

B.Sc. 101

Computer Fundamentals

UNIT I:

Evolution of Computers: Basic components of a Digital Computer- Control unit, ALU, Input/Output functions and memory, Generations, Computer Classification: Micro, Mini, Mainframe, Super Computer, PC, Server, Workstations. Computer system characteristics, Word length of a computer, processing speed of a computer,

UNIT II:

Input/Output Units: Keyboard, Mouse, Trackball, Joystick, Digitizing tablet, Scanners, Digital Camera, MICR, OCR, OMR, Bar-code Reader, Voice Recognition, Light pen, Touch Screen, Monitors and types of monitor-Digital, Analog, Size, Resolution, Refresh Rate, Dot Pitch, Video Standard-VGA, SVGA, XGA etc, Printers & types-Daisy wheel, Dot Matrix, Inkjet, Laser, Line Printer, Plotter, Sound Card and Speaker.

UNIT III:

Memory: RAM, ROM, EPROM, PROM and other types of memory, Storage fundamentals- Primary Vs Secondary Data Storage, Various Storage Devices- Magnetic Tape, Magnetic Disks, Cartridge Tape, Hard Disk Drives, Floppy Disks (Winchester Disk), Optical Disks, CD, VCD, CD-R, CD-RW, Zip Drive, flash drives Video Disk, Blue Ray Disc, SD/MMC Memory cards, Physical structure of floppy & hard disk, drive naming conventions in PC, DVD, DVD-RW, USB Pen drive.

UNIT IV:

Software and its Need, Types of Software-System software, Application software, System Software- Operating System, Utility Program, Assemblers, Compilers and Interpreter, DOS- Files and Directory, Study of all Internal & External commands, Types of files, Booting Procedure of DOS. Algorithms, Flow Charts, Programming languages.

UNIT V:

Data Representation within Computer: BIT, BYTE, WORD, ASCII, EBCDIC, BCD Code. Introduction to Number system: Binary, Octal, Decimal and Hexadecimal, Conversation from one number system to another number system, Binary arithmetic, Negative number representation.

References:

1. FUNDAMENTALS OF COMPUTERS -by V. RAJARAMAN.
2. FUNDAMENTALS OF COMPUTERS -by P.K.SINHA
3. FUNDAMENTALS OF COMPUTER Systems. Low Price Edition.