

# Syllabus

## COMPUTER FUNDAMENTALS AND COMPUTING SOFTWARE

(PAPER CODE: BCA-16-103)

### SECTION - A

**Computer Appreciation:** Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms-Hardware, Software Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.

**Computer Memory:** Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: Storage evaluation criteria, main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card;

**Types of software:** System and Application software; Programming Language: Generation of Languages; Translator - Interpreters, Compilers, Assemblers and their comparison.

### SECTION - B

**Understanding Operating System using DOS:** Introduction to operating systems and its functions, DOS and versions of DOS, Booting sequence; Warm and Cold Boot; Concepts of files and directories, Redirecting command input and output using pipes, Wildcard characters, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Command XCOPY, ATTRIB, BACKUP, RESTORE, FIND, SYS, FORMAT, CHKDSK, DISKCOPY, LABEL, MOVE, TREE, DELTREE, DEFRAG, SCANDISK, UNDELETE. Batch Files: Introduction to simple batch files; Introduction to CONFIG.SYS and AUTOEXEC.BAT files.

**Understanding Graphical User Interface using Windows:** Fundamentals of Windows, Types of Windows, Anatomy of windows, Icon, Recycle bin, Operations on Folders, Registry of Windows: Basic, Editing; Control panel.



## SECTION - C

**Word Processing Package:** Opening, saving and closing an existing document; renaming and deleting files; Using styles and templates: Introduction to templates and styles; applying, modifying and creating new (custom) styles; using a template to create a document, creating a template, editing a template, organizing templates, examples of style use, Changing document views, Moving quickly through a document, Working with text: select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents, Checking spelling and Grammar, Autocorrect, Using built-in language tools. Word completion, Autotext, Formatting text: Using Styles, formatting paragraphs, formatting characters, auto-formatting, creating lists; Formatting pages: Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Creating a table of contents, Creating indexes and bibliographies, Printing a document, Using mail merge. Tracking changes to a document, Using fields, Linking to another part of a document, Using master documents, Creating fill-in forms.

## SECTION - D

**Spreadsheet Package:** Introduction to Spreadsheets, sheets and cells; Opening and saving spreadsheet files; Working with sheets: inserting new sheet, deleting and renaming sheets, Viewing a spreadsheet: freezing rows and columns, splitting screen, Entering data: cell referencing, formatting cells, entering numbers, entering numbers as text, entering formulae, entering date and time, deactivating automatic changes, Speeding up data entry: using fill tool, fill series, defining fill series, Validating cell contents, Formatting data: formatting text, numbers, cells, Autoformatting cells and formatting text, numbers, cells, Autoformatting cells and sheets, defining new autoformat, Using conditional formatting, Hiding and showing data, Sorting records, printing a spreadsheet document: using print ranges, page formats, inserting page breaks, headers and footers; Working with Graphs and Charts : Creating Embedded Chart, formatting chart: Changing chart types, adding Titles, Legends and Gridlines, Printing Charts; Adding database functions: defining database ranges, sorting, filtering and grouping database ranges; Evaluating data: using DataPilot; Functions and Macros: using and editing existing macro, Creating Macros, Recording Macros, Running Macros.

**Presentation Packages:** Basics of creating a presentation, Parts of main window. Workspace views, creating a presentation, Incorporation of Animation.

**Note:** Any word processing, spreadsheet and presentation package may be used. Focus should be on open source software's.