

DEPARTMENT OF COMPUTER SCIENCE
CERTIFICATE COURSE IN
COMPUTER HARDWARE AND NETWORK ENGINEERING

Syllabus

UNIT – I (2 Hour)

Introduction to Computers– Types of Computers - Micro, Mini, Mainframe and Super Computer, Generations of Computer, Input/Output Devices.

UNIT – II (10 Hour)

Hardware– Introduction to Computer System. Identify the front and rear panel controls and ports on a PC. Power Supply Connections(SMPS). Motherboard Connections. Motherboard Components. CPU (Processor), RAM (Memory), Hard Drive Connections(HDD & SSD), ROM Drives, Video Cards, Sound Cards.

Installation of a PC– Removing and Installing - Power Supply, the Processor, the Motherboard, RAM, ROM, Hard Drive, Fans, Video Card, Expansion Cards, a CPU Cooler, CMOS Battery. Troubleshooting, About SMPS and its cable, Connector and Servicing Procedure.

UNIT – III (8 Hour)

Installation of Software– Windows 7, Ubuntu, Installation of Other Important Software.

UNIT – IV (4 Hour)

Introduction to Computer Networks – Definition, Advantages, Architecture: Peer-to-Peer and Client/Server Network. Network Topologies – Star, Ring, Bus, Tree, Mesh, Hybrid. Types of Network – Local Area Network (LAN), Metropolitan Area Network (MAN), Wide Area Network (WAN), Intranet and Internet. Wi-Fi, Bluetooth.

Communication Media & Connectors – Introduction to Data Communication – Analog and Digital Signals. Transmission mode: Simplex, Half-Duplex and Full-Duplex. Unshielded twisted pair (UTP), shielded twisted-pair (STP), Fiber Optics and coaxial cable: RJ-45

UNIT – V (6 Hour)

Crimping & Punching– RJ-45

Printer Sharing, Wi-Fi , USB Tethering Internet– Wi-Fi , USB Tethering Sharing of Data