

**B.Com (CA) and B.A.(CA) Under CBCS with effect from Academic Year 2015-2016**

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Semester	Part	Subject	Hrs.	Credits	IA	ES	Total
<b>FIRST YEAR</b>							
SEMESTER I	PART II	Fundamentals of Computers	4	3	25	75	100
		PC Software & Hardware Lab	2	2	0	50	50
SEMESTER II	PART II	Office Automation Tool	4	3	25	75	100
		MS Office Lab	2	2	0	50	50
<b>SECOND YEAR</b>							
SEMESTER III	PART II	Networks and Internet Foundation Course	4	3	25	75	100
		Networks and Internet Lab	2	2	0	50	50
SEMESTER IV	PART II	Computer Accounting with Tally	4	3	25	75	100
		Tally Lab	2	2	0	50	50
<b>THIRD YEAR</b>							
SEMESTER V	PART II	Database Management Systems	4	3	25	75	100
		Oracle Lab	2	2	0	50	50
		<b>ELECTIVE</b> 1. Electronic Commerce 2. Cloud Computing	6	5	25	75	100
SEMESTER VI	PART II	Web Technologies	4	3	25	75	100
		Web Technologies Lab	2	2	0	50	50
		<b>ELECTIVE</b> 1. Desktop Publishing Technologies 2. Multimedia Systems	6	5	25	75	100

**I YEAR I SEMESTER**

**FUNDAMENTALS OF COMPUTERS**

**UNIT I**

Introduction to Computers  
Input and Output Devices

**UNIT II**

Computer Memory and Processors  
Number Systems and Computer Codes

**UNIT III**

Boolean algebra And Logic Gates  
Computer Software

**UNIT IV**

Operating Systems  
Introduction to Algorithms and Programming Languages  
Database Systems

**UNIT V**

Computer Networks  
Internet  
Emerging Computer Technologies

**TEXT BOOK**

1. Fundamentals of Computers By Reema Thareja from Oxford University Press

**REFERENCE BOOKS**

1. Peter Norton, Introduction to Computers, 6<sup>th</sup> Edition , Tata McGraw – Hill , 2008 .
2. Jacob Beckerman, How to Build a Computer 2014-15: Learn, Select Parts, Assemble, and Install: A Step by Step Guide to Your First Homebuilt.
3. Leon A and Leon M, Computers for Everyone, Leon Vikas , 2001 .
4. Turban E, Rainer R K , and Potter R E , Introduction to Information Technology , John Wiley & Sons , 2000.

**PC HARDWARE & SOFTWARE – LAB**

1. Identifying external ports and interfacing of peripherals such as monitor, keyboard, mice, speakers, printers, modem, mother board, memory board, display card, NIC card, sound blaster card, interfacing floppy drives, Hard disk, CDRoms.
2. Disassembling and assembling of a Personal Computer.
3. Preventive maintenance of PC.
4. CMOS setup features.
5. Soldering RS-232C connector.
6. Prepare a patch card by crimping RJ-45 connector.
7. Partitioning and formatting of a Hard Disks.
8. Loading Windows operating system and device drivers.
9. Control Panel settings and features
10. Installation of modem and setting up dial network.
11. Setting up the properties of network neighborhood and copying files from another system.
12. Installation of MS Office application software.

**I YEAR II SEMESTER**

**OFFICE AUTOMATION TOOL**

**UNIT I**

Introduction to Windows, Desktop, File, Folder, My Computer, My documents, Recycle bin, Internet Explorer, Windows Explorer

**Office Automation:** Organization of an Office, Nature of Office work , The definition and need for office automation. Document Preparation : Word processing , Various office equipment that help in document preparation, Introduction to document storage and retrieval .

**UNIT II**

**Word Basics:** Starting word, Creating a new document, Opening preexisting document, The parts of a word window, Typing text, Selecting text, Deleting text, Undo, Redo, Repeat, Inserting text, Replacing text, Formatting text, Cut, Copy, Paste – Printing.

**Formatting Your Text and Documents:** Auto format, Line spacing, Margins, Borders and Shading.

**Working with Headers and Footers:** Definition of headers and footers, creating basic headers and footers, creating different headers and footers for odd and even pages.

**Tables:** Creating a simple table, Creating a table using the table menu, Entering and editing text in a table, selecting in table, adding rows, changing row heights, Deleting rows, Inserting columns, Deleting columns, changing column width .

**Graphics:** Importing graphics, Clipart, Insert picture, Clip Art Gallery, using word's drawing features, drawing objects, text in drawing.

**Templates:** Template types, using templates, exploring templates, modifying templates.

**Macros:** Macro, Recording macros, editing macros, running a macro.

**Mail Merge:** Mail Merge concept, Main document, data sources, merging data source and main document. Overview of word menu options word basic tool bar.

**UNIT III**

**MS Power Point:** Introduction, Building a presentation, Outlining the presentation, Creating the text and chart slides, Formatting charts, customizing a presentation, drawing on slides, Creating slide shows

**Creating Presentations :** Using auto content wizard, Using blank presentation option, Using design template option, Adding slides, Deleting a slide, Importing Images from the outside world, Drawing in power point, Transition and build effects, Deleting a slide, Numbering a slide, Saving presentation, Closing presentation, Printing presentation elements.

**UNIT IV**

**Excel Basics:** Overview of Excel features, Getting started, Creating a new worksheet, Selecting cells, Entering and editing text, Entering and editing Numbers, entering and editing Formulas, Referencing cells, moving cells, copying cells, sorting cell data, inserting rows, inserting columns, Inserting cells, Deleting parts of a worksheet, clearing parts of a worksheet.

**Formatting:** Page setup, changing column widths and Row heights, auto format, changing font sizes and Attributes, centering text across columns, using border buttons and Commands, changing colors and shading, hiding rows and columns.

**Introduction to functions:** Parts of a functions, Functions Requiring Add-ins, The Function Wizard. Examples functions by category: Data and time functions, Engineering functions, Math and Trig functions, Statistical functions, Text functions.

**Excel Charts:** Chart parts and terminology, Instant charts with the chart wizard, creation of different types of charts, printing charts, deleting charts – Linking in Excel

**Excel Graphics:** Creating and placing graphic objects, Resizing Graphics, Drawing Lines and Shapes

## **UNIT V**

### **MS Access**

**Creating a Simple Database and Tables:** Creating a contact Databases with the wiz, The Access Table Wizard, Creating Database Tables without the wizard, Field Names, Data Types and Properties, Adding, deleting fields, renaming the fields in a table.

**Forms:** The Form Wizard, Saving Forms, Modifying Forms

**Entering and Editing Data:** Adding Records, Duplicating previous entries without Retyping, Undo, Correcting Entries, Global Replacements, Moving from Record to Record in a table.

**Finding, Sorting and Displaying Data:** Queries and Dynasets, Creating and using select queries, Returning to the Query Design, Multilevel Sorts, Finding incomplete matches, Showing All Records after a Query, Saving Queries, Crosstab Queries.

**Printing Reports:** Simple table, Form and Database printing, Defining advanced Reports, Manual Reporting, properties in Reports, Saving Reports

**Relational Databases:** Flat Versus Relational, Types of Relationships, Viewing Relationships, Defining and Redefining Relationships, Creating and Deleting Relationships.

**MS Outlook:** Introduction, Reading and Sending messages, managing the mail box, keeping a contacts list, Scheduling tasks and Meetings.

### **TEXT BOOKS**

1. Baja K K , Office Automation , MacMillan India Ltd, 1996.
2. Steve Sagman, Microsoft Office XP for Windows, Pearson Education Asia, 2002.
3. Jennifer Fulton, Microsoft Office 2000 Cheat Sheet, Prentice-Hall of India, 1999.

### **REFERENCE BOOKS**

1. Windows XP Home Edition Complete , BPB Publications, 2001.
2. Raghav Bahl , Exploring Microsoft Office XP , Cyber Tech, 2001 .
3. Sanjay Saxena , MS Office 2000 for Everyone, Vikas Publishing , 2001

**MS OFFICE LAB**

1. Prepare your class time table using different Text formatting in table.
2. Send a Call Letter for All Applicants to Inform Interview Details using Mail Merge
3. Mathematical Equations
4. Water Marking
5. Create Backup file
6. Create a text and images with effects
7. Create a animation and sound effects
8. Create a pay details of employee
9. Calculate student mark details
10. Create four types of chart
11. Import external data, sort & filter

**II YEAR III SEMESTER**

**NETWORKS AND INTERNET FOUNDATION**

**UNIT I**

Introduction to Network, advantages and disadvantages of network , Types of Networks – Network topologies, Types of topologies- Connecting Devices – Hubs, Repeaters, Bridges, Routers, Network Interface Cards (NIC) and Switches – Network Operating system - analog and digital signal, analog and digital signal transmission

**UNIT II**

Introduction to Network Communication Model- Network Architecture –Application Layer, Presentation Layer, Session Layer, transport Layer, Network Layer, Data-link Layer, Physical Layer – TCP/IP Protocols- Protocols and their classification –Address Resolution Protocol(ARP) , Reverse Address Resolution Protocols (RARP) , SMTP, MIME, IMAP, POP, ICMP, HTTP, and Telnet – flow control and cryptography

**UNIT III**

Overview of Internet, revolution of Internet , Internet service providers (ISP) –setting windows environment for dial up networking, search engine, searching web using search engines – audio on internet – newsgroup – subscribing to news groups.

**UNIT IV**

Intranet concepts and architecture, building corporate world wide web protocol, Internet infrastructure, fundamentals of TCP/IP, - Internet Security design - intranet as business tools, future of intranet – protocols of communication.

**UNIT V**

Wireless Technology- aware of WML Protocol, planning your wireless home network- wireless networking equipments – Bluetooth and other wireless networks.- configuring wireless networks- Security – virus and antivirus, configuring firewalls.

**TEXT BOOKS**

1. Introduction to Computer Networks by P.K.Singh, VK Global Publications Pvt. Ltd.
2. Wireless Home Networking For Dummies, By Danny Briere, Hurley, Edward Ferris, Wiley publications

**REFERENCE BOOKS**

1. Computer Networks, Andrew S. Tanenbaum, Pearson edition ,Third Edition
2. Home Networking For Dummies, By Kathy Ivens , Wiley publications

**II YEAR IV SEMESTER**

**COMPUTER ACCOUNTING WITH TALLY**

**UNIT I**

**Introduction:** Business and Computers, Accounting as an Information System , General Role of Computers in Accounting

**Accounting System:** Accounting, Double Entry Book-keeping System, Journal Entry, The Account Cycle, Important Formulae of Ratio Analysis

**Inventory Control System:** Concept of Inventory, Objective of Inventory Control System, Steps in Computerizing Inventory Control System, Inventory Features

**Payroll System :** Introduction , Components of payroll System ,Step-1 Setting up Formulae ,Step-2 Payroll Processing ,step-3 Salary Disbursement ,Step-4 Setting up Legal Provisions ,Step-5 Setting up Tax Deducted at Source Module ,step-6 Setting up Salary Related MIS Reports , Step-7 Setting up Special Reports ,Step-8 Host of Standard Reports,

**UNIT II**

**Starting with Tally :**Introduction , Activating TallySliver for Single-User ,Activating TallyGold for Multi-user , New features of Tally , What is Tally ,Items Of the Tally Screen, Create a Company ,Basic Currency Information ,Other Information on the Screen, Accounting features ,Inventory Features ,Configuring Tally ,Number Symbols ,Accts/Inv Infor Menu, General ,Payment Vocher

**Creating Accounts Masters:** Creating Account Masters ,Accounting Information ,Creating a Group Company ,Ledgers ,Creating a ledger , Advanced Information , Display of Individual Ledger , Buttons on the Screen ,Creating Multiple Ledgers ,Buttons in Multiple Ledger Creation screen ,Alternating Multiple Ledger ,Buttons in Alter Ledger screen , Setting Credit Limits

**Creating Inventory Masters:** Creating Inventory Masters ,Stock Groups ,Creating a Stock Group , Creating Multiple Stock Groups ,Diaplay of Alter a Stock Group , Delete a Stock Group ,Creating Stock Categories ,Stock Items ,Creating a stock Item ,Buttons in Single Mode Stock Item Creation ,Creating Multiple Stock Items ,Advanced Stock Item Creation ,Specifying Reorder Levels ,Obtain Recorder Levels and Quantities to Order ,Alter Recorder Levels and Minimum Quantities ,Location/Godowns ,Displaying and alternating stock ,Unit of Measure ,Price Lists ,Assigning Ledger accounts to Price Levels , Hoe to Create and Use Price Lists ,Price Levels in Voucher Entry-Invoicing ,Voucher Types

**Entering Accounts Vouchers:** Voucher the Main Inputs ,Voucher Types ,Simple Voucher Entry ,The Voucher Entry Screen ,How to enter voucher ,Buttons in typical Entry Screen ,Contra Voucher ,Memo Voucher ,Optical Voucher ,Reversing Journals ,sales ,Purchase Voucher ,Credit Notes.

**UNIT III**

**Entering Inventory Vouchers:** Entering Inventory Voucher ,Sales and Purchase Voucher Entry ,Voucher Classes ,Default Accounting Allocation ,Types of Calculations ,Explanation of Types of Calculation ,Pure Inventory Vouchers ,Default Voucher Number ,Stock Journal, Common Information , Bills of Materials ,Alter a Purchase Order ,How to Create Sales Orders



**Introduction to VAT (Value Added Tax):** What is VAT? ,Concept Of Vat ,Vat Rates ,VAT classification , VAT Document ,VAT Recodes , Statutory Returns ,Dealers Status ,Composite Dealers

**Ledgers and VAT:**

Ledger Masters ,Company Creation/Alteration ,Sate ,Use Indian VAT ,Application Form, VAT TIN NO ,Purchase Ledger ,Used in VAT Return ,Default VAT /Tax Class, Sales Ledger ,Duties and Taxes Ledger ,Type Of Duty/Tax ,Default Vat/Tax Class ,Percentage Of Calculations , Method of Calculation ,Similarly for output VAT ,Default VAT Class ,method of Calculation ,Direct Expenses /Income Ledger , Vouchers and Transactions ,Computation Of VAT.

**More on VAT:** Interstate Sales And Purchases ,Interstate Sales ,Imports And Exports ,Exports ,Exempted Purchases and Sales.

**UNIT IV**

**VAT Documents and Reports:** Documents , Reports , VAT Control Ledger ,Group Summary ,Sales ,Reorganizing VAT Group , VAT Computation ,Statutory VAT Returns ,Inventory Records, Stock items, Manufacturing accounts

**Introduction to TDS :** Introduction: TDS Accounts, TDS Transactions , Configuring Tally for TDS, Creation of masters, Voucher entry for TDS, Purchase Voucher, Advance Payment, TDS Reports, TDS Computations Report.

**Display/Reports in Tally:** Output Reports, Aged Stock Analysis (Ageing Analysis). **The Collaborative Tally;** Importing Master Data, Export of Data, XML, Tally ODBC, Inward Connectivity, Creating the Client Rule for the Client Mission, Activating the Server Rule from the Server Machine, Synchronizing Back-Dated Vouchers, E-capabilities, Internet Publishing, Web Browser.

**UNIT V**

**The Administrative Tally:** Security Levels- Types of Security, Users and Passwords, Tally Audit, Tally Vault, Backup, Restore, Split Financial Years, How to Split Financial years,

**Fundamentals of Accounting:** Introduction, accounting systems, journal accounts, cash Book, Ledger and Ledger accounts, Trial Balance, Trading profit and Loss accounts, Profit and Loss accounts, Balance sheet,

**Fundamentals of Inventory:** Introduction, Market Valuation Method, Reorder Levels, Multiple Price List , Inventory Transactions, Invoice, order, Challans, Inventory Reports, Exception Reports.

**TEXTBOOKS**

1. Computer Accounting With Tally 7.2 ,Firewall , Firewall Media, , Laxmi Publications
2. Comdex Tally 9 Course Kit by Namrata Agrawal, Dream Tech Press

**REFERENCE BOOKS**

1. Tally 9 by Dinesh Maidarsani By Firewall Media
2. Tally 9.0 English Edition Google EBook By Computer World

**III YEAR V SEMESTER**  
**DATABASE MANAGEMENT SYSTEMS**

**UNIT – I:**

Data, Information, Data Vs Information, fields, records, files- Data Dictionary – Database - database Management system- operations performed on database systems,-Database Administrator (DBA), Functions and responsibilities of DBA- Database Environment- Advantages and disadvantages of DBMS- Data Models- Record based Data Models, Object bases data models, Physical data models, Hierarchical data model, Network data model, Relational data model, E-R Data Model, Object-oriented data model - RDBMS – Codd's Rules – Entity – Relationship (E-R) Modeling – Introduction –Basic E-R Concepts , Entities, Relationships, Attributes, constraints – Conversation of E-R model into Relations – Problems with E-R Models, E-R Diagram Symbols.

**UNIT – II:**

Data Normalization – introduction – First Normal Form (1NF) Second Normal Form (2NF) – Third Normal Form (3NF) – Boyce – CODD Normal Form (BCNF) – Fourth Normal Form (4NF).

**SQL** – An overview of SQL – Terminology – Object name- categories of SQL commands – Create a table – create table, table name, Column name, Data type, width, Multiple column names , Integrity constraints, constraint name, Disable constraints- Comment lines – Alter Table structure- Alter a table – add Specification- Modify Specification – Drop Specification – Enable/Disable constraint – Rename a table-Drop a table

**UNIT – III:**

Insert a Row- -verification – Commit, Rollback and Save Point – Substitution Variables- Forward slash- Default option – Update Rows – Update column values in rows, where clause – Comparison Operators – SQL operators- Between, in, like Null value-is Null- Not operator- Multiple conditions- check option- transfer data from old column to new column- Delete Rows – Delete from table – truncate – Query from tables- features of SQL – select statement, Group by clause, order by clause – Literal – Define – Double Ampersand(&&)- System table Dual and Tab.

**UNIT – IV**

Built-in Functions – Number Functions – Character Functions – Date Functions –Conversion functions – Group functions- Sub Query – Single value sub query - Multi-valued comparison- Multi-value sub query – Any. Some and All operators –Having Clause with sub query – Correlated sub query – Exists operator – Not exists operator - Insert rows using Sub query – Update columns in Rows using sub query- sub query in From clause – sub query with nested group functions- with clause sub query- Joins – out join, self join – set operators – View – Define, Retrieve, rename and Drop View- DML operations using view- Advantage and disadvantages- Sequence – Create, alter, drop sequence – Index- Create, rename, rebuild and drop index.

**UNIT – V**

PL/SQL – Introduction, advantages of PL/SQL, Block structure of PL/SQL - Control flow statements – If Statements, Looping statements – While statement, for statement, loop – end loop statements – PL/SQL simple Programs – Procedures – Insert , update, delete and query a row –exception handling – Exception Propagation - functions- Create, Call and Drop function- packages – Create package header, create package body, execute and drop Package – trigger – Create, Diable/enable and Drop trigger- Cursors – Introduction , cursor with for loop, fetch cursor, populate table using cursor, cursor within cursor.

**TEXT BOOKS**

1. Database Systems: Concepts, Design and Applications By S. K. Singh, Pearson Education 2009
2. Learning Oracle SQL & PL/SQL: A Simplified Guide, By Rajeeb C. Chatterjee, PH of India.

**REFERENCE BOOKS**

1. Database Management Systems by Pannerselvam R and published by PH of India, New Delhi.
2. A Guide to Oracle by John Morrison, Mike Morrison – Galgotia Publishers
3. SQL, PL/SQL , the program language of oracle by Ivan Bayross, BPB Publications, 2<sup>nd</sup> Edition

**ORACLE LAB**

1. Creation of college database and establish relationships between tables
2. Write a view to extract details from two or more tables
3. Write a stored procedure to process students results
4. Demonstration of a function
5. Demonstration of blocks, cursors & database triggers.
6. Demonstration of a Joins
7. Demonstration of a Aggregate functions
8. Creation of Reports based on different queries
9. Usage of file locking table locking, facilities in applications.

**ELECTIVE PAPER - ELECTRONIC COMMERCE**

**Unit I**

Foundations of E-commerce, Business-to-Customer (B2C) Electronic Commerce  
Business-to Business (B2B) Electronic Commerce

**Unit II**

Network Infrastructure for E-commerce, The Internet, Intranets and Extranets as E-commerce  
Infrastructure

**Unit III**

Web Security, Cryptography, Firewall

**Unit IV**

Electronic Payment Systems, Mobile Commerce

**Unit V**

WAP (Wireless Application Protocol), Legal Requirements in E-commerce

**TEXT BOOK**

1. E-Commerce By Mamta Bushry Firewall Media

**ELECTIVE PAPER - CLOUD COMPUTING**

**UNIT I**

**Introduction & Concepts:** Introduction to cloud computing: introduction, characteristics of cloud computing, cloud models, cloud services examples, cloud-based services & applications.

**Cloud Concepts & Technologies:** Virtualization, Load Balancing, Scalability & Elasticity, Deployment, Replication, Monitoring, Software Defined Networking, Networking Function Virtualization, MapReduce, Identity And Access Management, Service Level Agreements, Billing.

**UNIT II**

**Cloud Services & Platforms:** Compute Services, Storage Services, Database Services, Applications Services, Content Delivery Services, Analytics Services, Deployment & Management Services, Identity & Access Management Services, Open Source Private Cloud Software.

**HADOOP & MAPREDUCE:** Apache Hadoop, Hadoop MapReduce Job Execution, Hadoop Schedulers, Hadoop Cluster Setup

**UNIT III**

**Cloud Application Design:** Introduction, Design Considerations for Cloud Applications, Reference Architecture for Cloud Applications, Cloud Application Design Methodologies, Data Storage Approaches.

**UNIT IV**

**Python Basics:** Introduction, Installing Python, Python Data Types & Data Structures, Control flow, Functions, Modules, Packages, File Handling, Date/Time Operations, Classes 163.

**UNIT V**

**Python for Cloud:** Python for Amazon Web Services, Python for Google Cloud Platform, Python for Windows Azure, Python for MapReduce, Python Packages for Interest, Python Web Application Framework- Django, Designing a RESTful Web API.

**Cloud Application Development in Python:** Design Approaches, Image Processing App, Document Storage App, MapReduce App, Social Media Analytics App.

**TEXT BOOK:**

1. Cloud Computing A Hands On Approach By Arshdeep Bahga And Vijay Madiseti From University Press.

**III YEAR VI SEMESTER  
WEB TECHNOLOGIES**

**UNIT I**

**Basic Web Concepts:** Introduction, URL, MIME, CGI, Introduction to SGML

**HTML Common Tag:** Introduction, HTML Basics, Forms, Frames, Tables, Web Page Design

**UNIT II**

**Java Scripts:** Introduction, Basics of Java Script, Control Structures, Pop up Boxes, Functions, Arrays, Events, Objects, Simple Web Application.

**UNIT III**

**Dynamic HTML:** Introduction, Cascading Style Sheets (CSS), Object Model and Collections, Event Model, Filters and Transition, Data Binding, Data Control, ActiveX Control.

**UNIT IV**

**XML:** Introduction, Document Type Definition (DTD), XML Schemas, Document Object Model (DOM), Using XML Processors.

**UNIT V**

**Web Servers and Servlets:** Introduction, Servlets, Web Servers, Deployment of Servlets, Invoking Servlets using HTML, HTTP-Get and Post Request, Session Tracking, Cookies, JDBC

**Introduction to JSP:** Introduction, Problem with Servlets, Anatomy of JSP Page, JSP Processing, JSP Application Design with MVC, Setting up JSP Environment, Installing of JSD Kit, Tomcat Server, Testing

**TEXT BOOKS**

1. Web Technologies by A.A.Puntambekar from Technical Publications, Pune

**REFERENCE BOOKS**

1. INTERNET AND WEB TECHNOLOGIES - Rajkamal, TMH.
2. TCP/IP PROTOCOL SUITE - Behrouz A. Forouzan, 3rd edition, TMH.

**WEB TECHNOLOGIES LAB**

1. Create a simple HTML page which demonstrates all types of lists.
2. Create a letter head of your college using following styles
  - i. image as background
  - ii. use header tags to format college name and address
3. Create a web page, which contains hyper links like fruits, flowers, animals. When you click on hyper links, it must take you to related web page; these web pages must contain with related images.
4. Create a hyperlink to move around within a single page rather than to load another page.
5. Create a leave letter using different text formatting tags.
6. Create a table format given bellow using row span and colspan.

RNO	NAME	MARKS				
		M1	M2	M3	M4	M5

Insert 5 records.

7. Create a table with different formats as given bellow.
  - i. Give different background and font colors to table header, footer and body.
  - ii. Use table caption tag.
8. Divide a web page vertically and horizontally with scroll bars, name them as shown bellow decorate it with some items.

F1	F2
	F3

9. Create a student Bio-Data, using forms.
10. Create a web page using following style sheets
  - i. Inline style sheets.
  - ii. Embedded style sheets.
  - iii. External style sheets
11. Write a JavaScript program to accept two values from form and apply any 5 mathematical functions
12. Write student database with XML



**ELECTIVE PAPER - DESKTOP PUBLISHING TECHNOLOGIES**

**UNIT I**

**Basics of Desktop Publishing:** what is DTP? – Letterpress Printing – Wooden Types and Metal Types, Hot Metal Types, Printing Photographs - Offset Printing- Gravure – Hardware requirements – Software Requirements – DTP Operator’s Arsenal – TestEditors, word Processors, Vector Illustration Applications or drawing Applications, Bitmap Image Editing Application, Page Layout applications - Scanning –Printing –Monitor – briefly Input and Output Devices – Vector graphics and Raster graphics .

**UNIT II**

**Fonts** – Font Styles, Serif and Sans Serif, Dimensions of font , Fixed pitch fonts and proportional spaced fonts, scaling tracking, kerning, leading and ligatures, fonts in your computer, vector fonts and bitmapped fonts - character level and Paragraph level formatting – Drop Caps – Hyphenations – Alignments –Indentation – Single side and Double Side Documents –Headers and Footers – Selecting the text and graphics – Graphic file formats – screen colors (RGB) and Printer colors (CMYK) –Spot colors and Process Colors – Color Separations – Colour Half-tone images - Generic Process of Desktop Publishing.

**UNIT III**

**Corel DRAW10:** Starting CorelDRAW – Create , Save , close and open the drawing – Cartesian Coordinates – Creating text file – Basic terms – Page and Pasteboard - standard tool bar – Handling Shapes using Property bar – Rotating objects – Lines and Arrows – Page and Document setup – Rulers, Guidelines and grid – Using Docker Windows – Using Text – Printing a Drawing - Arranging of Objects – Cliparts and Bitmaps – Fun with the Artistic Media tool - Colour plates.

**UNIT – IV**

**PhotoShop7:** Introduction – Parts of Pageshop window - Open, Save, Close and Create a Image – Using Toolbox – Tool Options bar – Using layers – Layers paletter, adding new layer, Hiding layer, Renaming layer, Remove layer, Merge layer, copy and paste with image – Fascinating colors – Color models, Color Picker, Color palette, Swatches Palette, ICC – Inserting text in images – printing images – filters to improve images .

**UNIT – V**

**Page Maker7:** Introduction of Page Maker- starting of Page Maker – Creating a new publication in Page Maker – Dialog Boxes Document and setup and Save Publication – Close the publication – Text Blocks- drawing a textBlock by Dragging the Mouse cursor, Empty

Text block by a Mouse Click, Fitting text Blocks on a page, Inserting pages while placing Text – Handling Pages – Inserting, Deleting and goto the desired pages – using the Toolbox – Using the ToolBars – Importing text & Pictures – wrapping text around the pictures – Character level formatting – Opening Multiple Publication windows – Using story editor- Using Styles – Pre-defined styles, new style – Using the Document Master Pages – Sample Publication.

**TEXT BOOK**

1. Rapidex DTP Course by Shirish Chavan, Unicorn Books Pvt. Ltd., Edition 2005

**REFERENCE BOOK**

2. DeskTop Publishing English Edition By Ashish Joshi, Jigisha Raval, Pragnesh Patel, Computer world Publications,

**ELECTIVE PAPER - MULTIMEDIA SYSTEMS**

**UNIT I**

**What is Multimedia?:** Definition – Where to use Multimedia – Delivering Multimedia  
**Text-** The Power of Meaning – About Fonts and Faces – Using Text in Multimedia-  
Computers and Text – Font Editing and Design Tools – Hyper Media and Hyper Text

**UNIT II**

**Images:** Before you Start to Create – Making Still Images – Color – Image File Formats  
**Sound** – The Power of Sound – Digital Audio – MIDI Audio – MIDI vs Digital Audio –  
Multimedia System Sounds – Audio File Formats – Vaughans Law of Multimedia Minimums  
– Adding Sound to your Multimedia Project

**UNIT III**

**Video:** Using Video - How Video Works and is Displayed - Digital Video Containers -  
Obtaining Video Clips - Shooting and Editing Video  
**Making Multimedia:** The Stages of a Multimedia Project - What You Need: The  
Intangibles- What You Need: Hardware - What You Need: Software - What You Need:  
Authoring Systems

**UNIT IV**

**Multimedia Skills:** The Team – The Sum of Parts  
**Planning and Costing:** The Process of Making Multimedia – Scheduling -Estimating - RFPs  
and Bid Proposals  
**Designing and Producing:** Designing - Producing

**UNIT V**

**Content and Talent:** Acquiring Content - Ownership of Content Created for a Project -  
Acquiring Talent  
**The Internet and Multimedia:** Internet History - Internetworking – Multimedia on the Web  
**Designing for the World Wide Web:** Developing for the Web - Text for the Web -Images  
for the Web - Sound for the Web - Animation for the Web - Video for the Web

**TEXT BOOK**

1. Multimedia: Making It Work, Tay Vaughan, 8<sup>th</sup> Edition, Tara Mc-Graw Hill.

**REFERENCE BOOKS**

1. Multimedia Systems, John F.Koegel Buford, Pearson edition, 2003
2. Ranjan Parekh, Principles of Multimedia, TMH, 2006.Engineering Evaluation Software
3. Multimedia: Computing, Communication and applications, Ralf Steinmetz and Klara Nahrstedt, Pearson Edition, 2001

**PROJECT WORK**

The project will be one semester duration. The student will be advised to approach different organizations involved in science communication activities as per interest and specialization of students, mostly located in the place of the study. They will have to carry out a project work related to the area of interest and submit a project report at the end of the semester. The students shall defend their dissertation in front of experts during viva-voce examinations.