

B.C.A. Part I Semester I (From 2014-2015)

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Paper I

COMPUTER FUNDAMENTALS

UNIT - I :

Basic Components of Digital Computers: Block Diagram. **CPU:** Functions of Each Unit: Primary Memory, ALU and CU, Instruction format. **Bus:** Data, Control and Address Bus **Number Systems:** Binary, Octal, Decimal, HexaDecimal, Their Conversions, Binary Arithmetic. ASCII, BCD, EBCDIC.

Language Evolution : Generation of Languages : Machine, Assembly, High Level Languages. Characteristics of Good Language **Translators :** Compiler, Interpreter and Assembler. Source and Object Program.

UNIT - II :

Memory: Static & dynamic, RAM, ROM, PROM, EPROM, EEPROM, flash and Cache.

Storage Devices: Hard Disk, Zip Disk and Optical Disk. Pen Drive, Blue Ray

UNIT - III :

Input Devices: Keyboard, Mouse, Light Pen, Touch Screen, Voice Input , MICR, OCR, OMR, Barcode Reader and Flatbed Scanner.

Output Devices: VDU, Printers: Dot Matrix, Laser and Inkjet.

Plotters: Drum, Flat-Bed and Inkjet.

UNIT - IV :

Network: Network terminology, Topologies : Linear, Circular, Tree and Mesh. Types of Networks: LAN, WAN, MAN. Repeaters, Bridge, Routers, Brouters and Gateway. Modem for Communication between pc's, wi-fi network, Introduction of Bluetooth and Infrared devices. Network protocols. Architecture : Peer-to-Peer, Client/Server.

Reference Books:

1. Information technology concepts by Dr. Madhulika Jain, Shashank & Satish Jain, [BPB Publication, New Delhi.]
2. Fundamentals of Information Technology By Alexis And Mathews Leon [Leon Press, Chennai & Vikas Publishing House Pvt Ltd, New Delhi]