KRISHNA UNIVERSITY :: MACHILIPATNAM
B.Com. (Computer Applications)
Revised Common Framework of CBCS for students admitted in B.Com(Computers) from 2016-17 onwards

Semester –I

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam*	Sem. End Exam	Teaching Hours**	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Telugu/Hindi/Urdu/Sanskrit)	100	25	75	4	3
3.	Foundation Course -1	Human Values & Professional Ethics (HVPE)	50	---	50	2	2
4.	Foundation Course- 2	Environmental Studies	50	---	50	2	2
5.	DSC 1 A	Accounting-I	100	25	75	5	4
6.	DSC 2 A	Business Organization & Management.	100	25	75	5	4
7.	DSC 3 A	Computer Fundamentals & Photoshop	100	25	75	4	4
8		Computer Fundamentals & Photoshop - Lab	50	50	-	2	2
Total			**650**	**175**	**475**	**28**	**24**

* At the college (The marks split between formal test and co-curricular activities may be decided   by   the University concerned)

** Syllabus size shall be in accordance with the No. of teaching hours.

Semester – II

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam*	Sem. End Exam	Teaching Hours**	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Tel/Hindi/Urdu/Sans)	100	25	75	4	3
3.	Foundation Course -3A	Information & Communication Technology-1	50	---	50	2	2
4.	Foundation Course- 4 A	Communication & Soft Skills-1	50	---	50	2	2
5.	DSC 1 B	Accounting-II	100	25	75	5	4
6.	DSC 2 B	Business Economics	100	25	75	5	4
7.	DSC 3 B	Office Automation Tools	100	25	75	4	4
8		Office Automation Tools- Lab	50	-	50	2	
Total			**650**	**125**	**525**	**28**	**24**

Note:- In this semester Office automation tools Practicals will be conducted by the University

Semester – III

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam *	Sem. End Exam	Teaching Hours**	Credits
1.	First Language	English	100	25	75	4	3
2.	Second Language	(Telugu/Hindi/Urdu/ Sanskrit)	100	25	75	4	3
3.	Foundation Course- 3B	Information & Communication Technology -2	50	---	50	2	2
4.	Foundation Course-4 B	Communication & Soft Skills-2	50	---	50	2	2
5.	DSC 1 C	Corporate Accounting	100	25	75	5	4
6.	DSC 2 C	Business Statistics	100	25	75	5	4
7.	DSC 3 C	Programming in C	100	25	75	4	4
8		Programming in C – Lab	50	50	-	2	2
		Total	**650**	**175**	**475**	**28**	**24**

Semester – IV

Sl. No.	Course	Name of the subject	Total Marks	Mid. Sem. Exam*	Sem. End Exam	Teaching Hours**	Credits
1.	Foundation Course-4 C	Communication & Soft Skills-3	50	---	50	2	2
2.	Foundation Course- 5#	Analytical Skills	50	---	50	2	2
3.	Foundation Course- 6	Entrepreneurship Education	50	---	50	2	2
4.	Foundation Course-7	Leadership Education	50	---	50	2	2
5.	DSC 1 D	Accounting for Service Organizations	100	25	75	5	4
6.	DSC 2 D	Business Laws	100	25	75	5	4
7.	DSC 3 D	Object Oriented Programming with C++	100	25	75	4	4
8		Object Oriented Programming with C++ - Lab	50	-	50	2	2
		Total	**550**	**75**	**475**	**24**	**22**

Note:- In this semester Object Oriented Programming with C++ Practicals will be conducted by the University

To be taught by partly by Maths/statistics teachers

SEMESTER V

Sl. No	Name of the subject	Total marks	Mid.Sem. Exams*	Sem. End Exam	Teaching hours**	Credits
1	Cost accounting	100	25	75	5	4
2	Advanced accounting – I	100	25	75	5	4
3	Commercial geography	100	25	75	5	4
4	Goods & services tax Fundamentals – I	100	25	75	5	4
5	Data Base Management System	100	25	75	4	4
6	Data Base Management System - Lab	50	50	-	2	2
7	Web Technology	100	25	75	4	4
8	Web Technology – Lab	50	50	-	2	2
	Total	700	250	450	32	28

Note:- In this semester instead of Project work internal practicals will be added

SEMESTER VI

Sl. No	Name of the subject	Total marks	Mid.Sem. Exams*	Sem. End Exam	Teaching hours**	Credits
1	Goods and Service Tax & Customer Act – II	100	25	75	5	4
2	Auditing	100	25	75	5	4
3	Management Accounting	100	25	75	5	4
4	Advanced Accounting - II	100	25	75	5	4
5	E-Commerce	100	25	75	4	4
6	E-Commerce – Lab	50	50	-	2	2
7	PHP and MY SQL	100	25	75	4	4
8	PHP and MY SQL – LAB	50	50	-	2	2
	Total	700	250	450	32	28

Note :- In this semester instead of Project work internal practicals will be added. E-Commerce to be taught and evaluated by computer faculty only.

Semester - I
DSC 1A 1.1- Accounting-I

Unit-I – Introduction to Accounting
Need for Accounting – Definition – Objectives, Advantages – Book keeping and Accounting– Accounting concepts and conventions - Accounting Cycle - Classification of Accounts and its rules - Double Entry Book-keeping - Journalization - Posting to Ledgers, Balancing of ledger Accounts (problems).

Unit –II: Subsidiary Books:
Types of Subsidiary Books - Cash Book, Three-column Cash Book- Petty cash Book (Problems).

Unit-III: Trail Balance and Rectification of Errors:
Preparation of Trail balance - Errors – Meaning – Types of Errors – Rectification of Errors (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 favorable and unfavourable balances.

Unit -V: Final Accounts:
Preparation of Final Accounts: Trading account – Profit and Loss account – Balance Sheet – Final Accounts with adjustments (Problems).

References:

1. T.S.Reddy & A. Murthy, Financial Accounting , Margham Publications
2. R L Gupta & V. K Gupta, Principles and Practice of Accounting, Sultan Chand & Sons
3. S.P. Jain & K.L Narang, Accountancy-I, Kalyani Publishers
4. Tulasian, Accountancy -I, Tata McGraw Hill Co.
5. V.K.Goyal, Financial Accounting, Excel Books
6. K. Arunjyothi, Fundamentals of Accounting; Maruthi Publications

DSC 2 A 1.2 - Business Organization and Management

Unit-I: Introduction: Concepts of Business, Trade , Industry and Commerce – Features of Business -Trade Classification - Aids to Trade – Industry – Classification – Relationship among Trade, Industry and Commerce.

Unit-II: Forms of Business Organizations: Forms of Business Organization: Sole Proprietorship, Joint Hindu Family Firm, Partnership firm, Joint Stock Company, Cooperative Society; Choice of Form of Organization. Government - Business Interface; Public Sector Enterprises (PSEs) - Multinational Corporations (MNCs).

Unit-III: Joint Stock Company: Company Incorporation: Preparation of important Documents for incorporation of Company – Memorandum of Association – Articles of Association – Differences Between Memorandum of Association and Articles of Association - Prospectus and its contents - Companies Act, 2013.

Unit-IV: Management and Organization: Process of Management: Planning; Decision-making; Organizing: Line and Staff - Staffing - Directing and Controlling; Delegation and Decentralization of Authority.

Unit-V: Functional Areas of Management: Production - Manufacturing - Make in India - Marketing Management: Marketing Concept; Marketing Mix; Product Life Cycle; Pricing Policies and Practices. Financial Management: Objectives; Sources and Forms of Funds – Human Resource Management: Functions.

Suggested Readings:

1. Kaul, V.K., *Business Organization and Management*, Pearson Education, New Delhi.

2. Chhabra, T.N., *Business Organization and Management*, Sun India Publications, New Delhi.

3. Koontz and Weihrich, *Essentials of Management*, McGraw Hill Education.

4. Basu, C. R., *Business Organization and Management*, McGraw Hill Education.

5. Jim, Barry, John Chandler, Heather Clark; *Organization and Management*, Cengage Learning.

6. Allen, L.A., *Management and Organization*; McGraw Hill, New York.

7. R.K.Sharma and Shashi K Gupta, Business Organization - Kalyani Publications.

8. C.B.Guptha, Industrial Organization and Management, Sultan Chand.

9. Y.K.Bushan, Business organization and Management, Sultan Chand.

10. Sherlekar, Business Organization and Management, Himalaya Publications.

DSC 3 A- Computer Fundamentals & Photoshop

Unit-I

Introduction to Computers: Characteristics and limitations of Computer, Block diagram of computer, types of computers, uses of computers, computer generations. Number systems: binary, hexa and octal numbering system- Windows basics: desktop, start menu, icons – Recent Developments – Cloud Server.

Unit-II

Input and Output Devices: Keyboard and mouse, input data in other ways, Types of Software: system software, Application software, commercial, open source, domain and free ware software, Memories: primary, secondary and cache memory.

Unit –III

Introduction to Adobe Photoshop: Getting started with Photoshop, creating and saving a document in Photoshop, page layout and back ground, Photoshop program window-title bar, menu bar, option bar, image window, image title bar, status bar, ruler, pallets, tool box, screen modes, saving files, reverting files, closing files.

Unit –IV

Images: working with images, image size and resolution, image editing, color modes and adjustments, Zooming & Panning an Image, Rulers, Guides & Grids- Working with Tool box: Practice Sessions.

Unit-V

Layers: Working with layers- layer styles- opacity-adjustment layers. **Filters:** The filter menu, Working with filters- Editing your photo shoot, presentation –how to create ads, artistic filter, blur filter, brush store filter, distort filters, noise filters, pixel ate filters, light effects, difference clouds, sharpen filters, printing.

Reference Books:

1.ReemaThareja, Fundamentals of Computers, Oxford University Press

2. Adobe Creative Team, Adobe Photoshop Class Room in a Book.

3.David Maxwell, Photoshop: Beginner's Guide for Photoshop - Digital Photography, Photo Editing, Color Grading & Graphic...19 February 2016.

Photo Shop Lab

1   Design a Visiting card

2   Converting color photo to black and white photo

3   Design a Passport Photo

4   Changing the picture back ground using Layers

5   Create a Cover Page for any text book

6   Creating Custom Shapes

7   Changing the Back ground colour using Filters

8   Designing a pamphlet

9   Enhance and reduce the given image size

10   Creating a titles for any forth coming film

11   Creating a brochure of your college

12   Design texture and patterns

13   Filter effects and Eraser effects

Semester - II

DSC 1B 2.1 – Accounting-II

Unit-I: **Depreciation**
Meaning of Depreciation - Methods of Depreciation: Straight line – Written down Value – Sum of the Years' Digits - Annuity and Depletion (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 (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 (Problems).

Unit-IV: **Consignment Accounts**
Consignment - Features - Proforma invoice - Account sales – Del-credre Commission - Accounting treatment in the books of consigner and consignee - Valuation of closing stock - Normal and Abnormal losses (Problems).

Unit-V: **Joint Venture Accounts**
Joint venture - Features - Differences between Joint-venture and consignment – Accounting procedure - Methods of keeping records (Problems).

Reference Books:
1. R.L. Gupta & V.K. Gupta, Principles and Practice of Accounting, S.Chand & Co.
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 Accountancy-I, Vikas Publishers.

DSC 2 B 2.2 - Business Economics

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:** Definition - Determinants of Demand -- Demand function – Law of demand- Demand Curve - Exceptions to Law of Demand - Elasticity of Demand – Types of Elasticity of Demand – Measurements of Price elasticity of Demand – Total outlay Method – Point Method – Arc Method.

Unit – III: Cost and Revenue Analysis
Classification of Costs – Total - Average – Marginal; Cost function – Long-run – Short-run – Total Revenue - Average revenue – Marginal Revenue - Production and Costs: Techniques of Maximization of output, Minimization of costs and Maximization of profit - Scale of production - Economies and Dis-economies of Scale - Cobb-Douglas Production Function.

Unit-IV: Market Structure: Concept of Market - Market structure - Perfect competition - characteristics - equilibrium price - Monopoly- characteristics - Defects of Monopoly – Distinction between Perfect competition and Monopoly - Monopolistic Competition - Characteristics - Product differentiation - Oligopoly - characteristics - Price rigidity - Kinked Demand Curve.

Unit-V: National Income And Economic Systems: National Income - Measurement - GDP - Growth Rates - Problems in Assessment - Economic Systems - Socialism - Mixed Economic System - Free Market Economy - Economic liberalization, Privatization, Globalization - Free Trade - Agreements - Trade cycles - Phases - International Trade - Balance of payments.

References:

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

Office Automation Tools

Unit-I

MS-Excel: features of Ms-Excel, Parts of MS-Excel window, entering and editing data in worksheet, number formatting in excel, different cell references, how to enter and edit formula in excel, auto fill and custom fill, printing options.

Unit-II

Formatting options: Different formatting options, change row height, formulae and functions. **Functions:** Meaning and advantages of functions, different types of functions available in Excel.

Unit-III

Charts: Different types of charts, Parts of chart, chart creation using wizard, chart operations, data maps, graphs, data sorting, filtering. Excel sub totals, scenarios, what-if analysis, **Macro:** Meaning and advantages of Macros, creation, editing and deletion of macros - Creating a macro, how to run, how to delete a macro.

Unit-IV

MS Access: Creating a Simple Database and Tables: Features of Ms-Access, Creating a Database, Parts of Access. **Tables:** table creation using design view, table wizard, data sheet view, import table, link table. **Forms:** The Form Wizard, design view, columnar, tabular, data sheet, chart wizard.

Unit –V

Finding, Sorting and Displaying Data: Queries and Dynasts, Creating and using select queries, Returning to the Query Design, Multi-level sorts, Finding incomplete matches, showing All records after a Query, saving queries - Crosstab Queries. **Printing Reports:** Form and Database Printing. **Relational Databases:** Flat Versus Relational, Types of Relationships, Viewing Relationships, Defining and Redefining Relationships, Creating and Deleting Relationships.

Reference Books:

1. Ron Mansfield, Working in Microsoft Office, Tata McGraw Hill(2008)

2. EdBott, Woody Leonhard, Using Microsoft Office 2007, Pearson Education(2007)

3. Sanjay Saxsena, Microsoft Office, 4.Microsoft Office, BPB Publications

MS-EXCEL

1. Create an electronic spreadsheet in which you enter the following decimal numbers and convert into Binary, Octal and Hexadecimal numbers.
   Decimal Numbers: 29.68, 91.165, 289.355, 569.465

2. The ABC Company shows the sales of different products for 5 years. Create column chart, 3D-column and Bar chart for the following data

YEAR	PRODUCT-1	PRODUCT-2	PRODUCT-3	PRODUCT-4
2003	1000	800	900	1000
2004	800	80	500	900
2005	1200	190	400	800
2006	400	200	300	1000
2007	1800	400	400	1200

3. Create a suitable examination data base and find the sum of the marks(total) of each student and respective class secured by the student rules:
   Pass if marks in each subject >=35, Distinction if average>=75, First class if average>=60 but <75

   Second class if average>=50 but <60, Third class if average>=35 but <50, Fail if marks in any subject is <35. Display average marks of the class, subject wise and pass percentage.

MS-ACCESS

1.   Create a database using MS-ACCESS with atleast 5 records
   TABLE1 STRUCTURE: REGISTER NUMBER,   NAME, DOB,   GENDER,   CLASS

   TABLE2 STRUCTURE: REGISTER NUMBER,   M1, M2, M3, M4, M5, TOTAL

   Maintain the relationship between two tables with REGISTER NUMBER as a Primary Key and answer the

   following quarries:

   Show the list of students with the following fields as one query REGISTER NUMBER, NAME, GENDER and TOTAL MARKS

2. Maintain the relationship between above two tables with REGISTER NUMBER as a Primary Key and answer the following reports:

Reports must have following columns

Report1 with Register Number, Name, Marks of all Subjects and Total

Report2 with Register Number, Total and Percentage.

3. Create a database using MS-ACCESS with at least 5 records

TABLE1 STRUCTURE: EMP-CODE EMP-NAME AGE GENDER DOB

TABLE2 STRUCTURE: EMP-CODE   BASIC-PAY

Maintain the relationship between two tables with EMP-CODE as a Primary Key generate the following reports:

REPORT1:   EMP-CODE EMP-NAME BASIC-PAY DA HRA GROSS-SALARY

REPORT2:   EMP-CODE EMP-NAME AGE GENDER GROSS-SALARY

Note: Suggested to do more programs covering all topics related to syllabus and also may include

some problems in MS-Word

Marks Distribution: Procedure writing &Editing→ 15 M

Program execution & Result verification → 15 M

Viva-Voce→ 10 M

Records → 10 M

Total: 50 Marks

DSC 1 C 3.1 - Corporate Accounting

Unit-I
Accounting for Share Capital - Issue, forfeiture and reissue of forfeited shares- concept & process of book building. **(Problems only)**

Unit-II
Issue and Redemption of Debentures - Employee Stock Options – Accounting Treatment for Convertible and Non-Convertible debentures (preparation of Journal and Ledger). **(Problems only)**

Unit –III
Valuation of Goodwill and Shares: Need and methods - Normal Profit Method, Super Profits Method – Capitalization Method - Valuation of shares - Need for Valuation - Methods of Valuation - Net assets method, Yield basis method, Fair value method (including problems).

UNIT – IV
Company Final Accounts: Preparation of Final Accounts – Adjustments relating to preparation of final accounts – Profit and loss account and balance sheet – Preparation of final accounts using computers (including problems).

Unit –V
Provisions of the Companies Act, 2013 relating to issues of shares and debentures - Preparation of Balance Sheet and Profit and Loss Account – Schedule-III. Issue of rights and bonus shares - Buyback of shares (preparation of Journal and Ledger). **(Problems only)**

Reference Books:
1. Corporate Accounting – Haneef & Mukherji,
2. Corporate Accounting – RL Gupta & Radha swami
3. Corporate Accounting – P.C. Tulsian
4. Advanced Accountancy: Jain and Narang
5. Advanced Accountancy: R.L. Gupta and M.Radhaswamy, S Chand.
6. Advanced Accountancy : Chakraborthy
7. Modern Accounting: A. Mukherjee, M. Hanife Volume-II McGraw Hill
8. Accounting standards and Corporate Accounting Practices: T.P. Ghosh Taxman
9. Corporate Accounting: S.N. Maheswari, S.R. Maheswari, Vikas Publishing House.
10. Advanced Accountancy: Arutanandam, Raman, Himalaya Publishing House.
11. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand & Company Ltd.,
12. Management Accounting: Shashi K. Gupta, R.K. Sharma, Kalyani Publishers.

DSC 2C 3.2- Business Statistics

Unit 1: Introduction to Statistics:
Definition, importance and limitations of statistics - Collection of data - Schedule and questionnaire – Frequency distribution – Tabulation -Diagrammatic and graphic presentation of data using Computers (Excel).

Unit 2: Measures of Central Tendency:
Characteristics of measures of Central Tendency-Types of Averages – Arithmetic Mean, Geometric Mean, Harmonic Mean, Median, Mode, Deciles, Percentiles, (Problems only)

Unit 3: Measures of dispersion and Skewness:
Properties of dispersion-Range-Quartile Deviation –Mean Deviation-Standard Deviation-Coefficient of Variation-Skewness definition-Karl Pearson's and Bowley's Measures of skewness-Normal Distribution.

Unit 4: Measures of Relation:
Meaning and use of correlation – Types of correlation-Karlpearson's correlation coefficient – Spearman's Rank correlation-probable error- Calculation of Correlation by Using Computers

Unit 5: Index Numbers:
Index Numbers-Methods of Construction of Index Numbers – Price Index Numbers – Tests of Adequacy of Index Numbers – Cost of Index Numbers. **(Problems only)**

References:
1. Business Statistics   Reddy, C.R, Deep Publications.
2. Statistics-Problems and Solutions   Kapoor V.K.
3. Fundamentals of Statistics   Elhance.D.N
4. Statistical Methods   Gupta S.P
5. Statistics   Gupta B.N.
6. Fundamentals of Statistics   Gupta S.C
7. Statistics-Theory, Methods and Applications   Sancheti,D.C. &Kapoor V.K
8. Business Statistics   J.K.Sharma
9. Business Statistics   Bharat Jhunjhunwala
10. Business Statistics   R.S.Bharadwaj

Programming IN C

Unit- I

Introduction to Algorithms and Programming Languages: Algorithm – Key features of Algorithms – Some more Algorithms – Flow Charts. **Introduction to C:** Structure of C Program –Writing the first C Program – File used in C Program – Compiling and Executing C Programs –Using Comments – Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C- Operators in C- Programming Examples – Type Conversion and Type Casting.

Unit-II

Decision Control and Looping Statements: Introduction to Decision Control Statements – Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Go to Statement.

Unit- III

Arrays: Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array – Calculating the length of the Array – Operations on Array – one dimensional array for inter-function communication – Two dimensional Arrays –Operations on Two Dimensional Arrays, **Strings:** Introduction String and Character functions.

Unit- IV

Functions: Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive function.

Unit-V

Pointers: Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function. **Structure, Union, and Enumerated Data Types:** Introduction – Nested Structures – Arrays of Structures – Structures and Functions - Unions – Enumerated Data Types.

Reference Books:
1. ReemaThareja, Introduction to C programming, Oxford University Press.
2. E Balagurusamy, Programming in ANSI C Tata McGraw-Hill, Sixth Edition.
3. Ashok N Kamthane, Programming with ANSI and Turbo C, Pearson Publisher, 2002.
4. Henry Mulish & Hubert L.CooReemaThareja: The Spirit of C: An Introduction to Modern Programming, Jaico Publishing House,1996.

PROGRAMMING IN C LAB

1. Write a C program to find the given number is perfect number or not.
2. Write a C program to find the sum and product of individual digits of a positive integer.
3. Write a C program to generate the first n terms of the Fibonacci sequence.
4. Write a C program to generate all the prime numbers between 1 and n, where n is a value supplied by the user.
5. Write a C program to find both the largest and smallest number in a list of integers.
6. Write a C program to search an item in a given list by using linear search.
7. Write a C program to sort a given list of integers in ascending order
8. Write a C program to perform Addition of Two Matrices
9. Write a C program to perform Multiplication of Two Matrices using functions
10. Write a C program to perform various string operations
11. Write a C program to perform sorting of names using pointers
12. Write a C program to calculate student results using structures by giving suitable input.

Note: Suggested to do more programs covering all topics related to syllabus

Marks Distribution: Program writing &Editing→ 15 M

                         Program execution & Result verification → 15 M

                         Viva-Voce→ 10 M

                         Records → 10 M

                         Total: 50 Marks

Semester - IV
DSC 1D 4.1-   Accounting for Service Organizations

Unit-I: Non-Trading/ Service Organizations
Non profit entities-Features of nonprofit entities-Accounting process-Preparation of summaries – Receipt and payment account – Meaning and special features – Procedure of preparation – Uses and Limitations.
Income and expenditure account – Features – Procedure for preparation – Preparation of Balance Sheet **(Problems only)**

Unit – II Single Entry or Accounts from Incomplete Records:
Single Entry - Features-Books and accounts maintained-Recording of transactions-Ascertainment of Profit.(Statement of Affairs method only). **(Problems only)**

Unit – III - Bank Accounts
Bank Accounts – Books and Registers to be maintained by Banks – Slip System of Posting – Rebate on bills discounted – Schedule of advances – Non forming assets –Banking Regulation Act, 1969 - Legal Provisions Relating to preparation of Final Accounts. **(Problems only)**

Unit-IV: Insurance Companies
Life Insurance Companies –Preparation of Revenue Account, Balance Sheet (including problems) – LIC Act, 1956.

Unit – V - Insurance Claims for Loss of Stocks only
Fire loss claims - Claims for loss of goods - Average clause - Steps calculation. **(Problems only)**

Suggested Readings
1. Corporate Accounting – RL Gupta & M. Radha Swami
2. Corporate Accounting – P.C. Tulsian
3. Company Accounts : Monga, Girish Ahuja and Shok Sehagal
4. Advanced Accountancy: Jain and Narang
5. Advanced Accountancy : R.K. Gupta and M. Radhaswamy
6. Advanced Accountancy : Chakraborty
7. Advanced Accountancy: S.P. Iyengar
8. Modern Accounting: A. Mukherjee, M. Hanife McGraw Hill Company Ltd., New Delhi.
9. Accounting standards and Corporate Accounting Practices: T.P. Ghosh Taxman
10. Corporate Accounting: S.N. Maheswari, S.R. Maheswari, Vikas Publishing.
11. Advanced Accountancy: Arutanandam, Raman, Himalaya Publishing House.
12. Advanced Accounts: M.C. Shukla, T.S. Grewal, S.C. Gupta, S. Chand.

DSC 2D 4.2 - Business Laws

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 and Acceptance:

Definition of Valid Offer, Acceptance and Consideration -Essential elements of a Valid Offer, Acceptance and Consideration.

Unit-III: 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:

Contract of sale – Sale and agreement to sell – Implied conditions and warranties – Rights of unpaid vendor.

Unit-V: Cyber Law and Contract Procedures - Digital Signature - Safety Mechanisms.

References:

1. J. Jayasankar, Business Laws, Margham Publication. Chennai -17
2. Kapoor ND, Mercentile Law , Sultan Chand
3. Balachandram V, Business law Tata
4. Tulsian , Business Law Tata
5. Pillai Bhagavathi, Business Law , S.Chand.
6. Business Laws, Maruthi Publishers

DSC3D: Object Oriented Programming with C++

Unit - I Object Oriented Programming

Introduction: Programming Language generations, Object Oriented Paradigm, Basic Concepts of OOPs, Benefits of OOPs, Applications of OOPs, Object Oriented Languages, Difference between OOPs and Procedure Oriented Programming.

Unit – II C++ Basics, Streams based I/O

Introduction to C++, Difference between C and C++, A brief history of C++, General Structure of a C++ program, C++ tokens: Keywords, identifiers, Constants, variables,Strings, Operators in C++. Data types in C++. Special Operators in C++- Scope resolution operator.Streams Based I/O: input function – cin>>,output function – cout<< .

Unit – III Functions, Arrays and Structures, Pointers

Functions: Types of functions. Inline functions, Function- overloading, Introduction to arrays: Declaration of arrays – Different types of arrays: One Dimensional Array, Two Dimensional Array. Character arrays and strings. Structures – Pointers.

Unit - IV Classes and Objects

Classes – Objects , Defining a class, defining member functions, member function with object as arguments and argument as return type, array of objects, friend function and friend class.

Unit - V Constructors, Destructors and Inheritance

Constructors and Destructors - characteristics of constructor, constructor types – Default Parameterized, copy and dynamic constructor overloading, Operator overloading. Derived Classes: Syntax of derived classes, Access to the base class, Overloading inherited member function, multiple inheritance.

Reference Books

1. Object Oriented Programming with C++ - M.T. Somashekara, D.S.Guru, H.S. Nagendraswamy, K.S. Manjunatha, PHI 2nd Edition
2. Object Oriented Programming with C++ - E. Balagurusamy, 4th Edition, Tata Mc Graw Hill Publication
3. Object Oriented Programming in C++ - Robert Lafore, 4th Edition, Pearson Education
4. Object-Oriented Programming with ANSI and Turbo C++

Object Oriented Programming with C++ LAB

1. Write a C++ Program to calculate Simple Interest and Compound Interest for the given values.
2. Write a C++ Program to implement Arithmetic operations using Switch-Case Statement
3. Write a C++ Program to calculate Sum of Natural Numbers.
4. Write a C++ Program to generate the prime numbers up to given limit
5. Write a C++ Program to find out whether the given number is Palindrome number or not
6. Write a C++ Program to generate Fibonacci Series up to n.
7. Write a C++ Program to find out the sum and average for the given n number.
8. Write a C++ Program to Sort the given set of number in ascending order.
9. Write a C++ Program to find out the addition of given two matrices.
10. Write a C++ Program to find out the multiplication of given two matrices.
11. Write a C++ Program to find out the reverse of given string by using functions.
12. Write a C++ Program to find out Total Marks, Average, and Result for the given student details Student Number, Student Name, and Marks in three subjects using Class Concepts.
13. Write a C++ Program to swap the two numbers by using function overloading.
14. Write a C++ Program to explain the concept of Inline functions.
15. Write a C++ Program to explain the concept of Constructors and Destructions.
16. Write a C++ program to explain the following
    1. Multilevel Inheritance
    2. Multiple Inheritance

Note: Suggested to do more programs covering all topics related to syllabus

Marks Distribution: Program writing &Editing→ 15 M

Program execution & Result verification → 15 M

Viva-Voce→ 10 M

Records → 10 M

Total: 50 Marks

Semester - V

DSC - 1E 5.1 Cost Accounting

Unit-I:Introduction: Distinguish between Financial Accounting, Cost Accounting and management accounting - Cost Concepts and Classification – Cost Centre and Cost Unit – Preparation of Cost Sheet.

Unit-II: Elements of Cost: Materials: Material control – Selective control, ABC technique – Methods of pricing issues – FIFO, LIFO, Weighted average, (problems only).

Unit-III: Labour: Labour: Control of labor costs – Methods of remuneration – labour incentives schemes – Time rate halsey plan, Rowan plan , piece rate- F.W Taylor and Merrick multiple piece rate method (problems only)

Unit-IV: Methods of Costing: Job costing And contract costing – (problems only).

Unit -V: Marginal costing : Marginal Costing – BEP,P/V ratio, Margin of safety (problems only)

References:

1. S.P. Jain and K.L. Narang – Advanced Cost Accounting, Kalyani Publishers, Ludhiana.

2. M.N. Aurora – 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.

6. I.M .Pandey – Management Accounting, Vikas Publishing House Pvt. Ltd.

7. Sharma & Shashi Gupta – Management Accounting, Kalyani Publishers. Ludhiana.

DSC 2E 5.2 ADVANCED ACCOUNTING –I

UNIT-I:- Self –balancing System:

Meaning, Advantages of self balancing system- preparation of sales ledger adjustment account, purchase ledger adjustment account and General ledger adjustment account. (Problems only)

Unit –II:- Royalty

Royalties- preparation of minimum rent account, Royalties account, short working accounts and Land lord account (Problems only)

UNIT – III :- Insolvency Accounting

Insolvency of an Individual- Preparation of statement of affairs, and deficiency account. (problems only)

UNIT – IV:- Partnership Accounts-I

Nature- deed- Types of Capital accounts (Fixed and fluctuating), Calculation of goodwill, Revaluation of assets and liabilities of firm- Admission of a partner (problems only)

UNIT-V:- Partnership Accounts-II

Retirement of a partner- Death of a partner- Dissolution of a partnership firm- Garner Vs Murray Case (problems only)

Reference Books:

1. Advanced Accounting- R.L.Gupta and M.Radha Swamy, Sultan Chand & Sons
2. Corporate Accounting- R.L.Gupta and M.Radha Swamy, Sultan Chand & Sons
3. Accountancy-I- S.P.Jain and K.L.Narang, Kalyani Publications
4. Advanced Accountancy- M.C.Shukla and T.S. Grewal, Sultan Chand & Sons

DSC 3E 5.3 Commercial Geography

Unit –I: The Earth: Internal structure of the Earth – Latitude – Longitude – Realms of the Earth – Evolution of the Earth – Environmental pollution - Global Warming - Measures to be taken to protect the Earth.

Unit -II: India – Agriculture: Land Use - Soils - Major crops – Food and Non-food Crops – Importance of Agriculture – Problems in Agriculture – Agriculture Development.

Unit -III: India – Forestry: Forests – Status of Forests in Andhra Pradesh – Forest (Conservation) Act, 1980 – Compensatory Afforestation Fund (CAF) Bill, 2015 - Forest Rights Act, 2006 and its Relevance – Need for protection of Forestry.

Unit -IV: India – Minerals and Mining: Minerals – Renewable and non Renewable – Use of Minerals – Mines – Coal, Barites, etc. – Singareni Coal mines and Mangampeta Barites - District-wise Profile.

Unit-V: India – Water Resources – Rivers: Water resources - Rationality and equitable use of water – Protection measures - Rivers **-** Perennial and peninsular Rivers - Interlinking of Rivers - Experience of India and Andhra Pradesh.

References:

1. Shabiar Ahmad; Quazi ,Natural Resource Consumption and Environment Management, APH Publishing Corporation.

2. Tarachand, Economic and Commercial Geography of India, Vikas Publishing House.

3. Dr. S. Sankaran, Commercial Geography, Margam Publications, Chennai.

4. C. B. Memoria, Commercial Geography, Lal Agarwal & Co.

5. C. B. Memoria, Economic and Commercial Geography, Lal Agarwal & Co.

6. Vinod N. Patel, Commercial Geography, Oxford Book Company

DSC 4E 5.4 GOODS &SERVICE TAX FUNDAMENTALS-I

Unit I: Introduction: Overview of GST - Concepts – Limitations of VAT – Need for Tax Reforms - Justification for introduction of GST - Shortcomings and advantages at the Central Level and State Level on introduction of GST- Process of Introduction of GST - Constitutional Amendments.

Unit II: GST: Principles – Models of GST: Austrlian, Candian, Kelkar-Shah – Bagchi-Poddar - Comprehensive structure of GST model in India: Single, Dual GST–Transactions covered under GST.

Unit-III: Taxes and Duties: Subsumed under GST - Taxes and Duties outside the purview of GST: Tax on items containing Alcohol – Tax on Petroleum products -Tax on Tobacco products - Taxation of Services

Unit-IV: Inter-State Goods and Services Tax: Major advantages of IGST Model –Interstate Goods and Service Tax: Transactions within a State under GST – Interstate Transactions under GST - Illustrations.

Unit-V: 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.

References:

1. Goods and Services Tax in India – Notifications on different dates.

2. GST Bill 2012.

3. Background Material on Model GST Law, Sahitya Bhawan Publications, Hospital Road, Agra -

   282 003.

4. The Central Goods and Services Tax Act, 2017, NO. 12 OF 2017 Published by Authority,

   Ministry of Law and Justice, New Delhi, the 12thApril, 2017.

Database Management System

Unit-I

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

Unit-II

File-Based System, Drawbacks of File-Based System , DBMS Approach, Advantages 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 Sets , 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 Standard, 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, Function, Exceptions Handling.

Text Books:
1. S.Sumathi, S. Esakkirajan, Fundamentals of Relational Database Management Systems
2. Ivan Bayross, SQL, PL/SQL, The programming language of Oracle, BPB Publications
Reference Books:
1. Paneerselvam: Database Management Systems, PHI.
2. Bipin C. Desai, "An Introduction to Database Systems", Galgotia Publications.
3. Korth, Database Management systems.
4. Navathe, Database Management systems.

DATABASE MANAGEMENT SYSTEMS LAB

1. Draw ER diagrams for train services in a railway station
2. Draw ER diagram for hospital administration
3. Creation of college database and establish relationships between tables
4. Write a view to extract details from two or more tables
5. Write a stored procedure to process students results
6. Write a program to demonstratea function
7. Write a program to demonstrate of Aggregate functions
8. Creation of Reports based on different queries
9. Write a program to generate employee pay slip using PL/SQL.

Web Technology

Unit-I

HTML: Basic HTML, Document body, Text, Hyper links, adding more formatting, Lists, Tables using images. **More HTML**: Multimedia objects, Frames, Forms towards interactive, HTML document heading detail.

Unit-II

Cascading Style Sheets: Introduction, using Styles, simple examples, your own styles, properties and values in styles, style sheet, formatting blocks of information, layers.

Unit-III

Introduction to JavaScript: What is DHTML, JavaScript, basics, variables, string manipulations, mathematical functions, statements, operators, arrays, functions. **Objects in JavaScript**: Data and objects in JavaScript, regular expressions, exception handling.

Unit-IV

DHTML with JavaScript: Data validation, opening a new window, messages and confirmations, the status bar, different frames, rollover buttons, moving images.

Unit-V

XML: defining data for web applications, basic XML, document type definition, presenting XML, document object model. Web Services.

Text Books:
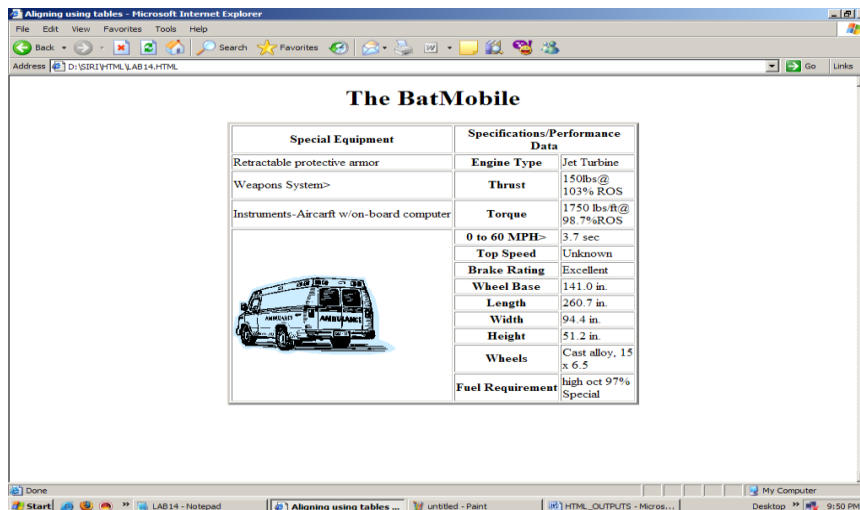
1. Web Technology, Chris Bates, Wiley publications
Reference books:

1. Uttam Kumar Roy, Web Technologies, Oxford University Press.

2. Black Book HTML 5.0

3. Complete reference HTML 5.0

4. Web Technology, PHI Publications.

Web Technologies Lab

1. Write a HTML program illustrating text formatting.

2. Illustrate font variations in your HTML code.

3. Prepare a sample code to illustrate links between different sections of the page.

4. Create a simple HTML program to illustrate three types of lists.

5. Embed a real player in your web page.

6. Embed a calendar object in your web page.

7. Create an applet that accepts two numbers and perform all the arithmetic operations on them.

8. Create nested table to store your curriculum.

9. Create a form that accepts the information from the subscriber of a mailing system.

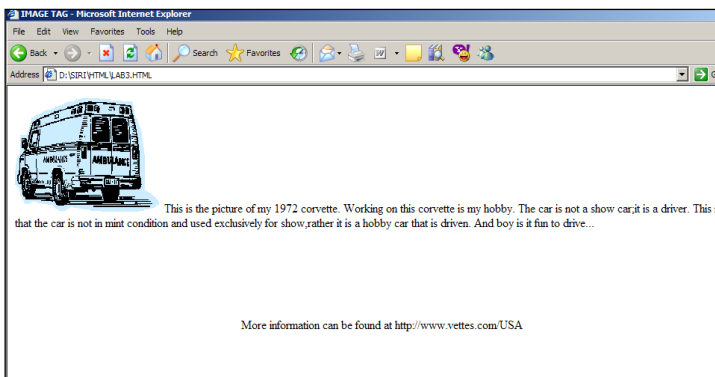10. Design the page as follows:

11. Using "table" tag, align the images as follows:

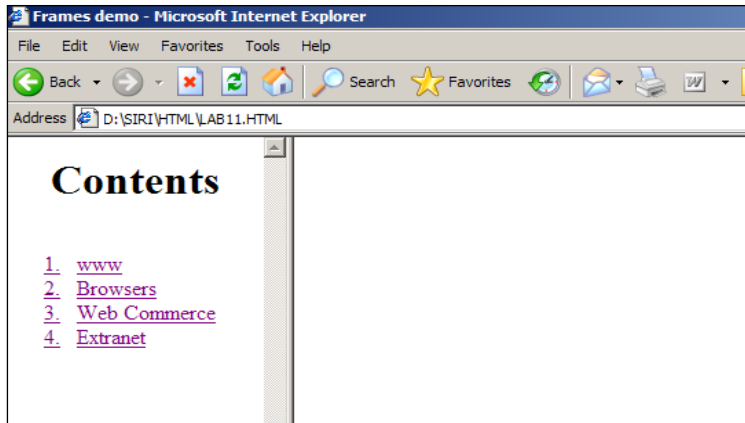## 12. Divide the web page as follows:
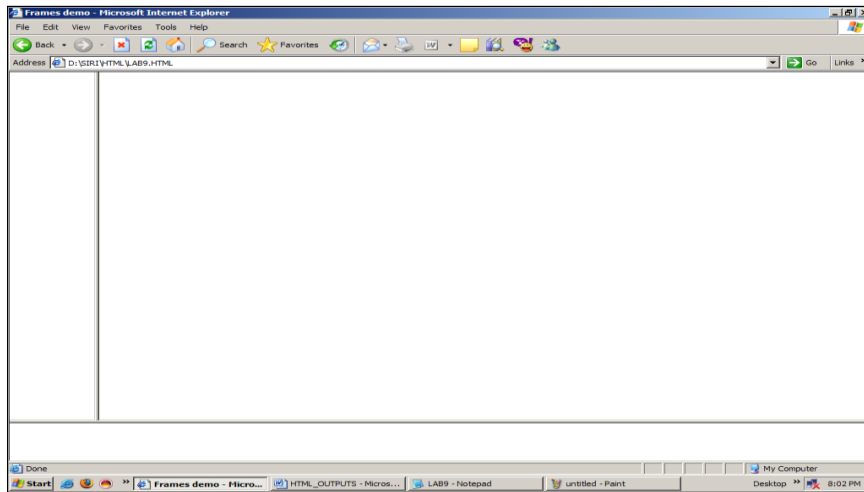
13. Design the page as follows:

14. Illustrate the horizontal rulers in your page.

15. Create a help file as follows:

16. Create a form using form tags(assume the form and fields).
17. Create a webpage containing your biodata(assume the form and fields).
18. Write a html program including style sheets.
19. Write a html program to include audio or video into webpage.
20. Write a html program to layers of information in web page.
21. Create a static webpage.

SEMESTER –VI

DSC 1F 6.1 GOODS AND SERVICE ACT & CUSTOMER ACT-II

Unit-I: Registration and Filing–Registration of Assesses Under GST - Persons liable for registration - Compulsory registration in certain cases - Procedure for registration - Deemed registration - GST Rate Structure.

Unit-II: Administration: Officers under GST Act: Appointment and Powers of officers- Administration of officers of State tax or Union-territory tax – Accounts and Records – Retention of Records – Audit by Tax Authorities.

Unit-III: Assessment: Self-assessment - Provisional assessment –Security of Returns - Assessment of Non-filers of returns - Assessment of Unregistered persons –Audit and Assessment – Other features of Dual GST model.

Unit-IV: Levy and Exemptionof Tax: Chargeability – Collection at Source –E-Commerce - Composition Levy - Tax under Central GST and State GST - Zero-rating of Exports – GST on Imports –Returns under GST –Taxation of Services–Remission of Tax - Adjustment and Refund of GST.

Unit- V: Customs Act: Types of Custom Duties- Valuation for Customs Duty- Tariff Value- Customs Value- Methods of Valuation for Customs - Problems on Custom Duty Assessment.

References:
1. Goods and Services Tax in India – Notifications on different dates
2. Customs Law Manual and Customs Tariff of India- R K Jain.
3. Background Material on Model GST Law, Sahitya Bhawan Publications, Hospital Road, Agra - 282 003.
4. The Central Goods and Services Tax Act, 2017, NO. 12 OF 2017 Published by Authority, Ministry of Law and Justice, New Delhi, the 12th April, 2017.

DSC 2F 6.2 AUDITING

Unit-I: Auditing: Meaning – Objectives – Importance of Auditing – Auditing as a Vigil Mechanism – Role of Auditor in checking corporate frauds.

Unit-II: Types of Audit: Based on Ownership and time - 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 - Internal check, internal audit and internal control.

Unit-IV: Vouching and Investigation: Vouching of cash and trading transactions - Investigation, Auditing vs. Investigation

Unit-V: Company Audit and Auditors Report: Auditor's Qualifications – Appointment and Reappointment – 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, Baldev Sachdeva & Jagwant Singh, "Auditing Theory and Practice, Kalyani Publications, Ludhiana.
4.   N.D. Kapoor, "Auditing", S. Chand, New Delhi.
5.   R.G. Saxena, "Principles and Practice of Auditing", Himalaya Publishing House, New Delhi.
6.   Jagadesh Prakesh, "Principles and Practices of Auditing" Kalyani Publications, Ludhiana.
7.   Kamal Gupta and Ashok Gupta, "Fundamentals of Auditing", Tata McGraw Hill
8.   B.N. Tondan, "Practical Auditing", S.Chand, New Delhi.

DSC 3F 6.3 MANAGEMENT ACCOUNTING

Unit–I: Management Accounting: Interface with Financial Accounting and Cost Accounting **-** Financial Statement analysis and interpretation: Comparative analysis – Common size analysis and trend analysis (including problems).

Unit–II: Ratio Analysis: Classification, Importance and limitations - Analysis and interpretation of Accounting ratios - Liquidity, profitability, activity and solvency ratios (including problems).

Unit–III: Fund Flow Statement: Concept of fund: Preparation of funds flow statement. Uses and limitations of funds flow analysis (including problems).

Unit–IV: Cash Flow Statement: Concept of cash flow – Preparation of cash flow statement - Uses and limitations of cash flow analysis (including problems).

Unit–V: Standard Cost: Material variance only (including Problems).

References:
1. S.N. Maheswari, A Textbook of Accounting for Management, S. Chand Publishing, New Delhi.
2. I.M Pandey, "Management Accounting", Vikas Publishing House, New Delhi,
3. Shashi K. Gupta & R.K. Sharma, "Management Accounting: Principles and Practice", Kalyani Publishers, Ludhiana.
4. Jawahar Lal, Accounting for Management, Himalaya Publishing House, New Delhi.
5. Charles T. Horngren, et.al, "Introduction to Management Accounting" Person EducationIndia, New Delhi, 2002.
6. Murthy & Guruswamy – Management Accounting, Tata McGraw Hill, New Delhi.
7. Dr. Kulsreshtha & Gupta – Practical problems in Management Accounting.
8. Bhattacharya, D., "Management Accounting", Pearson Education India, New Delhi.
9. S.P. Gupta – Management Accounting, S. Chand Publishing, New Delhi.

DSC 4F 6.4 ADVANCED ACCOUNTING-II

UNIT-I:- Hire purchase – installment purchase accounting

Hire Purchase system- Calculation of interest- Accounting procedure for preparation of Hire Purchase Accounts – Installment purchase system (problems only)

UNIT-II:- Branch Accounts:

Branch Accounting- Debtors system- stock and debtors system- invoice price method (excluding independent and foreign branch). (problems only)

UNIT-III:- Internal Reconstruction:

Meaning- Reasons and factors for reconstruction procedure for capital reduction- preparation of post reconstruction balance sheet and capital reduction account (excluding surrender of shares) (problems only)

UNIT-IV:- Liquidation:

Meaning – liquidation expenses- Liquidator's remuneration – preparation of Liquidator's final statement of account (problems only)

UNIT-V:- Profits Prior to Incorporation of Company:

Profits prior to incorporation of Company- Accounting treatment (problems only)

Reference Books:

1.Advanced Accounting- R.L.Gupta and M.Radha Swamy, Sultan Chand & Sons
2.Corporate Accounting- R.L.Gupta and M.Radha Swamy, Sultan Chand & Sons
3.Accountancy-I- S.P.Jain and K.L.Narang, Kalyani Publications
4.Advanced Accountancy- M.C.Shukla and T.S. Grewal, Sultan Chand & Sons

E-COMMERCE

Unit-I

Electronic Commerce Environment and Opportunities: Background, The Electronic Commerce Environment, Electronic Market place Technologies. **Mode of Electronic Commerce**: Electronic Data Interchange, Migration to Open EDI, Electronic Commerce with WWW/Internet, Commerce Net Advocacy, Web Commerce going forward.

Unit-II

Approaches to Safe Electronic Commerce: Secure Transport Protocols, Secure Transactions, Secure Electronic Payment Protocol (SEPP), Secure Electronic transaction (SET), Certificates for authentication Security on Web Servers and Enterprise Networks.

Unit-III

Electronic Cash and Electronic Payment Schemes: Internet Monetary Payment & Security Requirements, Payment and Purchase Order Process, On-line Electronic cash. **Internet / Intranet Security Issues and Solution:** The need for Computer Security, Specific Intruder Approaches, Security Strategies, Security Tools, Encryption, Enterprise Networking and Access to the Internet, Antivirus Programs, Security Teams.

Unit-IV

Master Card / Visa secure Electronic Transaction: Introduction, Business Requirements, Concepts, Payments Processing. **E-Mail and Secure E-Mail technologies for Electronic Commerce**: Introduction The Means of Distribution, A Model for Message Handling, E-Mail Handling, Multipurpose Internet Mail Extensions, Message Object Security Services, Comparisons of Security Methods, MIME and Related Facilities for EDI over the Internet.

Unit-V

Internet Resources for Commerce Introduction: Introduction, Technologies for Web Servers, Internet Tools Relevant to Commerce, Internet Applications for Commerce, Internet Charges, Internet Access and Architecture.

Text Books

Web Commerce Technology Handbook, by Daniel Minoli, Emma Minoli, McGraw-Hill

Reference Books

1. David Whiteley, "E-Commerce", Tata McGraw Hill, 2000.

2. E Business by Parag Kulakarni and SunithaJahirabadkar from Oxford University Press.

3. E Business by Jonathan Reynolds from Oxford University Press.

4. Eframi Turban, Jae Lee, David King, K. Michael Chung, "Electronic Commerce", Pearson Education, 2000.

5. R. Kalakota and A. B. Whinston, Frontiers of Electronic Commerce, Addison Wesley.

6. David Kosiur, Understanding Electronic Commerce, Microsoft Press.

7. Soka, From EDI to Electronic Commerce, McGraw Hill.

PHP and My SQL

Unit-I: Building blocks of PHP: Variables, Data Types, Operators and Expressions, Constants.

Flow Control Functions in PHP: Switching Flow, Loops, Code Blocks and Browser Output. **Working with Functions:** Defining Functions, Calling functions, returning the values from User- Defined Functions, Variable Scope, Saving State between Function calls with the Static statement, more about arguments.

Unit-II: Working with Arrays: Arrays, Creating Arrays, Some Array-Related Functions. **Working with Objects:** Creating Objects, Object Instance. **Working with Strings, Dates and Time:** Formatting Strings with PHP, Investigating Strings with PHP, Manipulating Strings with PHP, Using Date and Time Functions in PHP.

Unit-III: Working with Forms: Creating Forms, Accessing Form - Input with User defined Arrays, Combining HTML and PHP code on a single Page, Using Hidden Fields to save state, Redirecting the user, Sending Mail on Form Submission, Working with File Uploads**.**

Unit-IV: Working with Files and Directories: Including Files with include(), Validating Files, Creating and Deleting Files, Opening a File for Writing, Reading or Appending, Reading from Files, Writing or Appending to a File, Working with Directories, Open Pipes to and from Process Using popen (), Running Commands with exec(), Running Commands with system ( ) or passthru ( ).

Working with Images: Understanding the Image-Creation Process, Necessary Modifications to PHP, Drawing a New Image, Getting Fancy with Pie Charts, Modifying Existing Images, Image Creation from User Input.

Unit-V: Interacting with MySQL using PHP: MySQL Versus MySQLi Functions, Connecting to MySQL with PHP, Working with MySQL Data.

References:
1. Julie C. Meloni, PHP MySQL and Apache, SAMS Teach Yourself, Pearson Education (2007).
2. Xue Bai Michael Ekedahl, The Web Warrior Guide to Web Programming, Thomson (2006)

PHP AND MY SQL LAB

MySQL Lab Cycle

Cycle -1:

An Enterprise wishes to maintain the details about his suppliers and other corresponding details.

For that he uses the following details.

Suppliers (sid: Integer, sname: string, address: string)

Parts (pid: Integer, pname: string, color: string)

Catalog (sid: integer, pid: integer, cost: real)

The catalog relation lists the prices charged for parts by suppliers.

Write the following queries in SQL:

1.Find the pnames of parts for which there is some supplier.

2.Find the snames of suppliers who supply every part.

3.Find the snames of supplier who supply every red part.

4.Find the pnames of parts supplied by London Supplier abd by no one else.

5.Find the sid's of suppliers who charge more for some part than theaverage cost of that part.

6.For each part, find the sname of the supplier who charges the most for that part.

7.Find the sid's of suppliers who supply only red parts.

8.Find the sid's of suppliers who supply a red and a green part.

9.Find the sid's of suppliers who supply a red or green part.

10.Find the total amount has to pay for that suppler by part located from London.

Cycle –2

An organisation wishes to maintain the status about the working hours made by his employees.

For that he uses the following tables.

Emp (eid: integer, ename: string, age: integer, salary: real)

Works (eid: integer, did: integer, pct_time: integer)

Dept (did: integer, budget: real, managerid: integer)

An employee can work in more than one department; the pct_time field of the works relation shows the percentage of time that a given employee works in a given department.

Resolve the following queries.

1.Print the names and ages of each employee who works in both Hardware and Software departments.

2.For each department with more than 20 full time equivalent employees (i.e.,where the part-time and full-time employees add up to at least that many full-time employees), print the did's together with the number of employees that work in that department.

3.Print the name of each employee whose salaryexceeds the budget of all of the departments that he or she work in.

4.Find the managerid's of managers who manage only departments with budgets greater than 1,000,000.

5.Find the enames of managers who manage the departments with largest budget.

6.If a managermanages more than one department, he or she controls the sum of all the budgets for those departments. Find the managerid's of managers who control more than 5,000,000.

7.Find the managerid's of managers who control the highest amount.

8.Find the average manager salary.

PHP Lab Cycle

1.Write a PHP program to Display "Hello"

2.Write a PHP Program to display the today's date.

3.Write a PHP Program to read the employee details.

4.Write a PHP Program to display the

5.Write a PHP program to prepare the student marks list.

6.Write a PHP program to generate the multiplication of two matrices.

7.Write a PHP Application to perform demonstrate the college website.

8.Write a PHP application to add new Rows in a Table.

9.Write a PHP application to modify the Rows in a Table.

10.Write a PHP application to delete the Rows from a Table.

11.Write a PHP application to fetch the Rows in a Table.

12.Develop an PHP application to make following Operations

i. Registration of Users.

ii. Insert the details of the Users.

iii. Modify the Details.

iv. Transaction Maintenance.

a) No of times Logged in

b) Time Spent on each login.

c) Restrict the user for three trials only.

d) Delete the user if he spent more than 100 Hrs of transaction.