

## Detailed Curriculum

**Name of Topics of Qualification:** Basic of computer, I/O devices, Different types of Mother Board and Cards, Different types of RAM

**Duration** : 40 Hrs.

<b>Performance Criteria (OUTCOME)</b>	<b>Contents</b>	<b>Hrs.</b>
Acquire the foundation level knowledge required to understand computer and its operations	Introduction to Computer, Uses of Computer, Different between Hardware & Software, Different types of components inside PC and its peripherals devices	7
Understand the Booting process of Computer	Booting concept of computer in DOS and Windows environment	6
Acquire knowledge on different Input and Output device of the computer	Different input and output devices/ cables, connectors identifications	8
Acquiring skills to identify different types of motherboard and cards which are used in computer	Different types of motherboard, controller cards, display cards, sound card AGP cards FAX/Modem Cards, TV Tuner Cards, LAN Cards, Ethernet cards	15
Understand different types of RAM	Different types of RAM used in PC's.	4

**Name of Topics of Qualification:** BIOS setup, Partitioning of HDD, Installation of Operating System, Password resetting, Preventive and breakdown maintenance, troubleshooting of sound, USB and LAN, Windows Command

**Duration** : 30 Hrs.

<b>Performance Criteria (OUTCOME)</b>	<b>Contents</b>	<b>Hrs.</b>
Acquire skills to enter the BIOS setup utility and configuring the BIOS like booting sequence, system date, setting administrative password, USB enabling etc.	BIOS and its setting	4
Understand the use of different commands of Windows in command prompt.	Different commands of Windows in command prompt.	6
Acquire skills to Format and Partitioning of HDD	Formatting and partitioning of HDD	3
Acquire knowledge and skills for Installation of Operating System for DOS & Windows using Off-line and Online method and booting from pen drive	Installation of Operating System i.e. DOS/Windows, Off-line drive installation / online drive Installation/ Pen Drive bootable	10
Acquire skills to reset the BIOS and Administrative password	BIOS password break / Administrative password break	3
Understand how to backup drivers & data and to restore it when necessary	Driver backup/restore, Data recovery	3

Acquire skills for windows file repairing and to troubleshoot Sound, USB, LAN problem	Windows file repairing / Sound Problem / USB Problem / LAN problem etc.	3

**Name of Topics of Qualification:** Introduction to Application Software, Antivirus Software, Utility Software, Multiple OS

**Duration** : 40 Hrs.

<b>Performance Criteria (OUTCOME)</b>	<b>Contents</b>	<b>Hrs.</b>
Understand different types of application software and their Installation	Application, types of application software and their Installation	10
Acquiring knowledge on different types of antivirus software and their Installation	Antivirus Software Installation/ different types of Antivirus Software/ Protect PC from Virus	10
Acquire knowledge on various system utility like disk fragment, disk clean-up which are available for each of the operating system	Hard Disk utility Software	10
Acquiring skills on Installation of multiple Operating System in a computer	Installation of multiple Operating System in a computer	10

**Name of Topics of Qualification:** Integration of system, Troubleshooting, Power supply, Storage devices, Installation, Repair and maintenance of Keyboard, Mouse, Monitors

**Duration** : 50 Hrs.

<b>Performance Criteria (OUTCOME)</b>	<b>Contents</b>	<b>Hrs.</b>
Acquiring skills to integrate different types of computers	System integration of different types of computers, such as PC, PCXT, PC –AT etc.	10
Acquiring knowledge and skills to configure different types of motherboard, its components, different card slots for connecting memory, I/O devices, additional cards etc.	Trouble shooting of different types of faults, Different computer cards identifications and troubleshooting	8
Acquiring skills to install and troubleshoot different types of SMPS.	Power supplies installation and troubleshooting, Different types of SMPS identifications	9
Understand Hard Disk drive installation and configuring its settings	Hard Disk drive installation and configuration setting, Use of CD ROM and DVD Drive, Using of FDD drives	10
Acquiring skills to identify different types of Keyboards, mouse and their repairing.	Different types of keyboards, repairing and maintenance, Mouse repairing and Installation	6
Acquire knowledge on different types of Monitor and their working principles	Different types of monitors, Monitors Repairing /Maintenance	7

**Name of Topics of Qualification:** Types of printers, Printer interface and setting of dip switches, working principles of printers, Types of UPS, UPS replacement and maintenance

**Duration** : 30 Hrs.

<b>Performance Criteria (OUTCOME)</b>	<b>Contents</b>	<b>Hrs.</b>
Acquiring knowledge of different types of printers and their usage.	Different types of printers and their usage	5
Acquiring skills to identify Printers and its purpose. The type of Printers (LaserJet, inkjet etc.) their usage. Connection and Installation of printers and its associated drivers.	Checking of printer interface cable and dip switch setting, self-test and loading of printer drives	5
Acquiring skills to repair different types of printers	Repairing of different types of printers (LaserJet, inkjet etc.)	7
Understand UPS and its types	Introduction to UPS, different types of UPS	5
Acquiring skills to perform the maintenance and servicing of UPS and its battery	Maintenance and servicing of UPS, battery replacement of UPS	8

**Name of Topics of Qualification:** Assembly of PC, Maintenance and preventing PC, Backup, Diagnostics tools, Virus protection program, IT Act 2000

**Duration** : 50 Hrs.

<b>Performance Criteria (OUTCOME)</b>	<b>Contents</b>	<b>Hrs.</b>
Acquiring skills to assemble and dismantle the PCs front panel connection	Assembly and dismantling of PCs front panel connection	9
Acquiring skills to perform the various process involved in maintenance and servicing of PC	Preventing , Maintenance and Cleaning, servicing of computer	10
Acquiring knowledge on types of backup and skills to backup files. Creation of restore point and configuring automated system recovery.	Type of Backup, Taking Backup files and fine tuning the system	10
Acquiring skills in running the diagnostics tool and understand the beep codes error during POST, running of diagnostic tools,	Running diagnostics tool	9
Understand the different types of Virus and its current trends. Configuration and maintenance of virus protection programme i.e. Antivirus	Antivirus and its current trends. Configuration and maintenance of virus protection programme	8
Understand the various acts under IT Act 2000	IT Act 2000 and its amendments	4

**Indicative list of tools/equipment to conduct the training:**

- Desktop Computer with Windows 7 or later
- Different types of Mother Board
- Different types of Cards
  - VGA, AGP, NIC, Audio,
- Different types of Tools and instrument
  - BGA Machine, Soldering and Desoldering Station, Oscilloscope 25-100 MHz, Multi-meter, Digital IC Tester, Analog IC Tester, Function Generator, Power Supply 0-30 V, Small screw Driver kit, Different types of small Pliers set, De-soldering pump, soldering wire, Tweezer, Bond make liquid flux 0% some respective components etc.
- Diagnostic Card for Desktop and Laptop
- Operating System and other supporting software.

**Trainers qualification:**

For a batch of 20 students:

1. One Faculty B. Tech /B. E (CS/IT/EC) with relevant experience.
2. One Support / Lab Instructor with at least Diploma in (CS/IT/EC) and relevant experience.