

BCA 106: Information Technologies

Teaching Scheme Lectures: 3 hrs/Week Tutorials: 1 hr/Week Credits: 4	Examination Scheme Class Test -12Marks Teachers Assessment - 6Marks Attendance – 12 Marks End Semester Exam – 70 marks
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Prerequisite: - Fundamentals of computers

Course Objectives:

1. To know the basic components of computer and its working, generations of computer, types.
2. To know the basic input output devices.
3. To gain knowledge about Software and types
4. To describe various application software available with Microsoft Office Package with their applications.
5. To understand the importance of Microsoft Word, Microsoft Excel, Microsoft Power Point, Microsoft Access and HTML.
6. To know about various menus and tool box available with software of Microsoft Office Package and their usage to design well formatted documents, worksheets and presentations.

Detailed Syllabus

Unit-1

Computer fundamentals: Computer system concepts, Types of computers, Generations of computers, Basic components of a computer system - Control unit, ALU, Input/output functions and characteristics, Input /Output devices, Primary and Secondary memories.

Unit-2

Computer Languages: Computer Programming Languages – Machine Language, Assembly Language, High Level Language, 4 GL, their merits and demerits.

Computer software: Software and its Need, Types of Software - System software, Application software, System Software: Operating System, Utility Program, Assemblers, Compilers and Interpreter.

Unit-3

Programming Fundamentals: Algorithm development, Techniques of problem solving. Flowcharting, Structured programming concepts; Top down Design, Debugging and testing of Programs.

Introduction to HTML5 and Web Design: Create a Simple Web Page, Format Your Text, Adding Web Links and Images, Creating Tables, Forms, Borders, Backgrounds, Adding Videos and Graphics.

Unit-4

Introduction of Ms-Office: Applications of Ms-Word, PowerPoint, Excel and Access, Microsoft Word Formatting Text, Find and Replace, Working with Paragraphs, Inserting Tables, Performing Calculations in Tables, Formatting Tables, Inserting Pictures, Document Background, Page Layout, Printing Documents, Mail Merge, Watermark, Page border.

Unit-5

Microsoft Excel: Creating Workbooks, Moving Data within a Workbook, Finding and Replacing Data, Perform Basic Calculations on Data, Creating Basic Formulas, Finding and Correcting Errors in Calculations, Filters, PivotTables, Creating Charts and Graphics, Printing Parts of Worksheets, Creating and Modifying Macros, Protecting Workbooks and Worksheets.

Unit-6

Microsoft PowerPoint: Creating a Presentation, Changing the Slide Size & Orientation, Adding, Deleting, and Rearranging Slides, Views, Text Formatting, Adding Tables, SmartArt, Charts, and Hyperlinks to Slides, Adding Movies and Sounds to a Presentation, Slide Transitions and Animations, Inserting Charts, Drawing Shapes. **Microsoft Access:** Working in Access, Database Concepts, Exploring Tables, Forms, Queries, Reports, Creating Databases from Templates, Creating Databases and Tables Manually, Manipulating Table Columns and Rows, Refining Table Structure, Creating Forms.

Text and Reference Book

1. Rajaraman V. Fundamental of Computers.
2. Ram B. Computer Fundamentals, New Age International.
3. Balaguruswamy - Programming in C.
4. Office 2007 All-in-One Desk Reference for Dummies, Wiley, 2007.
5. Microsoft Office Home and Student 2010, Microsoft Press, 2010.

Course Outcomes:

After completing the course, students will be able to:

1. Demonstrate the knowledge of the basic structure, components, features and generations of computers.
2. Apply formulae to design workbook by Microsoft Excel.
3. Create good presentations by using Microsoft Power Point.
4. Use different data structures and create / manipulate basic data files and developing applications for real world problems.
5. Create database by using Microsoft Access and applying query to fetch desired results. Create well-formed web-pages.