Paper Code: PS03CELE03	Total Credit: 4
Title Of Paper: Computer Hardware & Networking	

Unit	Description in detail	Weightage (%)
I	Microprocessor types & Specifications, Motherboard & BUS, PC Components features and system design, Network Elements, LAN & WAN, Host-Workstation and Server, Peer-to-peer and Client Server Architecture. Physical Topologies- BUS-Star-Ring-Mesh- Wireless.	25%
II	Backbone and Segments, Selecting the right Topology, Physical Media- Coaxial Cable-Twisted Pair Cable- Fiber Optic Cable, Common Network Connectivity Devices- Network Interface Adapter – Hub – Switch- Router, Ethernet Frame Structure IEEE 802.3, Wireless Network, WLAN, WPAN, IEEE 802.11 Frame Structure, Wireless Antenna, Wireless Network Connectivity Devices, WiMAX, GAN, The OSI Reference Model.	25%
III	Networking Protocols – TCP/IP – IPX/SPX – NetBEUI, TCP/IP Fundamentals, The Transmission Control Protocol, The Internet Protocol, Understanding IP Addressing, Name Resolution Methods, Configuring TCP/IP on Windows, TCP/IP Utilities, IPV4, IPV6- The New Internet Generation – Characteristics- Packet Header- Addressing- Transition from IPV4 to IPV6.	25%
IV	Networking with Windows Operating System Basic Software requirements, Network Connection, NIC Setting, Installing the Network Adapter and Protocols, File and Printer Sharing, Browsing the Network, Mapping the Network Drives. Windows 200X Operating System, Architecture of Windows 200X, Workgroups, Domains and Active Directory, Installing Windows 200X, Installing & Configuring DNS and Active Directory, Administering and Securing Active Directory, Managing User Groups, Sharing – Securing and Accessing Files & Folders.	25%

Basic Text & Reference Books:-

➢ **Upgrading and Repairing PCs – 14th Edition**
   Scott Mueller, Pearson Education Asia
➢ **Troubleshooting, Maintaining & Repairing PCs, 5th Edition**
   Stephen J. Bigelow, Tata McGrew Hill Publishing Company Limited, New Delhi
➢ **Computer Networks Protocols, Standards and Interfaces**
   Uyless Black, Prentice Hall of India Pvt. Ltd., New Delhi
➢ **Computer Networks**
   Andrew S. Tanenbaum, Prentice Hall of India Pvt. Ltd., New Delhi
➢ **Networking + Study Guide**
   David Groth, Todd Lammle, William Tedder, BPB Publications.
➢ **Installing, Configuring & Administering Windows 200X Professional Windows 200X Server, Windows 200X Networking Infrastructure Windows 2000 Directory Services**
   Alan R. Carter, IDG Books India (P) Ltd.