

M4.3-R4: INTRODUCTION TO ICT RESOURCES

Objective of the Course

This course has been designed to provide an introduction to Computer Hardware and Networking troubleshooting & maintenance. The student will be able to troubleshoot problems of PC and replace the defected parts of the computer. Students will understand the basic networking concepts and they will be able to establish and manage small networks.

At the end of the course students will be able to:

- Assemble and disassemble a PC
- Effectively use miscellaneous utilities such as: Compression, CD writing, Antivirus etc.
- Establish and configure a small LAN
- Perform simple network administration operation

Outline of Course

S. No. Topic	Minimum number of hours
1. PC Assembly and Operation	15
2. Miscellaneous Utilities	15
3. Networking Concepts	15
4. Network Administration	15

Lectures = 60
Practical/Tutorials = 60
Total = 120

Detailed Syllabus

1. PC Assembly and Operation

15 Hrs.

Assembly and Disassembly of PC and its various Parts, Startup Process (Booting), BIOS Setup, CMOS Setup and meaning of its various setting, Installation of WindowsXP operating System, Installation of Other Software Packages such as Ms Office etc. Operation of Printer, Installation of printer driver, Backup and Restore Operations Troubleshooting PC Problems

2. Utilities

15 Hrs.

Compression Utilities: WinZip, PKZIP, Concept of compression, Defragmenting Hard,disk using defrag, Scan Disk for checking disk space, lost files and recovery, FormattingHard disk, Floppy Disk, Setting System Date and Time, Antivirus Package CD Writing Software – Nero etc.

3. Networking Concepts

15 Hrs.

What is Networking, Local Area Networking (LANs), Metropolitan Area Network , (MAN),

Wide Area Network (WAN), Networking Topologies, Transmission media & method of communication, Cabling: straight through and cross over, Study of components like switches, bridges, routers, Wifi router etc., communication Protocols, TCP/IP, IP addressing, MAC address, Subnetting

4. Network Administration

15 Hrs.

Installing and configuring the network using Windows NT based System, Administration of Windows NT based network, Creation of user and groups, File Sharing, Printer Sharing

RECOMMENDED BOOKS

MAIN READING

1. Scott and Mueller, "Upgrading and Repairing PCs", Techmedia, New Delhi
2. Troubleshooting, Maintenance and Repairing PCs, Fifth Edition, by Stephen J. Bigelow, Tata McGraw-Hill Publishing Company Limited, New Delhi.
3. PC Upgrade and Maintenance Guide, 15th Edition, by Marks Minasi, BPB Publications
4. Basic of Networking. "NIIT ", Prentice, Hall of India Private Limited.
5. Networking Protocols and Standards. "NIIT ", Prentice, Hall of India Private Limited.
6. William Stallings, "Data and Computer Communication", Prentice, Hall of India Private Limited.