14.1 Electronics Components and PC Hardware (CHM - A1- R0)

Objective of the Course

This course has been designed to provide an introduction to the basic electronic components that go into making of a computer system. The course covers the various tools available for diagnosing an electronic circuits and component testing. Digital circuits, which are the basic building blocks of a computer, are also introduced in this module.

Outline of the Course

Sl. No.	Topic	Min. no. of Hours
1.	Introduction to Computers	04
2.	Electronic Components: Active and Passive Components	16
3.	Circuit Analysis	04
4.	Connectors, Relays, Switches and Panel Components	04
5.	Digital and Integrated Circuits	10
6.	Semiconductor Memories	02
7.	Power Supplies	08
8.	Tools and Aids for Maintenance	06
9.	Types of PCB's and Soldering Techniques	04
10.	Do's and Don'ts of PC Maintenance	02

Lectures	=	**60 Hrs.**
Practicals	=	**60 Hrs.**
Total	=	**120 Hrs.**

4.1.1 Detailed Syllabus

1. Introduction to Computers — 04 Hrs.

1.1 Basic building blocks of a computer system - the CPU, the Arithmetic & Logical Unit. The binary numbers as a language which computer understands, Interprets and processes. The Input & Output devices as means of communication with a computer system.

1.2 Concept of hardware & software - Two main components of a computer system. Definition of data and information. Importance of information flow & its impact on growth & productivity.

1.3 Computer as an Electronic Machine - The need for study of Electronics & Electronic components for understanding the working of a Computer & Peripherals such as Keyboard, Mouse etc. from hardware point of view.

2. Electronic Components: Active and Passive Components 16Hrs.

2.1. Passive components: Resistor, Capacitor & Inductor 08 Hrs.

Resistor:
Standardization, color codes, power rating specifications and properties of fixed and variable resistors. Specifications and properties of thermistors.

Capacitor:
Introduction, standardization, and colour codes characteristics of capacitor tolerance, temperature coefficient, type of capacitors and their applications.

Inductor :
Introduction to magnetic materials and their properties, inductor, characteristics, types of inductors, their features and specifications, transformers, types of transformers.

2. 2. Active Components 08 Hrs.

Introduction to Diodes, their characteristics and applications, Zener diodes and their characteristics and impedance, introduction to Bipolar transistors and their applications, functions, specification, testing of Diodes and Transistors. Introduction to operational amplifiers (OP AMPs) and simple circuits

3. Circuit Analysis 04 Hrs.

Fundamentals of AC and its application to circuit theory, energy and power in AC. Simple RC, RL, LC & RLC circuit and filters.

4. Connectors, Relays, Switches And Panel Components 4 Hrs.

Introduction to relays, their characteristics, classifications, performance during pick up and drop out, introduction to connectors and switches, different types and their applications, panel components. Introduction to various transformers used in SMPS and Peripherals.

5. Digital and Integrated Circuits 10Hrs.

Introduction to logic levels & gates, Latches, unidirectional & bi-directional buffers, tristate devices, Clock generators, Flip-flops, Registers, Counters, Multiplexers & Demutiplexers. Introduction to various logic families and their characteristic, Bipolar Logic Family, Unipolar Logic Family – PMOS, NMOS, CMOS. Characteristics of Digital IC's. Comparison of Digital Logic Families. Latest trends in packaging.

6. Semiconductor Memories : 02 Hrs.

Hierarchy of memories used in a computer, Classification of memories and trends in PC memory modules.

7. Power Supplies 08 Hrs.

7.1 Constituents of Power Supplies

Introduction to half wave, full wave and bridge rectifier circuits, introduction to regulated power supplies (linear), power supply filters, three terminal regulators and regulated power supply using three terminal regulators,

7.2 Batteries

Types of Batteries and their regular maintenance.

7.3 SMPS

Introduction to SMPS, various topologies, study of SMPS used in PCs, specification of SMPS according to system requirement, various voltage and current ratings available on various types of SMPS, troubleshooting of SMPS, handling of SMPS

7.4 UPS

Introduction to UPS, Types of UPS.

8. Tools and Aids for PC Maintenance 06Hrs.

Test and measuring equipment like Cathode Ray Oscilloscope, Multi-meter. Study of ammeter, digital multi-meter and how they are used. Tools used in maintenance like vacuum cleaner, brush, forcep, screwdriver set, cutter, pliers, stripper, cleaning solutions.

9. Types of PCB and Soldering Techniques 04 Hrs

Types of PCBs, Soldering & De-soldering Techniques and Materials, ESD and Heat Sinks, Good Soldering practices, Antistatic Material Handling & Zero Defect Soldering.

10. Do's and Don'ts of PC Maintenance 02 Hrs.

Do's and Don'ts of PC Maintenance.

14.1.2 Practical Assignments

Electronics Components and PC Hardware (CHM - A1 - R0)

1. Identification of resistances by colour coding and wattage rating.
2. Measurement of voltage, current and resistance using digital multimeter.
3. Study of different Logic families.
4. Study of series and parallel connections of resistor.
5. Study of active and passive components.
6. Study of half wave rectifier with filter.
7. Study of full wave rectifier with centre tap transformer.
8. Study of full wave bridge rectifier circuit.
9. Soldering and de-soldering practices .
10. Study of a bipolar junction transistor (BJT) as switch.
11. Study of SMPS circuit.
12. Study of Oscilloscope and measurements using (CRO).
13. Study of inverting & non-inverting circuits of op-amp.
14. Study of three terminal voltage regulator.
15. Study of RC, RL, LC & RLC filters.
16. Study of logic gates.
17. Study of flip flops.
18. Study of different types of UPS.
19. Study of tri-state devices.
20. Study of types of PCB's.

RECOMMENDED BOOKS FOR:

Main Reading:

1. Basic Electronics
   Grobe
   McGraw Hill

2. Digital Principles and Applications.
   By Leach & Malvino
   5th Addition Tata McGraw Hill

Supplementary Books:

1. Modern Digital Electronics by R.P. Jain

2. Solders and Soldering
   Haward H. Manho
   McGraw Hill Book Company, New York.

3. Uninterruptible Power Supplies
   David C. Griffith
   Marcel Dekker Inc.

14. 2 PC Architecture (CHM - A2 - R0)

Objective of the Course

This course introduces the student to the various cards and add-on cards that go into making of a computer system. The course first deals with the 16 & 32 bit microprocessors. The various types of microprocessors and motherboards that are available in the market are covered in this course. The concept of BIOS, POST, Batch Files etc., and their importance in a computer system is outlined here. Topics on display cards, monitors, floppy disk drives and hard disk drives are covered in the later part of this course.

Outline of the Course

Sl.No.	Topic	Min. no. of Hours
1.	Introduction to Microprocessors / Microcomputers	10
2.	Pentium class of processors	06
3.	PC/AT Motherboards	18
4.	Buses & Ports	06
5.	Display Cards & Monitors	08
6.	Drive Systems	10
7.	Introduction to Preventive & Breakdown Maintenance	02

Lectures	=	**60 Hrs.**
Practicals	=	**60 Hrs.**
Total	=	**120 Hrs.**

14.2.1 Detailed Syllabus

1. Introduction to Microprocessors / Microcomputers **10 Hrs.**

Introduction to digital computer, microcomputer organization, machine language, architecture of an 16-Bit generic microprocessor, simplified memory organization, DMA, interrupts, 8086 / 8088 architecture and instruction set, steps for program development for 8086 / 8088.

Features of Microprocessor: Introduction to 80286, 80386, 80486, numeric processor 80387, various version of 80386 and 80486 viz. 80386SX, 80386DX, 80486SX, 80486DX-2, 80486 DX-4, and their comparisons.

2. Pentium Class of Processors **06 Hrs.**

Pentium processor, Pentium Pro processor, Pentium MMX processor, Pentium-II, Celeron processor, Pentium –III processor, Pentium–IV Processor. Introduction to Server class processor.

3. PC/AT Motherboards **18 Hrs.**

The Mother board, the various parts of mother board and its architecture. Elements of motherboard, keyboard interface circuit on motherboard, P-IV motherboards. CMOS setup and their features in detail. CMOS concept, extended and expanded memory, cache memory, shadow memory. Different types of memories such as EDO RAM, SDRAM, RDRAM, DDR RAM, etc.
Specifications of a latest Pentium –III and P-IV based motherboard and chipsets. Concept of BIOS, POST, its error codes and their interpretation, DOS, internal and external commands of DOS, Password setup. The DOS batch files, detailed description of DOS batch files config.sys and autoexec.bat, their creation and editing, the commands of config.sys file and their order, a sample of config.sys and autoexec.bat files, IRQ, PnP.

4. Buses & Ports **06 Hrs.**

Study of various bus standards: ISA, EISA, VL, PCI, PCMCIA, AGP etc., Ports like PS/2, COM, LPT, USB, IrDA etc. Memory types: SIMM, DIMM etc.

5. Display Cards & Monitors **08 Hrs.**

Different types of display cards, resolution and colour depth, video memory, video drivers, Monitors, CRT construction and working, vertical stage, horizontal stage and 15 pin input type-monitor, block diagram & description of colour monitor, display configuration, introduction to LCD displays.

6. Drive Systems: **10 Hrs.**

Various parts of FDD, types of floppies, geometry of floppy, various recording formats, interface signals, floppy drive alignment track 0, adjustment, formatting of floppies. Types of hard disk drives, IDE, EIDE, SCSI, Geometry of hard disk drive, Interface signal, tape drives, DVD, introduction to RMD, various concepts of hard disk drives, types of formatting, partitioning and handling of hard disk drive. zip drive functioning, CD drive and CD writer functioning, handling and repair.
Mouse and keyboard (wired and wireless): types, basic functioning, interfacing and installation.

7. Introduction to Preventive & Breakdown Maintenance **02 Hrs.**

Type of maintenances: Preventive and break down maintenance. Backup & Recovery in windows: Need for recovery, Techniques: log based recovery , check point, differed and immediate updates, Shadowing, Catastrophic and non-catastrophic failures, Recovery in multi-database environments.

14.2.2 Practical Assignments

PC Architecture (CHM - A2 - R0)

1. Study of different types of motherboards.
2. Study of jumper settings on Pentium mother boards.
3. Installation of memory modules.
4. Study of Various adapter cards and their functioning and installation.
5. Study of different buses and the number of pins in the different slots corresponding to different buses.
6. Opening the PC and identification and study of its different blocks, assembling and disassembling.
7. Study of various types of display cards and dismantling & assembling of Monochrome & Color monitors.
8. Study of operation of floppy drive.
9. Opening of a old floppy drive, study of its different parts, connection of two floppy drives to the motherboard. Distinction between floppy drive A & B in relation to twist in cable connections.
10. Installation of CD drive.
11. Study of faults diagnosis based on different beeps.
12. Configure CMOS setup.
13. Installation of hard disk.
14. Installation of hard disk in master and slave mode.
15. How to access the configured space of ISA slot.
16. Study of PC specification.
17. Study of preventive maintenance of PC.
18. Concept of IRQ.

19. Examining various error codes and their causes

20. Creating batch files.

21. Study of Windows registry.

RECOMMENDED BOOKS FOR:

Main Reading :

1. IBM PC & Clones: Hardware trouble shooting & maintenance
   Govindarajalu,
   Tata McGraw Hill

2. Inside the PC
   By Peter Norton
   8th Edition Tec media Publications

3 Bigelow's PC troubleshooting & Repair
   By Stephen Bigelow
   Dreemtech Press

4. The Complete PC Upgrade & Maintenance Guide
   By Mark Minasi
   BPB Publications

Supplementary Books:

1. Build your own Pentium Processor PC
   Aubrey Pilgrim
   Windcrest/McGraw Hill

2. Complete PC Upgrade & maintenance Guide
   Mark Minasi
   BPB Publications

14.3 Computer Peripherals and Networking (CHM - A3 - R0)

Objective of the Course

This Course covers the topics on computer peripherals and networking of computers. A brief introduction to the various multimedia components is also covered here. The various network topologies and the different transmission media are dealt with in this course. Finally general troubleshooting and maintenance of computers is covered.

Outline of the Course

Sl.No.	Topic	Min. no. of Hours
1.	Scanners and Video cam	04
2.	Printers ,Plotters and their Troubleshooting	14
3.	Multimedia and other Components	06
4.	Networking	04
5.	Introduction to NAS & SAN	02
6.	Transmission media & networking connectivity hardware, CAT 5 & 6 structured cabling, crimping	20
7.	General troubleshooting & maintenance	10

Lectures	=	**60 Hrs.**
Practicals	=	**60 Hrs.**
Total	=	**120 Hrs.**

14.3.1 Detailed Syllabus

1. Scanners and Videocam **04 Hrs.**

Various scanner and format of file, basic functioning of scanner, interfacing scanner to PC and configuration. Installation of video camera to PC.

2. Printers & Plotters & their Troubleshooting **14 Hrs.**

Different types of printers and functioning, interface signals and cables, printer dip switches, printer port, printer driver, printer head and ribbon. Principal of operation of Inkjet Printers, various components of inkjet printers, Trouble shooting of Inkjet printers. Laser Printers, Principal of operation, various components of Laser Printers, the stages involved in printing process of laser printers, Troubleshooting, Specifications of a latest inkjet & laser printer and configuration of printers. X – Y plotter, roller plotter etc.

3. Multimedia and Other Components **06 Hrs.**

Sound cards, microphones and speakers, recording on magnetic tape, digital recording, digital signal processing (DSP), The MIDI standard, configuring multimedia components. joysticks, mouse etc.,

4. Networking **04 Hrs.**

What is networking, types of network, server client & peer to peer, Local Area Network (LAN), Metropolitan Area Networks (MAN) and Wide Area Networks, Network management, Network elements.

5. Introduction to NAS & SAN **02 Hrs.**

Introduction to Network Accessed Storage (NAS) & Storage Area Network (SAN).

6. Transmission Media and Networking Connectivity Hardware **20 Hrs.**

Network interface cards–Ethernet, ArcNet, Cabling Concepts, thin Ethernet, thick Ethernet, Coaxial cables, STP, UTP, Fiber optic, CAT 5 & 6 Structured Cabling, Crimping etc. Introduction to repeaters, bridges, routers. Networking topologies bus, star, token ring, mesh, OSI model and layers, The need of layered solutions.

7. General Troubleshooting and Maintenance **10 Hrs.**

Assembly and disassembly of PC and its various parts, startup problems, run problems their identification and remedy, maintenance of mouse, keyboard, displays, printers, FDD's, HDD's, CDD's, SMPS motherboard, their identification and remedy, servicing of mouse and keyboard, maintenance of UPS. Operating systems – Windows/ Linux.

14.3.2 Practical Assignments

Computer Peripherals and Networking (CHM-A3-R0)

1. Study the functioning of Scanner and interfacing with PC.
2. Installation of Video camera to PC.
3. Configuring multimedia components.
4. Installation of scanners on USB port & configuration.
5. Study of dismantling and assembling of Dot matrix, Inkjet and Laser Printers and their Troubleshooting.
6. Study of troubleshooting of the PC systems & Peripherals using flow -charting methods.
7. Study of installation of network card in a system and connecting PCs in a LAN using network connectivity Hardware.
8. Installation of sound card and its driver. Connection of speakers and mike. Testing with sound recording and reproduction. Adjustment of volume and other parameters.
9. Study of various hardware connectivity devices and transmission media. Practice on connecting RJ-45 connectors to UTP cables using the crimping tool.
10. Study of an old hard disk and identification of its various subassemblies and parts including heads, head moving mechanism and recording media.
11. Installing and configuring the drives for Plotters (Windows/ Linux).
12. Troubleshooting of Printer.
13. Study of different signaling scheme in printers.
14. Study the properties of different cabling systems.
15. Troubleshooting of SMPS.
16. Study of different types of UPS and its blocks.
17. Study of SAN & NAS.
18. Handling crimping tool and connecterisation.

RECOMMENDED BOOKS FOR:

Main Reading:

1. Computer Networks, Protocols, Standards & Interfaces
   By Uyless Black
   Prentice Hall Publication

2. Trouble Shooting & Repairing Personal Computers
   - Art Margolis
   - Windcrest / McGraw Hill Publication

3. All about Printers
   - By Manohar Lohia
   - BPB Publications

Supplementary Reading:

1. Introduction to Networking
   By Barry Nance
   Prentice Hall Publication

14.4 System Software, Diagnostic & Debugging Tools (CHM - A4 - R0)

Objective of the Course

This course has been designed to provide an introduction to the system software. The basics of Windows 2003 / XP and Linux, including installation, administration, back-up procedures and disaster prevention are dealt in this course. A brief topic on virus, symptoms of different types of virus, installation of anti-virus programs and Windows NT based networking is also covered here. The students are introduced to the uses of Internet and how to configure a computer system to access the Internet.

Outline of the Course

Sl.No.	Topic	Min. no. of Hours
1.	Basics of Operating Systems	12
2.	Installation and Administration of WINDOWS 2003 and Linux	14
3.	Taking Care of System Health & Debugging	08
4.	Back-up Procedures & Disaster Prevention	04
5.	Installation in a Client Server Model	15
6.	Introduction to Internet, Connectivity and Peripheral Configuration	04
7.	Various Antivirus Software and their Installation	02
8.	Introduction to scripting languages like ASP, JSP, PERL etc.	01

Lectures	=	**60 Hrs.**
Practicals	=	**60 Hrs.**
Total	=	**120 Hrs.**

14.4.1 Detailed Syllabus

1. Basics of Operating System **12 Hrs.**

Differences between DOS, WINDOWS 2000 / XP and Linux operating systems, starting and exiting from a program in WINDOWS 2003 / XP, Linux, files and folders in Windows 2003 / XP/Linux copying and moving files under Windows 2003 / XP, the use of explorer, study of control panel and its settings.

2. Installation and Administration of WINDOWS 2003 and LINUX **14 Hrs.**

The minimum hardware requirements for the installation, the steps involved in installation of Windows 2003/Linux and troubleshooting during installation. Booting process of Windows 2003/ XP/Linux the plug and play feature of Windows2003 / XP – the automatic detection of new hardware at booting time, the boot sector, Architecture of

Windows2003 / XP, the Recycle bins, DLL files, the Windows registry and its importance, the device drivers, the addition of new hardware and software to a Windows 2003 / XP system, the device manager of 2003 / XP, changing of display settings, setting of screen savers and their password protection, configuration of keyboard and mouse in Windows 2003 / XP.

3. Taking Care of System Health & Debugging 08 Hrs.

System testing and diagnosis using available diagnostic programs like AMIDIAG, PC tools, Norton utilities etc and latest trends. Debugging Tools, procedures, features etc and their use.

4. Windows based back-Up Procedures & Disaster Prevention 04 Hrs.

Write protection of your software MS-Windows delete protection, crash recovery, preventing hard disk failures, Back-up & Restore procedures, types of back-up, media for back-up, Raid systems. Preparation of bootable CD and FD.

5. Installation of Network Operating System in a Client-Server Model 15 Hrs.

5.1 Client and Server Configuration of Win-2000

Introduction to Windows 2000 and Windows XP. The minimum hardware requirements for installation, Server installation, Configuring a Windows 2000/XP system as a client to Windows 2000 network. and Password security in Windows 2000. Peer to Peer Networking in Windows 2000/2003, sharing the files and folder level security. Users Rights available in Windows 2000 and their functions. Rights assigned to built in groups. Password Security, account restrictions, Audit Policy. The TCP/IP protocol suit, TCP/IP core protocols, TCP/IP diagnostic utilities, IP addressing. TC/IP configuration, Installation of TCP/IP protocol.

5.2 Client and Server Configuration of Linux

Installation of Linux in a Client-Server configuration, Minimum hardware requirement for installation, Server configuration, Client configuration, Peer to Peer Networking in Linux. Sharing the files and folder level security, Users rights available in Linux, Password security/Account restriction.

6. Introduction to Internet, Connectivity and Peripheral Configuration 04 Hrs.

The internet as a source of information, The domain names in the internet, world wide web, configuring Windows as a station for accessing Internet using dial up networking, Modem Configuration and connectivity using ISDN, leased line, obtaining the internet connection from the Internet service provider, using of internet for obtaining information, chatting / searching of information using search engine, using various browsers and configuring E-Mail, Uploading / Downloading, Tips for increasing speed of internet etc.

7. **Various Antivirus Software and their Installation:** **02 Hrs.**
Virus prevention and removing, Different types of Viruses and their removal using Antivirus programs and installation, Introduction to firewalls.

8. **Introduction to scripting languages like ASP, JSP, PERL etc.** **01 Hr.**
Introduction to Perl, Variables, control structures, File I/O Server side web programming in Perl, Process management, fork, exec, pipe commands, client/ server models. Introduction to scripting languages and its use in fine tuning the OS.

14.4.2 Practical Assignments

System Software, Diagnostic & Debugging Tools (CHM - A4 - R0)

1. Running of various diagnostic software (e.g., PCTOOLS, Norton Utilities) to check the working of various parts of the system

2. Installation of Windows 2003/ XP/ Linux and practice of using the same in details like adding of new hardware, and software, installation of new devices to a Windows 2003 / Linux system and the troubleshooting of related problems

3. Running of Anti-virus program (Eg., Norton Anti-virus) to detect and remove virus from the system.

4. Practicals on taking the backup of directories, files & complete hard disk on a available but reliable media and then restoring from the media back to the hard disk.

5. Installation of Windows NT Server /Linux and clients and practice of using_the network

6. Creating and administration of User accounts using a User Manger for Domains

7. Use of Internet by each student

8. Running of Scan disk and Disk defragmenter as part of preventive maintenance

9. Copying of files from one folder to other using Windows explorer

10. Use of different commands of Windows 2003/ XP in command prompt.

11. Configuring of system for Internet.

12. Patches in Linux/ service pack in Windows and its up date in both.

13. Comparison of Antivirus Software and Firewall.

14. Installation of Multiple operating Systems using grup/ lilo.

15. Study of TCP/IP configuration.

16. Configuring System as server.

17. Copying files from one operating system to another system.

18. Creating a backup files on floppy/ CD/ DVD etc.

19. Study of different features of Operating System.

20. Study of control panel and settings.

Practical Assignments on Linux :

21. Accessing the system BIOS and configuration under LINUX.

22. Usage of basic file management commands.

23. Installing boot manager and design hard disk layout.

24. Installation and setup of new hardware devices.

25. Working on online and offline commands.

26. Usage of display manager and X – windows system.

27. Booting system, login and shut down procedure.

28. Using text editor and performs file management commands.

29. Creating partition and file system in Windows/ Linux.

30. Adding and removing user accounts.

RECOMMENDED BOOKS FOR:

Main Reading:

1. Windows 98 / 2000/2003, Bible; Simpson Alan
2. Red Hat/ Suse

Supplementary Books:

1. Teach yourself Windows 98/2000/XP; Stevens
2. Getting ready for Windows2000/XP; Crawford

14.5 Personality Development and Communication Skills (CHM - A5 - R0)

Objective of the Course

For a person to be successful in servicing and maintenance career, only technical knowledge of this field is not sufficient. The interactions of the person with others, public relation, managing the activities, his/her attitude play a key role in his or her growth as a professional. This course has been designed to help an individual to develop soft skills and be attractive, impressive and efficient professional.

Outline of the Course

Sr.No.	Topic	Min No. of Hours
1	Communication Skills	04
2	Public Speaking	03
3	Time Management	03
4	Stress Management	04
5	Interview Skills	03
6	Customer Focus	03
	Lectures = 20 Hrs	

14.5.1 Detailed Syllabus

1. **Communication Skills** **04 Hrs**
   Importance of communication, types of communication, effective listening, verbal communication, Language: grammar, pronunciations, selection of words; feedback from listeners, written communication – formal & informal, telephonic communication; Emails: non-verbal communication – body language.

2. **Public Speaking** **03 Hrs**
   Preparing the venue, pay attention to detail, checking the equipment, optimise the seating arrangement, consider the needs of the audience, getting started, the introduction, what style is best, using audio-visual aids, body language communication, body and limb movement, eye contact, the posture and stance, staying in control, reading signals from the audience, coping with hostility, the conclusion, promoting interaction, the question and answer session, tricky questions, keeping cool.

3. **Time Management** **03 Hrs**

Time, the most valuable resource, common misconceptions, the 80/20 rule, identifying time wasters, keeping a time log, analysing the time log, the urgency/importance grid, zone 1, zone 2, zone 3, zone 4, task typing, effective decision making, don't delay – do it today, how to overcome procrastination, do the worst job first, break daunting tasks down into smaller ones, make a public commitment to do the job, plan the evening before.

4. **Stress Management** **04 Hrs**

Understanding stress, survival stress, internally generated stress & anxiety, environmental, nutritional & job stress, chemical and nutritional stress, life style, short term and long term stress, stress management techniques, stress diary, finding your optimum stress levels; psyching up – raising stress levels to improve performance, anticipating stress - managing stress by preparing for it, imagery – mental adjustment of stress levels, autosuggestions – powerful relaxation techniques, meditation – relaxation by sustaining focused attention on one thing; taking exercise – improving health and reducing tiredness, time management – reducing stress by improving the effectiveness and efficiency, improving attitudes – reducing stress you cause for yourself, health and nutrition – reducing chemical and medical stress, eliminating stress from the environment.

5. **Interview Skills** **03 Hrs**

Interview dress code, dress to fit in, controlling the nerves, positive visualization, timing your arrival, creating a positive first impression, opening conversation, assessing the degree of formality, getting comfortable, recovering from a poor start, positive body language, mirroring body language, how to sit at interview, optimizing eye contact at interview, selling yourself at interview, what does the interviewer want?, sell the sizzle, not the sausage.

6. **Customer Focus** **03 Hrs**

Basic facts about customers and customer services, how to satisfy the customers.