Annexure III

Lesson Plan:

Module	Unit	Topic	Day	Contents
Module 1 : Basic Computer components installation skill	1	Basic of computer, I/O devices, Different types of Mother Board and Cards, Different types of RAM	Day 1 , 2 , 3	Introduction to Computer, Uses of Computer, Difference between Hardware & Software, Different types of components inside PC and its peripherals devices
			Day 4 , 5 , 6	Booting concept of computer in DOS and Windows environment
			Day 7 to 10	Different input and output devices/ cables, connectors identifications
			Day 11 to 17	Different types of motherboard, controller cards, display cards, sound card AGP cards FAX/Modem Cards, TV Tuner Cards, LAN Cards, Ethernet cards
			Day 18 , 19	Different types of RAM used in PC's.
			Day 20	Unit Test
	2	BIOS setup, Windows command prompt command, Partitioning of HDD, Installation of Operating System, Password resetting, Preventive and breakdown maintenance, troubleshooting of sound, USB and LAN	Day 21	BIOS and its setting
			Day 22 to 24	Understanding windows command prompt commands, Formatting and partitioning of HDD
			Day 25 to 28	Installation of Operating System i.e. Windows & Linux , Off-line drive installation / online drive Installation/ Pen Drive bootable
			Day 29	BIOS password break / Administrative password break
			Day 30, 31	Driver backup/restore, Data recovery
			Day 32	Windows file repairing /Sound Problem / USB Problem / LAN problem etc.
			Day 33	Unit Test
	3	Introduction to Application Software, Antivirus	Day 34 to 38	Application, types of application software and their Installation

			Day 39 to 43	Antivirus Software Installation/ different types of Antivirus Software/ Protect PC from Virus
		Software, Utility Software, Multiple OS	Day 44 to 48	Hard Disk utility Software
			Day 49 to 53	Installation of multiple Operating System in a computer
			Day 54	Unit Test
Module 2: Troubleshooting & Maintenance of Computer	4	Integration of system, Troubleshooting, Power supply, Storage devices, Installation, Repair and maintenance of Keyboard, Mouse, Monitors	Day 55 to 59	System integration of different types of computers, such as PC,PCXT,PC –AT etc.
			Day 60 to 63	Trouble shooting of different types of faults, Different computer cards identifications and troubleshooting
			Day 64 to 67	Power supplies installation and troubleshooting, Different types of SMPS identifications
			Day 68 to 72	Hard Disk drive installation and configuration setting, Use of CD ROM and DVD Drive, Using of FDD drives
			Day 73 to 75	Different types of keyboards, repairing and maintenance, Mouse repairing and Installation
			Day 76 to 78	Different types of monitors, Monitors Repairing /Maintenance
			Day 79	Unit Test
	5	Types of printers, Printer interface and setting of dip switches, working principles of	Day 80, 81	Different types of printers and their usage
			Day 82, 83, 84	Checking of printer interface cable and dip switch setting, self-test and loading of printer drives

		printers, Types of UPS, UPS replacement and maintenance	Day 85, 86, 87	Repairing of different types of printers (LaserJet, inkjet etc.)
			Day 88 ,89, 90	Introduction to UPS, different types of UPS
			Day 91 to 94	Maintenance and servicing of UPS, battery replacement of UPS
			Day 95	Unit Test
	6	Assembly of PC, Maintenance and preventing PC, Backup, Diagnostics tools, Virus protection program	Day 96 to 100	Assembly and dismantling of PCs front panel connection
			Day 101 to 105	Preventing , Maintenance and Cleaning, servicing of computer
			Day 106 to 110	Type of Backup, Taking Backup files and fine tuning the system
			Day 111 to 114	Running diagnostics tool
			Day 115 to 119	Antivirus and its current trends. Configuration and maintenance of virus protection programme . Understanding IT Act 2000 and its amendments
			Day 120	Unit Test

Distribution of training duration into theory and practical component:

Module	Unit	Topic	Contents	Theory	Practical	Total
Module 1: Basic Computer components installation skill	1	Basic of computer, I/O devices, Different types of Mother Board and Cards, Different types of RAM	Introduction to Computer, Uses of Computer, Difference between Hardware & Software, Different types of components inside PC and its peripherals devices	4	3	7
			Booting concept of computer in DOS and Windows environment	2	4	6
			Different input and output devices/ cables, connectors identifications	4	4	8
			Different types of motherboard, controller cards, display cards, sound card AGP cards FAX/Modem Cards, TV Tuner Cards, LAN Cards, Ethernet cards	8	7	15
			Different types of RAM used in PC's.	2	2	4
	2	BIOS setup, Partitioning of HDD, Installation of Operating System, Password resetting, Preventive and breakdown maintenance, troubleshooting of sound, USB and LAN	BIOS and its setting	2	2	4
			Windows command	3	3	6
			Formatting and partitioning of HDD	1	2	3
			Installation of Operating System i.e. DOS/Windows, Off-line drive installation / online drive Installation/ Pen Drive bootable	4	6	10
			BIOS password break / Administrative password break	1	2	3
			Driver backup/restore, Data recovery	3	2	3

Module						
			Windows file repairing /Sound Problem / USB Problem / LAN problem etc.	1	2	3
	3	Introduction to Application Software, Antivirus Software, Utility Software, Multiple OS	Application, types of application software and their Installation	6	4	10
			Antivirus Software Installation/ different types of Antivirus Software/ Protect PC from Virus	4	6	10
			Hard Disk utility Software	4	6	10
			Installation of multiple Operating System in a computer	4	6	10
Module 2: Troubleshooting & Maintenance of Computer	4	Integration of system, Troubleshooting, Power supply, Storage devices, Installation, Repair and maintenance of Keyboard, Mouse, Monitors	System integration of different types of computers, such as PC,PCXT,PC –AT etc.	4	6	10
			Trouble shooting of different types of faults, Different computer cards identifications and troubleshooting	4	4	8
			Power supplies installation and troubleshooting, Different types of SMPS identifications	4	5	9
			Hard Disk drive installation and configuration setting, Use of CD ROM and DVD Drive, Using of FDD drives	4	6	10
			Different types of keyboards, repairing and maintenance, Mouse repairing and Installation	2	4	6
			Different types of monitors, Monitors Repairing /Maintenance	3	4	7
	5	Types of printers, Printer	Different types of printers and their usage	3	2	5

		interface and setting of dip switches, working principles of printers, Types of UPS, UPS replacement and maintenance	Checking of printer interface cable and dip switch setting, self-test and loading of printer drives	2	3	5
			Repairing of different types of printers (LaserJet, inkjet etc.)	2	5	7
			Introduction to UPS, different types of UPS	3	2	5
			Maintenance and servicing of UPS, battery replacement of UPS	3	5	8
	6	Assembly of PC, Maintenance and preventing PC, Backup, Diagnostics tools, Virus protection program	Assembly and dismantling of PCs front panel connection	4	7	9
			Preventing , Maintenance and Cleaning, servicing of computer	4	6	10
			Type of Backup, Taking Backup files and fine tuning the system	4	6	10
			Running diagnostics tool	4	5	9
			Antivirus and its current trends. Configuration and maintenance of virus protection programme	4	6	8
			Understanding of IT Act 2000 and its amendment's	4	0	4
				105	135	240

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.

Performance Criteria (OUTCOME)	Contents	Hrs.
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.

Performance Criteria (OUTCOME)	Contents	Hrs.
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.

Performance Criteria (OUTCOME)	Contents	Hrs.
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.

Performance Criteria (OUTCOME)	Contents	Hrs.
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.

Performance Criteria (OUTCOME)	Contents	Hrs.
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.

Performance Criteria (OUTCOME)	Contents	Hrs.
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 Disordering 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 Plair set, De-soldering pump, soldering wire, Twizer, 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 Faculties 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.