I B.Com CA – Semester - I
Course 1C: Information Technology

05 hrs per week(Both theory&Practical)

Course Objectives:

The objective of the course is to introduce the concepts of computer fundamental, Network & Internet basics and Computer applications for the efficient use of office technology in a business environment.

Syllabus:

Unit-I – **Introduction to computers:** Definition and applications of Computers, History and Generations of Computer, Characteristics and limitations of Computer, Classification of computers, Basic Computer Architecture, Input and output devices, Memory Deivces- RAM, ROM-types, Cache memory, Storage devices-Magnetic tapes, Hard disks, Optical disks -types, Flash drives, Processor arcitecture.

Unit-II –Software- System software-Operating System, Compilers & Interpreters, Application software - Examples, **Windows-**Features, versions, desktop, start menu, control panel and recycle bin. **Networking basics:** Computer Network benefits, types of Networks, LAN topologies, Internet and WWW, Services of Internet, Browsers, URLs, E-Mail concepts – Advantages & Disadvantages of E-mail, Userids, Passwords, Email Addresses.

Unit-III – MS-Word: Working with MS-Office 2007 & above, Features of MS-Word, Components of Word window, Creating, editing documents, Formatting font, paragraph, page, creating, saving, opening document, creating tables, Headers & Footers, Bullets & numbering, Creating Macros, Mail merge.

Unit-IV – MS-Excel: Understanding Excel basics-Worksheet,cell, cell pointer, Editing the worksheet, Cell referencing, Formatting Cells, copying cells, Formulas and functions, working with charts – Creating and editing charts – Chart types – Sorting and filtering, Data validation.

Unit-V – MS-Powerpoint: Understanding powerpoint basics, different types of creating presentations, Slide views, Slide layouts, slide transition effects, Custom animation.
MS- Access: Basics-Objects in MS-Access, data types in MS-Access, Creating database, creating tables in design view,datasheet view , creating queries in different methods, creating forms using wizard, and creating reports using wizard, Relationships and types of relationships.

REFERENCE BOOK

1. Fundamentals Of Computers " by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. Microsoft Office 2007 Fundamentals, 1st Edition By Laura Story, Dawna Walls UNIT II, UNIT III, UNIT IV)
3. PC SOFTWARE UNDER WINDOWS by Puneet Kumar And Sushil Bhardwaj From Kalyani Publishers

COMPUTER FUNDAMENTALS AND MS OFFICE LAB

1. Prepare your class time table using different Text formatting's in a table.
2. Send a Call Letter for All Applicants to Inform Interview Details using Mail Merge
3. Type your mathematical problems in MS word using Mathematical Equation editor
4. Create Water Marking
5. Create Backup file
6. Create a short film with animation and sound effects
7. Create a payslip with details of employee salary
8. Calculate student grades using his internal and external marks details
9. Draw different types of charts for weather analysis of 5 successive years
10. Prepare an excel sheet for posting attendance of students in various subjects and create a formula for promoting students having 75% minimum attendance
11. Prepare an excel sheet for conducting objective entrance test having multiple choice answers.
12. Prepare an excel sheet for student details and create formulas for accessing student addresses, category etc.
13. Creating student database and tables for inserting student admission data, marks data etc.
14. Creating a form for inserting student data.
15. Generating reports to display student data summary.

I B.Com CA – Semester - II
Course 2C: E-Commerce and Web Designing

Unit-I:Introduction to E-Commerce - Definition, Advantages and disadvantages of E-Commerce, E-Commerce framework, Anatomy of E-Commerce Applications-Multimeida content for E-Commer applications, Multimedia servers & E-Commerce Applications, Client-Server Architecture in E-Commerce, Business models in E-Commerce.

Unit-II: Electronic Payment Systems- Introduction, Advantages of E-payment system, Digital tokens, Smart cards, Credit cards, Risks in E-payment system. **Introduction to EDI-** benefits of EDI, EDI implementation, Value Added Networks. **Multimedia in E-Commerce**– Key multimeda concepts, securing multimedia e-commerce-Digital certificates and single sign-on, Multimedia E-Commerce formats, Consumer devices.

Unit-III: Introduction to web designing enviroment – Types of websites-personal, organizational and commercial – Search tools- Web designing roles – Web designing tools- **Introduction to markup languages – HTML, XML, and DHTML,** - HTML basics-Structure of HTML document, Body tag attributes, Heading tags, semantic and syntactics style tags, Anchor tag, Font tag, Image tag and its attributes.

Unit-IV: Advanced HTML: List tags, table tags, frame tags, form tag and its attributes, form input types- **Introduction to CSS** – Advantages, CSS syntax, CSS rules, CSS selectors, Types of style sheets, Layers, creating a new style sheet.

Unit-V: Introduction to Scripting Languages: Javascript – Introduction, difference between java and javascript, variables & literals, datatypes , operators, Control structures, Functions, Using javascript in HTML, Java Script events, Javascript built-in objects, Document Object Model.

Reference books:

1. E-Commerce – An Indian perspective-6th Edition by P.T.Joseph S.J, PHI Publishers.
2. Sams Teach Yourself HTML, CSS And JavaScript All In One Paperback – 1, Pearson Eduction of India.

Practicals:

1. Excercises in HTML – Creating web pages using list tags, table tags, frame tags and form tags.
2. Desigining web pages using CSS
3. Simple Javascript examples.
4. HTML and Javascript examples
5. Design of a simple website.

II B.Com CA – III Semester
3C: Programming with C & C++

Unit-I: Introduction to programming language paradigms – Problem solving methods-Flowcharts and Algorithms, Introduction to C-Structure of C, Compilation and Execution, C-character set, identifiers & Keywords, variables and constants, data types, expressions, operators in C, Input and output statements in C.

Unit-II: Control structures – Decision making and branching, looping structures, switch-case, break and continue, goto statement, functions – advantages, storage classes, creating user-defined functions, recursion, Parameter passing, arrays- types of arrays, arrays and functions.-Introduction to pointers-pointer declaration, pointer operators, Dynamic memory allocation.

Unit-III: Introduction to object oriented programming – Difference between function oriented programming and object oriented programming, Features of OOP, Applications of OOP, structure of C++ program with simple C++ program, basics of console Input and Output, C++ data types, Operators in C++, Control Structures, Functions-inline functions, default arguments, function overloading.

Unit-IV: Classes and Objects: Specifying a class, defining member functions, Access control, constructors and destructors, Friend functions – Inheritance – Class hierarchy, derived classes, types of inheritance, Polymorhism-static binding, dynamic binding, method overloading with virtual functions, pure virtual functions, abstract classes.

Unit-V: Operator overloading-this pointer, applications of this pointer, operator function, operator overloading. **Exception handling**- Try, throw and catch, Dynamic Memory management, new and delete operators, object copyiing, copy constructor, **Templates**-template classes and functions.

Text books:

1. Programming in C by E.Balaguruswamy, McGrawhill 6th Edition.
2. Object oriented Programming with C++ by E.Balaguruswamy McGrawHill Education.
3. ANSI and Turbo C++ by Ashoke N. Kamthane, Pearson Education.

II B.Com CA – IV Semester
4F: Database Management Systems

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, Functions of DBA, Database users, 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 ,Packages ,Exceptions Handling, Database Triggers, Types of Triggers.

Text books;

1. Database Management Systems by R. Panneer Selvam, PHI
2. SQL, PL/SQL, the programming languageof Oracle by Ian Bayross, BPB Pub.