

**Paper DSC 103: FUNDAMENTALS OF INFORMATION TECHNOLOGY**

**Hours Per Week:** 6 (4T+2P)

**Credits:** 5

**Exam Hours:** 1 ½

**Marks:** 50U+35P+15I

**Objective:** To understand the basic concepts and terminology of information technology and to identify issues related to information security.

**UNIT-I: INTRODUCTION TO COMPUTERS:**

Introduction, Definition, Characteristics of computer, Evolution of Computer, Block Diagram of a computer, Generations of Computer, Classification Of Computers, Applications of Computer, Capabilities and limitations of computer. Role of I/O devices in a computer system. **Input Units:** Keyboard, Terminals and its types. Pointing Devices, Scanners and its types, Voice Recognition Systems, Vision Input System, Touch Screen, **Output Units:** Monitors and its types. Printers: Impact Printers and its types. Non-Impact Printers and its types, Plotters, types of plotters, Sound cards, Speakers.

**UNIT -II: COMPUTER ARITHMETIC & STORAGE FUNDAMENTALS:**

Binary, Binary Arithmetic, Number System: Positional & Non Positional, Binary, Octal, Decimal, Hexadecimal, Converting from one number system to another.

Primary Vs Secondary Storage, Data storage & retrieval methods. **Primary Storage:** RAM ROM, PROM, EPROM, EEPROM. **Secondary Storage:** Magnetic Tapes, Magnetic Disks. Cartridge tape, hard disks, Floppy disks Optical Disks, Compact Disks, Zip Drive, Flash Drives.

**UNIT-III: SOFTWARE:**

Software and its needs, Types of S/W. **System Software:** Operating System, Utility Programs Programming Language: Machine Language, Assembly Language, High Level Language their advantages & disadvantages. **Application S/W** and its types: Word Processing, Spread Sheets Presentation, Graphics, DBMS s/w.

**UNIT-IV: OPERATING SYSTEM:**

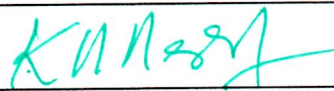
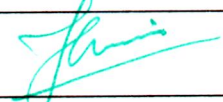





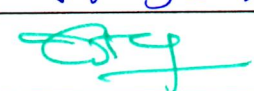
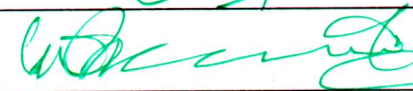
Functions, Measuring System Performance, Assemblers, Compilers and Interpreters. Batch Processing, Multiprogramming, Multi Tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux.

**UNIT-V: DATA COMMUNICATION:**

Data, Communication, Basic Networking Devices, Communication Process, Data Transmission speed, Communication Types(modes), Data Transmission Medias, Modem and its working, characteristics, Types of Networks, LAN Topologies, Computer Protocols, Concepts relating to networking.

**SUGGESTED READINGS:**

*Computer Fundamentals: P.K.Sinha*

  
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