

# **SEMESTER- I**

## **FUNDAMENTALS OF IT (CREDITS: 6)**

**Total Marks: 100**

**External Marks: 70**

**Internal Marks: 30**

**Credits: 6**

**Pass Percentage: 40%**

### **Section A**

*Unit I: Introduction of Computer:* Characteristics of the Computer, Block diagram of a Computer, Classification and Generations of Computer, *Input Devices:* Keyboard, Mouse, Trackball, Space ball, Joystick, Light pen, Touch screen, Digitizer, Data Glove, Scanner, Speech Recognition Devices, Optical Recognition Devices: OMR, OBR, OCR, MICR, Video Cameras, *Output Devices:* Monitors, Printers and its types, Plotters and its types, Speakers, Multimedia Projector.

*Unit II: Computer languages:* Machine language, assembly language, high level language, 4GL. *Language Translators:* Compiler, Interpreter, and Assembler. *Software:* Types of Software: System Software, Application Software, and Firmware. *Memories:* Memory Hierarchy, Memory Types: Magnetic core, RAM, ROM, Secondary, Cache, Overview of storage devices: floppy disk, hard disk, compact disk, tape.

*Unit III: Operating System:* Functions of Operating System, Types of Operating System, Types of Operating System, Windows concepts, features, windows structure, desktop, taskbar, start menu

*Unit IV: Basics of Computer:* Turning on a computer, booting up, Desktop, Shortcut, Icons, Recycle Bin, Start Menu, My Computer, Computer's Devices and Drives, Storage, Removable Storage, CD/DVD Drive, floppy drive, and USB flash drive, Hard drive, Control Panel, The Window, Parts of Window, File Explorer, Files, Folders, Directories, Command, Menus, Keyboard, Function Keys, Normal Keys, Special keys, Direction keys, Numeric Keypad, Numeric Keys, Mouse: Left button, Right Button, Windows Accessories, Sharing Information between Programs. Virus, Antivirus, Peripherals can use with your computer

## **Section B**

*Unit V: Computer Networks:* Components of data communication, modes of communication, standards and organizations, Network Classification, Network Topologies; Network Types, Transmission media, network protocol; layered network architecture. Basic of Computer networks: LAN, MAN, WAN.

*Unit VI: Introduction to Internet:* Evolution and Applications of Internet, Web Essentials: Clients, Servers, and Communication, Different ways to connect to the Internet, downloading, uploading, Browser, Secure browsing, Working with different Web Browsers, Web Address, Website, Portal, Webpage, Internet Protocols, Internet chatting; Intranet, Extranet, Gopher, Mosaic, WAIS, Cybersecurity: hacking and ethical hacking.

*Unit VII: Information Technology and Society:* Applications of Information Technology in Business and Industry, Railway, Airline, Entertainment, Banking, Insurance, Inventory Control, Hotel Management, Education and Training, Mobile Phones, Information Kiosks, Weather Forecasting, Scientific Application

*Unit VIII: Current Trends in IT Application:* AI, Virtual Reports, Robots, Multimedia Technology. Advanced Trends in IT: Mobile Internet, GPS, 3G, 4G, Wi-Fi, Bluetooth, Cloud Technology, Virtual Reality, Nanotechnology