginal Costing – Contribution –Profit Volume Ratio- Break Even Point – Margin of Safety – Estimation of Profit and Estimation of Sales(including problems)

References:
1. S.P. Jain and K.L. Narang – Advanced Cost Accounting, Kalyani Publishers.
2. M.N. Arora – A test book of Cost Accounting, Vikas Publishing House Pvt. Ltd.
3. S.P. Iyengar – Cost Accounting, Sultan Chand & Sons.
4. Nigam & Sharma – Cost Accounting Principles and Applications, S.Chand& Sons.
5. S.N. Maheswari– Principles of Management Accounting, Sultan Chand & Sons.
6. I.M.Pandey – Management Accounting, Vikas Publishing House Pvt. Ltd.
7. Sharma & Shashi Gupta – Management Accounting, Kalyani Publishers.
8. Murthy & Guruswamy – Management Accounting, Tata McGraw Hill, New Delhi.
9. S.P. Gupta – Management Accounting, S. Chand Publishing, New Delhi.
10. Umamaheswara Rao and Ranganath, Cost Accounting, Kalyani Publishers.
11. Dr V Murali Krishna – Cost Accounting, Seven Hills International Publishers.

II B.COM   IV SEMESTER
Course 4C   **INCOME TAX**

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Acquire the complete knowledge of the tax evasion, tax avoidance and tax planning, Understand the provisions and compute income tax for various sources, Grasp amendments made from time to time in Finance Act, Compute total income and define tax complicacies and structure and Prepare and File IT returns of individual at his own.

Unit-I: Introduction: Income Tax Act-1961 - Basic Concepts: Income, Person, Assesses - Assessment Year, Previous Year, Rates of Tax, Agricultural Income, Residential Status of Individual -Incidence of Tax – Incomes Exempt from Tax (theory only).

Unit-II: Income from Salaries: Basis of Charge, Tax Treatment of Different Types of Salaries Allowances, Perquisites, Profits in Lieu of Salary, Deductions from Salary Income, Computation of Salary Income (including problems).

Unit-Ill: Income from House Property and Profits and Gains from Business: Annual Value, Let-out/Self Occupied/Deemed to be Let-out house -Deductions from Annual Value - Computation of Income from House Property Definition of Business and Profession – Procedure for Computation of Income from Business – Revenue and Capital Nature of Incomes and Expenses – Allowable Expenses – Expenses Expressly Disallowed – Computation (including problems).

Unit-IV: Income from Capital Gains - Income from Other Sources: Meaning of Capital Asset – Types – Procedure for Computation of Long-term and Short-term Capital Gains/Losses Meaning of Other Sources - General Incomes – Specific Incomes – Computation (including problems).

Unit-V: Computation of Total Income of an Individual: Deductions under Section 80 - Computation of Total Income (Simple problems).

Reference Books:

1. Dr. Vinod; K. Singhania; Direct Taxes – Law and Practice, Taxman Publications
2. T. S. Reddy and Dr. Y. Hari Prasad Reddy - Taxation , by Margham Publications
3. Premraj and Sreedhar, Income Tax, Hamsrala Publications
4. B.B. Lal - Direct Taxes; Konark Publications
5. Dr. Mehrotra and Dr. Goyal -Direct Taxes, Law and Practice, Sahitya Bhavan Publication.
6. Balachandran&Thothadri- Taxation Law and Practice, PHI Learning.
7. V.P. Gaur and D.B. Narang - Income Tax, Kalyani Publications
8. Dr Y Kiranmayi - Taxation, Jai Bharath Publishers
9. Income Tax, Seven Lecture Series, Himalaya Publications

Course 4D   BUSINESS LAW

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Understand the legal environment of business and laws of business, Highlight the security aspects in the present cyber-crime scenario, Apply basic legal knowledge to business transactions, Understand the various provisions of Company Law, Engage critical thinking to predict outcomes and recommend appropriate action on issues relating to business associations and legal issues and Integrate concept of business law with foreign trade.

Unit-I: Contract:
Meaning and Definition of Contract - Essential Elements of Valid Contract -Valid, Void and Voidable Contracts - Indian Contract Act, 1872

Unit-II: Offer, Acceptance and Consideration:
Definition of Valid Offer, Acceptance and Consideration - Essential Elements of a Valid Offer, Acceptance and Consideration.

Unit-Ill: Capacity of the Parties and Contingent Contract: Rules Regarding to Minors Contracts - Rules Relating to Contingent Contracts - Different Modes of Discharge of Contracts - Rules Relating to Remedies to Breach of Contract.

Unit-IV: Sale of Goods Act 1930 and Consumer Protection Act 2019:
Contract of Sale - Sale and Agreement to Sell - Implied Conditions and Warranties - Rights of Unpaid Vendor- Definition of Consumer - Person - Goods - Service - Consumer Dispute - Consumer Protection Councils - Consumer Dispute Redressal Mechanism

Unit-V: Cyber Law:
Overview and Need for Cyber Law - Contract Procedures - Digital Signature – Safety Mechanisms.

References:

1. J. Jaysankar, Business Laws, Margham Publication. Chennai.
2. ND Kapoor, Business Laws, S Chand Publications.
3. Balachandram V, Business law, Tata McGraw Hill.
4. Tulsian, Business Law, Tata McGraw Hill.
5. Pillai Bhagavathi, Business Law,SChand Publications.
6. Business Law, Seven Hills Publishers, Hyderabad.
7. K C Garg, Business Law, Kalyani Publishers.

Course 4E   **AUDITING**

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Understanding the meaning and necessity of audit in modern era, Comprehend the role of auditor in avoiding the corporate frauds, Identify the steps involved in performing audit process, Determine the appropriate audit report for a given audit situation, Apply auditing practices to different types of business entities and Plan an audit by considering concepts of evidence, risk and materiality

Unit-I: Introduction: Meaning – Objectives – Importance of Auditing – Characteristics - Book Keeping vs Auditing - Accounting vs Auditing – Role of Auditor in Checking Corporate Frauds.

Unit-II: Types of Audit: Based on Ownership,Time and Objective - Independent, Financial, Internal, Cost,Tax, Government, Secretarial Audits

Unit-III: Planning of Audit: Steps to be taken at the Commencement of a New Audit – Audit Programme - Audit Note Book– Audit Working Papers - Audit Evidence - Internal Check, Internal Audit and Internal Control.

Unit-IV: Vouching and Investigation: Definition and Importance of Vouching – Objectives of Vouching -Vouching of Cash and Trading Transactions – Investigation - Auditing vs. Investigation

Unit-V: Company Audit and Auditors Report: Auditor's Qualifications – Appointment andReappointment – Rights, Duties, Liabilities and Disqualifications - Audit Report: Contents – Preparation - Relevant Provisions of Companies Act, 2013.

References:

1. S.Vengadamani, "Practical Auditing", Margham Publications, Chennai.
2. Ghatalia, "Principles of Auditing", Allied Publishers Pvt. Ltd., New Delhi.
3. Pradeesh Kumar, BaldevSachdeva&Jagwant Singh, "Auditing Theory and Practice,Kalyani Publications
4. N.D. Kapoor, "Auditing", S Chand, New Delhi.
5. R.G. Saxena, "Principles and Practice of Auditing", Himalaya Publishing House New Delhi
6. JagadeshPrakesh, "Principles and Practices of Auditing", Kalyani Publications
7. Kamal Gupta and Ashok Gupta, "Fundamentals of Auditing", Tata McGraw Hill
8. B.N. Tondan, "Practical Auditing", S.Chand, New Delhi.
9. K J Vijaya Lakshmi & A S Roopa, Auditing, Seven Hills International Publishers, Hyderabad

II B.COM   IV SEMESTER
Course 4F   GOODS AND SERVICE TAXES

Syllabus

Hours per week: 5   **Credits: 4**

Learning Outcomes:
At the end of the course, the student will able to;
Understand the basic principles underlying the Indirect Taxation Statutes, Examine the method of tax credit. Input and Output Tax credit and Cross Utilisation of Input Tax Credit, Identify and analyze the procedural aspects under different applicable statutes related to GST, Compute the assessable value of transactions related to goods and services for levy and determination of duty liability and Develop various GST Returns and reports for business transactions in Tally.

Unit I: Introduction: Overview of GST - Concepts –Taxes Subsumed under GST –Components of GST- GST Council- Advantages of GST-GST Registration.

Unit II: GST Principles –Vijay Kelkar Sha Committee Recommendations - Comprehensive Structure of GST Model in India: Single, Dual GST – GST Rates - Taxes Exempted from GST-Taxes and Duties outside the purview of GST- Taxation of Services

Unit-III: Tax Invoice- Bill of Supply-Transactions Covered under GST-Composition Scheme-Reverse Charge Mechanism- Composite Supply -Mixed Supply.

Unit-IV: Time of Supply of Goods & Services: Value of Supply - Input Tax Credit - Distribution of Credit -Matching of Input Tax Credit - Availability of Credit in Special Circumstances- Cross utilization of ITC between the Central GST and the State GST.

Unit-V:GST Returns: Regular Monthly Filing Returns-Composition Quarterly Filing Returns-GSTR-1, GSTR-2, GSTR 2A, GSTR-3, GSTR 3B -Annual Returns GSTR-9, GSTR 9A, GSTR 9B& GSTR 9C - Records to be Maintained under GST

References:

1. T. S. Reddy and Dr. Y. Hari Prasad Reddy, Business Taxation (Goods and Services Taxes),Margham Publications.
2. Taxmann's Basics of GST.
3. Taxmann's GST: A practical Approach.
4. Theory & Practice of GST, Srivathsala, Himalaya Publishing House.
5. Goods and Services Tax in India - Notifications on different dates.
6. GST Bill 2012.
7. Background Material on Model GST Law, Sahitya Bhawan Publications.
8. The Central Goods and Services Tax Act, 2017, No. 12 of 2017 Published by Authority,
9. Ministry of Law and Justice, New Delhi, the 12thApril, 2017.
10. Theory & Practice of GST: Dr. Ravi M.N, BPB Publications.

Course 4D   DATA BASE MANAGEMENT SYSTEM

Hours per week: 5   **Credits: 4**

Learning Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

   A. *Remembers and states in a systematic way (Knowledge*)*

  1. Understand the role of a database management system in an organization.

  2. Understand basic database concepts, including the structure and operation of the relational data model.

  3. Understand and successfully apply logical database design principles, including E-R diagrams and database normalization

  4. Understand Functional Dependency and Functional Decomposition

  5. Explains (Understanding*)

  6. To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS.

  7. Perform PL/SQL programming using concept of Cursor Management, Error Handling, Packages

  8. Critically examines, using data and figures (Analysis and Evaluation**)

  9. Apply various Normalization techniques

  10. Model an application's data requirements using conceptual modeling tools like ER diagrams and design database schemas based on the conceptual model

 D. Working in 'Outside Syllabus *Area' under a Co-curricular Activity*(Creativity)
    Design and implement a small database project

 E. Construct simple and moderately advanced database queries using Structured Query Language (SQL)(Practical skills***)

Syllabus

Unit - I: Overview of Database Management System

Introduction, Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management System, Classification of Database Management System.

Unit - II: File-Based System

File Based System. Drawbacks of File-Based System, DBMS Approach, Advantage of DBMS, Data Models, Components of Database System, Database Architecture, DBMS Vendors and their products.

Unit - III: Entity-Relationship Model:

Introduction, The building Blocks of an Entity-Relationship, Classification of entity set, Attribute classification, relationship degree, Relationship classification, Generalization and specialization, Aggregation and composition, CODD's Rules, Relational Data Model, Concept of Relational Integrity.

Unit – IV: Structured Query Language

Introduction, History of SQL Standards, Commands in SQL, Data types in SQL, Data Definition Language (DDL),Selection Operation Projection Operation, Aggregate Functions, Data Manipulation Language, Table Modification, Table Truncation, Imposition of Constraints, Set Operations.

Unit – V: PL/SQL:

Introduction, structure of PL/SQL,PL/SQL Language Elements, Data Types, Control Structure, Steps to Create a PL/SQL Program, Iterative Control Cursors, Steps to Create a Cursor, Procedure, Functions, Packages, Exceptions Handling, Database Triggers, Types of triggers.

References:

1. Paneerselvam:Database Management system,PHI.
2. David Kuklinski, Osborne, Data management system McGraw Hill Publication.
3. Shgirley Neal And Kenneth LC Trunik Database management system in Business-PHI.
4. Godeon C. EVEREST, Database Management-McGraw Hill Book Company.
5. MARTIN,Database Management-Prentice Hall of India, New Delhi.
6. Bipin C.Desai ,`An Introduction to Database System`,Galgotia Publications
7. Korth, Database Management System.
8. Navathe, Database Management System.
9. S. Sumathi, S. Esakkirajan,Fundamentals of Relational Database Management System

Practical Component: @ 2 hours/week/batch

1. Create tables department and employee with required constraints.

2. Initially only the few columns (essential) are to be added. Add the remaining columns separately by using appropriate SQL command.

3. Basic column should not be null

4. Add constraint that basic should not be less than 5000.

5. Calculate HRA,DA,Gross and Net by using PL/SQL program.

6. The percentage of HRA and DA are to be stored separately.

7. When the DA becomes more than 100%, a message has to be generated and with user permission DA has to be merged with Basic.

8. Empno should be unique and has to be generated automatically.

Recommended Format for Question Paper

For Courses 1A, 2A, 3A, 3B, 4A, 4B, 4C

[Max. Marks : 75   *Time: 3 Hours]*

Section-A   *[5X5=25]*
Answer any **FIVE** of the following questions (at least 4 problems must be given*)*

    1. Contents of **Unit-I**

    2. Contents of **Unit-II**

    3. Contents of **Unit-III**

    4. Contents of **Unit-IV**

    5. Contents of **Unit-V**

    6. Contents of **Unit-I to V**

    7. Contents of **Unit-I to V**

    8. Contents of **Unit-I to V**

Section-B   *[5X10=50]*
Answer any **FIVE** of the following questions (at least 4 problems must be given*)*

    9.a Contents of **Unit-I**   (Theory/Problem)
           OR
    9.b. Contents of **Unit-I**   (Problem)

    10.a. Contents of **Unit-II** (Theory/Problem)
           OR
    10.b. Contents of **Unit-II** (Problem)

    11.a. Contents of **Unit-III**(Theory/Problem)
           OR
    11.b. Contents of **Unit-III**   (Problem)

    12.a. Contents of **Unit-IV** (Theory/Problem)
           OR
    12.b. Contents of **Unit-IV**(Problem)

    13.a. Contents of **Unit-V** (Theory/Problem)
           OR
    13.b. Contents of **Unit-V** (Problem)

Recommended Format for Question Paper

For Courses 1B,1C,2B,2C, 3C, 4D, 4E, 4F

[Max. Marks : 75   *Time: 3 Hours]*

Section-A   *[5X5=25]*
Answer any **FIVE** of the following questions (at least 4 problems must be given*)*

1. Contents of **Unit-I**
2. Contents of **Unit-II**
3. Contents of **Unit-III**
4. Contents of **Unit-IV**
5. Contents of **Unit-V**
6. Contents of **Unit-I to V**
7. Contents of **Unit-I to V**
8. Contents of **Unit-I to V**

Section-B   *[5X10=50]*
Answer any **FIVE** of the following questions (at least 4 problems must be given*)*

9.a. Contents of **Unit-I**
         OR
9.b. Contents of **Unit-I**

10.a. Contents of **Unit-II**
         OR
10.b. Contents of **Unit-II**

11.a. Contents of **Unit-III**
         OR
11.b. Contents of **Unit-III**

12.a. Contents of **Unit-IV**
         OR
12.b. Contents of **Unit-IV**

13.a. Contents of **Unit-V**
         OR
13.b. Contents of **Unit-V**