

CERTIFICATE COURSE IN PC ASSEMBLY & MAINTENANCE

Detailed Curriculum

Name of Unit	:	Basic of computer, I/O devices
Duration	:	5 Hours

Performance Criteria(OUTCOME)	Contents	Hrs.
Acquire the foundation level knowledge required to understand computer and its operations	What is Computer? Components of Computer System, Concept of Hardware and Software	3
Understand the Input and Output device of the computer	Input and output devices like Mouse, Keyboard, Plotter etc.	2

Name of Unit	:	Monitors (CRT/LCD/LED), Memory
Duration	:	11 Hours

Performance Criteria(OUTCOME)	Contents	Hrs.
Understand different types of Monitor and their working principles	Computer monitors, functions, advantages and disadvantages.	5
Understand different types of main memory and secondary memory and their usage.	Memory system and its types (Main memory &Secondary memory), their differences	6

Name of Unit	:	Hard Disk (SATA, USB, Solid State)
Duration	:	6 Hours

Performance Criteria(OUTCOME)	Contents	Hrs.
Understand different types of storage devices like SATA, USB , their purpose and the storage capacity	Secondary memory like Hard Disk and its types.	3
Understand formatting (FAT,NTFS) and partitioning of Hard disk into different partitions like primary and logical partition	Formatting of Hard disk, Partitioning of Hard disk in different logical drives, Disk defragmentation, Disk clean up, Scan disk etc.	3

Name of Unit	:	Study of different types of Mother Board
Duration	:	9 Hours

Performance Criteria(OUTCOME)	Contents	Hrs.
Understand different types of motherboard and cards which are used in computer	Motherboard and its types	4
Understand configuration of the different types of motherboard its components, different card slots for connecting memory, I/O devices, additional cards etc.	Motherboard Configuration, Identifying Internal and External connectors, Types of data cables	5

Name of Unit	:	Study of different Buses
Duration	:	4 Hours

Performance Criteria (OUTCOME)	Contents	Hrs.
Understand internal and external bus. Number of bit each bus support and their usage.	What is Bus? System bus types, functions and features	4

Name of Unit	:	I/O Ports, graphic cards
Duration	:	5 Hours

Performance Criteria (OUTCOME)	Contents	Hrs.
Understand the different I/O ports like Serial, Parallel, USB, Game Port, Bluetooth interface, and the device which can be connected to it	Different types of I/O Ports available and their purpose	2
Understand Identification of different graphics cards, its location on the mother board and their purpose	Graphic cards and its function	3

Name of Unit	:	Installation of OS /printer/ modem / scanner
Duration	:	10 Hours

Performance Criteria (OUTCOME)	Contents	Hrs.
Understand Formatting, Partitioning and Installation of different types of Operating System (DOS/ Windows) from CD, Pen drive etc.	Installation of Operating System i.e. DOS/Windows	5
Understand Printer, Scanner, Modem and its purpose. The type of Printers (LaserJet, inkjet etc.), Scanner & Modem available, their usage. Connection and Installation of printers and its associated drivers.	Printers, Scanner, Modem and their Installation	5

Name of Unit	:	BIOS set up
Duration	:	7 Hours

Performance Criteria (OUTCOME)	Contents	Hrs.
Understand how to enter the BIOS setup utility and configuring the BIOS like booting sequence, system date, setting administrative password, USB enabling etc.	Study of BIOS Set-up, Boot configuration, Boot Menu	7

Name of Unit	:	Recovery & Trouble shooting
Duration	:	9 Hours

Performance Criteria (OUTCOME)	Contents	Hrs.
Understand the types of backup and different ways to backup files. Creation of restore point and configuring automated system recovery.	Type of Backup, Taking Backup files, Restore point, Automated System Recovery (ASR),	4
Understand the beep codes error during POST, running of diagnostic tools,	POST(Power on Self-Test), identifying problems by Beep codes errors, Troubleshooting Boot Failures, Replacement of components etc.	5

Name of Unit	:	Preventive maintenance & Anti-Virus
Duration	:	7 Hours

Performance Criteria (OUTCOME)	Contents	Hrs.
Understand the various process involved in maintenance and servicing of PC	Overview of computer maintenance and security	2
Understand the various system utility like disk fragment, disk clean-up which are available for each of the operating system	System utility	3
Understand the different types of Virus and its current trends. Configuration and maintenance of virus protection programme i.e. Antivirus	Virus and Running of virus protection programme.	2

Name of Unit	:	Networking Fundamentals
Duration	:	7 Hours

Performance Criteria (OUTCOME)	Contents	Hrs.
Understand the Networking basics like types of networks (LAN, MAN, WAN), their differences and their purpose. Advantages of each one of the network.	Networking Concept, advantages, Network topologies, Types of networks, OSI model	3
Understand the networking components (switches, bridges, routers), their functions and uses.	Networking Components - switches, bridges, routers, Gateways etc.	2
Understand the various medium like Guided media and Unguided media through which network are connected and their characteristic functions.	Transmission media- Guided media and Unguided media	2