

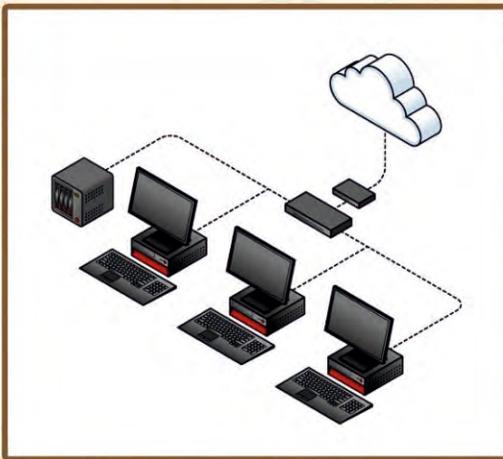


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Skilling India in Electronics

Facilitator Guide



Sector
Electronics

Sub-Sector
IT Hardware

Occupation
After Sales Support

Reference ID: ELE/Q4606, Version 1.0

NSFQ Level: 4

**Field
Technician
(Networking
and Storage)**



Shri Narendra Modi
Prime Minister of India

“ Skilling is building a better India.
If we have to move India towards
development then Skill Development
should be our mission. ”

Acknowledgements

The need for having a standard curriculum for the Job Role based Qualification Packs under the National Skills Qualification Framework was felt necessary for achieving a uniform skill based training manual in the form of a Facilitator Guide.

I would like to take the opportunity to thank everyone who contributed in developing this Guide for the QP Field Technician -Networking and Storage.

The Guide is the result of tireless pursuit to develop an effective tool for imparting the Skill Based training in the most effective manner.

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CEO

Electronics Sector Skills Council of India

About this Guide

This Facilitator Guide is designed to enable training for the specific Qualification Pack (QP). Each National Occupational (NOS) is covered across Unit/s. Key Learning Objectives for the specific NOS mark the beginning of the Unit/s for that NOS. The symbols used in this book are described below.

Symbols Used



Ask



Demonstrate



Facilitation Notes



Learning Outcomes



Notes



Objectives



Practical



Team Activity



Do



Explain



Say



Resources



Activity



Summary



Role Play



Example

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Transforming the skill landscape



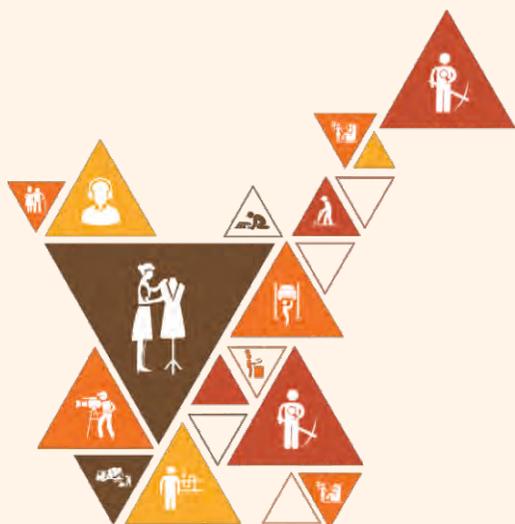
1. Introduction to Computers and Networking

Unit 1.0 – Objective of the Module

Unit 1.1 – Computer Fundamentals

Unit 1.2 – Networking Fundamentals

Unit 1.3 – Software Basics



ELE/N4612

Key Learning Outcomes



At the end of this module, you will be able to:

- Describe the basics of computers
- Explain computer peripherals
- Explain what a network is and types of network
- Describe different types of networking devices
- Describe software

UNIT 1.0: Objective of the Module

Objective of the Module

The objective of this module is to enable the participants to define computer. They will be able to demonstrate the main functions of a computer and the different peripherals devices. In addition, they will be able to explain the different types of computers. They will also be able to explain network and its various types along with the networking devices. They will be able to explain what an operating system (OS) is and identify its various types.

Ask

- Ask the participants about different components of a computer.
- Ask them to define network and its various types.
- Ask them if they know some advantages of a computer.
- Ask them if they can tell about different types of computers such as PC, workstation and so on.
- Ask them to tell about the various networking devices used in a network connection.
- Ask them how a laptop is different from a desktop.
- Ask them to define OS.
- Enquire from them if they know about different types of OS. If yes, then ask them to name a few OS.

Notes for Facilitation

- Initiate the session with the participants by discussing about the objectives of the module.
- Make the session interactive by asking the participants to share their expectations from the module on the blackboard/whiteboard.
- Introduce the topics to be covered and give some information about them.
- Give the participants a general idea about what will be covered in the module.

Icebreaker

Objective

The objective of this activity is to make the participants familiar with each other. This is mainly done to break the ice between the participants (make them talk to each other).

Do

- Make some tags of famous people such as:
 - PV Sindhu
 - Undertaker
 - Harry Potter
 - Narendra Modi
 - Amitabh Bachchan

Notes for Facilitation

- Ask the participants to stand in a circle. Randomly choose any participant and stick one tag on the person's back without showing the name.
- Ask the participant to identify the name written on the tag by putting up questions to his fellow participants.
- Give the participants an example of how to play this game by telling them the type of questions they can ask, such as:
 - Am I an athlete?
 - Am I a wrestler?
 - Am I an actor?
- The fellow participants should only answer either "Yes" or "No".
- Continue the same activity with a few of the other participants.

UNIT 1.1: Computer Fundamentals

Unit Objectives

At the end of this unit, you will be able to:

- Define computer and its types
- Describe computer peripherals

Ask

- Ask them which component of a computer is called the brain of the computer and why.
- Ask them if they know some functionalities of a computer.
- Ask them if they can tell about different types of computers.
- Enquire from them if they know anything about peripheral devices. If they say yes, then ask them to name a few peripheral devices.
- Ask them if they can tell the basic functionality of a few peripheral devices such as a scanner, a printer and so on.
- Ask them if they know about storage devices.

Demonstrate

- Show the various hardware components of a computer.
- Show the working of a webcam, a scanner and a printer.
- Show the working of a system software such as Windows.
- Show the working of an application software such as MS Office.

Notes for Facilitation

- Start the session by explaining to the participants the importance of computers by telling them that a computer has become an indispensable part of our day to day life.
- Inform them that a computer is an electronic device for performing arithmetic and logical operations.
- Then, define computer to them by saying that a computer is a device or a machine which is given a set of instructions to carry out arithmetic or logical operations. These set of instructions are called a program.
- Tell them a few characteristics of a computer with the help of the following points:
 - Speed: Computers work at a very high speed and are capable of performing 3-4 million instructions per second.
 - Accuracy: Computers deliver 100% accuracy.
 - Diligence: Computers are highly dependable.
 - Versatility: Computers are versatile machines and are capable of performing a variety of tasks.
 - Storage Capacity: Computers can store a very large amount of data.

- Further, explain to them the four functional units in a computer which are an input unit, a storage unit, a CPU and an output unit.
- Inform them that peripheral devices are input-output devices used to enter information and instructions into a computer for storage or processing and to deliver the processed data to a user.
- Next, tell them about the classification of computers on the basis of size with the help of the following figure:

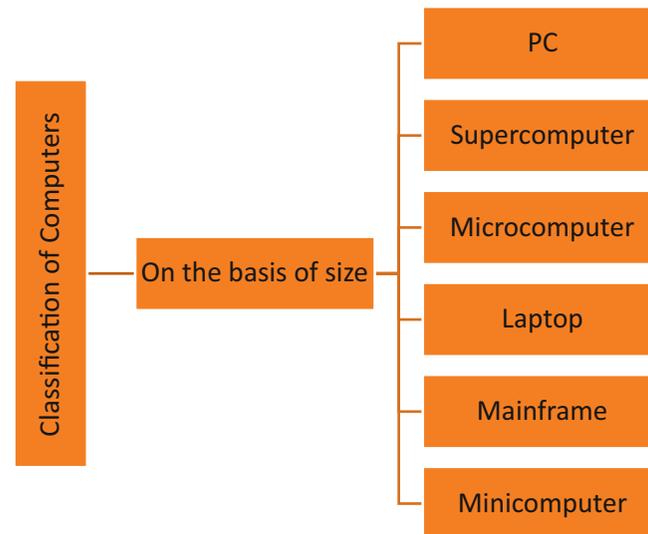


Fig 1.1.1: Classification of computer

- In addition, explain to them about each type of computer in detail.
- Inform them about applications of a computer in different fields such as:
 - **Business:** Calculations of payroll, budgeting, enterprise resource planning (ERP) and so on.
 - **Banking:** Online accounting facility
 - **Education:** Computer based education
 - **Marketing:** Advertisement, online or home shopping
- Explain in detail about the hardware components of a computer.
- Tell them about other hardware components such as webcam, scanner, printer, monitor and speaker.
- Define peripheral devices to the participants by saying that these are used in combination with a computer to perform different functions such as processing of information, calculation of arithmetical problems and so on.
- Inform them that peripheral devices such as input-output devices are used to enter information and instructions into a computer for storage or processing and to deliver the processed data to a user.
- Tell them that peripheral devices are just like auxiliary devices and are connected externally to a computer.
- Tell them that a mouse and a keyboard are basic input devices and a monitor and a printer are examples of output devices and also inform the participants about storage devices such as hard disk, floppy and so on.

- Next, tell them about the peripheral devices other than the basic ones with the help of the following figure:

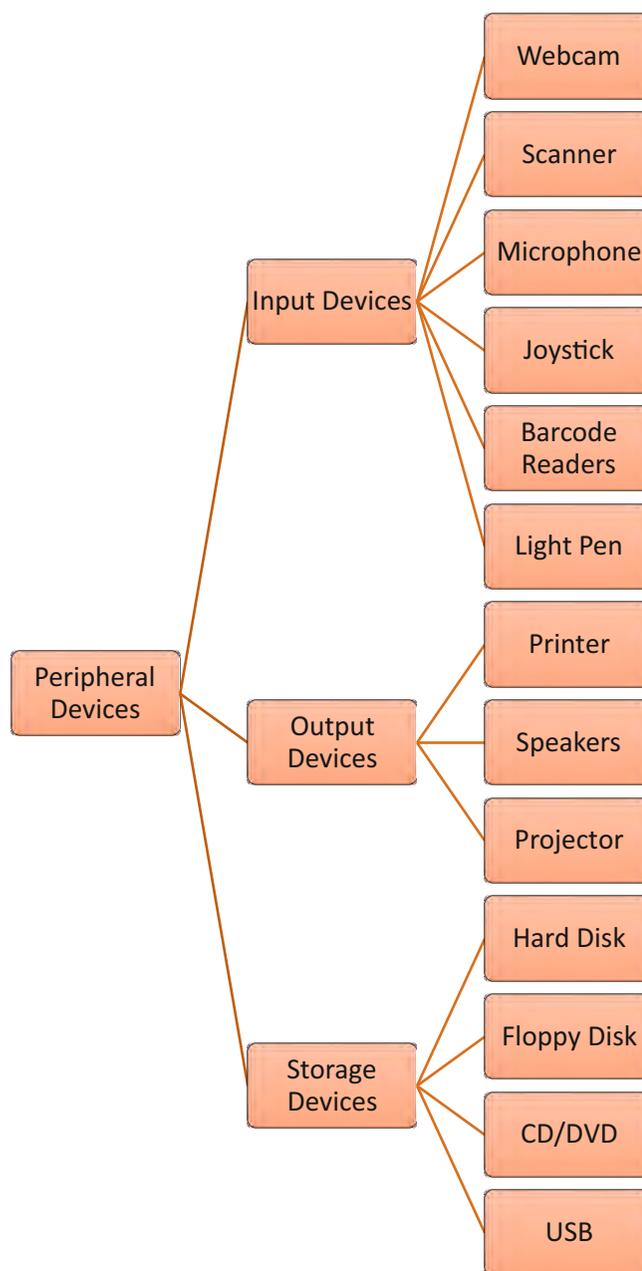


Fig 1.1.2: Peripheral devices

- In addition, explain to them about each type of peripheral device with the help of the following points:
 - Webcam: It is an input device which is used to stream real-time images through a computer to a network. The video data/stream may be saved, viewed and sent via the Internet. It uses an image sensor chip to catch moving images, which is converted into a binary form that is a stream of digits. Then, it is uploaded over the Internet.

The main applications of a webcam are as shown in the following figure:

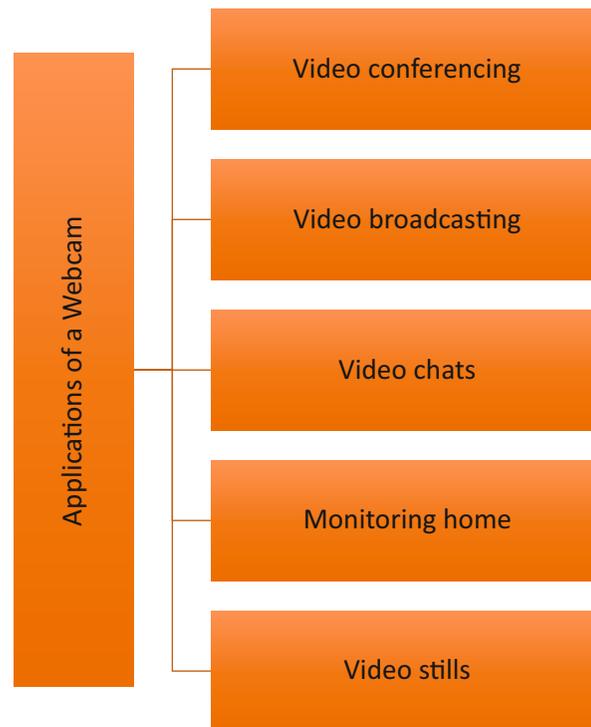


Fig 1.1.3: Applications of webcam

- Scanner: A scanner reads documents (text and photographs) and stores it in the computer to which it is connected. The physical document is converted to a digital format after it gets scanned.
The images are scanned by placing them on top of the glass plate of a scanner. The various applications of a scanner are that it is used for scanning documents and is also used with a fax machine.
- Microphone: A microphone is a device which is used to convert sound into electrical signals. When words are spoken in a microphone, the sound waves which are created by the voice carry the energy inside it. After processing of the sound waves, it is converted into electric current which flows from the microphone to a speaker. It is used in concert halls, sound recording, speech recognition and television broadcasting.
- Joystick: A joystick is a device which is used to play games. It contains push buttons whose inputs are read by a computer. It consists of a stick which pivots on the base and its direction and angles are reported by the device to which it is connected.

The various applications where joysticks are used are as shown in the following figure:

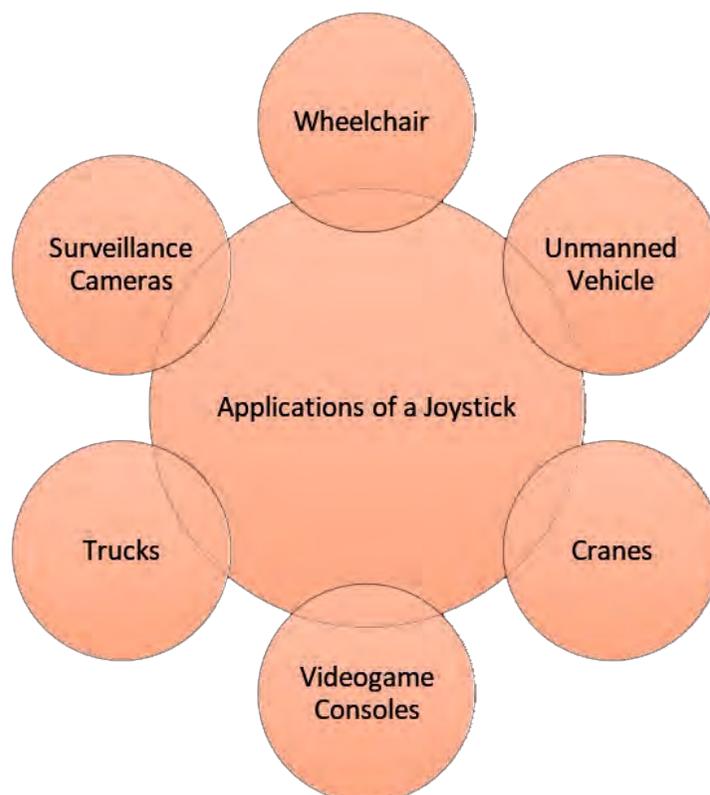


Fig 1.1.4: Applications of joystick

- Barcode Reader: A barcode reader is an input device which reads printed barcodes and gives the desired output to a computer. It is basically used in enterprises and shopping centres.
- Light Pen: A light pen is a pointing device used to point at objects to be displayed. It works with a cathode ray tube(CRT) based display to point at objects or images.
- Printer: It is a peripheral device which provides or displays graphics or text on paper. The resolution or clarity of a printer is determined by dots per inch (dpi) and duplexing assembly allows a printer to print on both sides of the paper. These papers come in different types and forms such as single-sheet paper, continuous-feed paper, thermal paper and so on.
- Speaker: Speakers receive audio signals as the input from the sound card of the computer and convert them into the form of sound waves as the audio output.
- Projector: A projector is an output peripheral device which projects an image onto a projection screen. It projects the image when a light emits from a transparent lens. Some projectors create the image directly with the help of lasers.
- Headphones: It is used to listen to an audio or voice clip by converting electrical signal to a sound using a transducer. Headphones are also known as earphones.

- Lastly, tell them about storage devices such as a hard disk, a compact disc (CD), a magnetic strip and a universal serial bus (USB) and tell them that storage devices store the data in their memory.
- Activity Handling Strategy: Match the following:
 - Make a group of five people.
 - Show them the devices given in the activity.
 - Ask them to match them with their respective device types.
 - Tell the answer at the end as given below:
 1. d.
 2. e.
 3. b.
 4. a.
 5. c.

UNIT 1.2: Networking Fundamentals

Unit Objectives

At the end of this unit, you will be able to:

- Define network
- Identify the types of network
- Describe networking devices

Ask

- Start the session by asking the participants if they know what a network is.
- Ask the participants if they know about LAN, MAN and WAN.
- Ask them if they can tell about different types of networking devices.
- Ask them if they know about the role of a client and a server in a network.

Demonstrate

- Show the various networking devices

Notes for Facilitation

- Tell the participants that a network is an interconnection of a group of computers that can communicate and share resources such as hard disks and printers and are connected by some type of transmission media.
- Tell them some advantages of a network such as:
 - Sharing of information across the network
 - Optimum utilization of hardware resources
 - Centralization of data management & peripherals
- Inform them that network architecture is a structural model that specifies the type, layout and components of a network along with the data format, different protocols and services provided.
- Explain to them the two types of network architecture with the help of the following points:
 - **Peer-to-Peer:** In a peer-to-peer network, there is no specific distinction between a client and a server. Every computer can communicate directly with every other computer. By default, no computer has more authority than another.
 - **Client-Server:** In a client-server network, the requests are processed centrally by one or more servers. The server is a system with high processing power, which provides services for the other computers in the network. The client is a system that accesses resources available on a server. In a client / server network setup, the server is responsible for processing the requests sent by the clients.

- Next, tell them about the different types of server such as file, print, communication and mail server.
- Inform them that the three types of network are:
 - Local Area Network (LAN)
 - Wide Area Network (WAN)
 - Metropolitan Area Network (MAN)
- Tell them about each type of network with the help of the following figure:

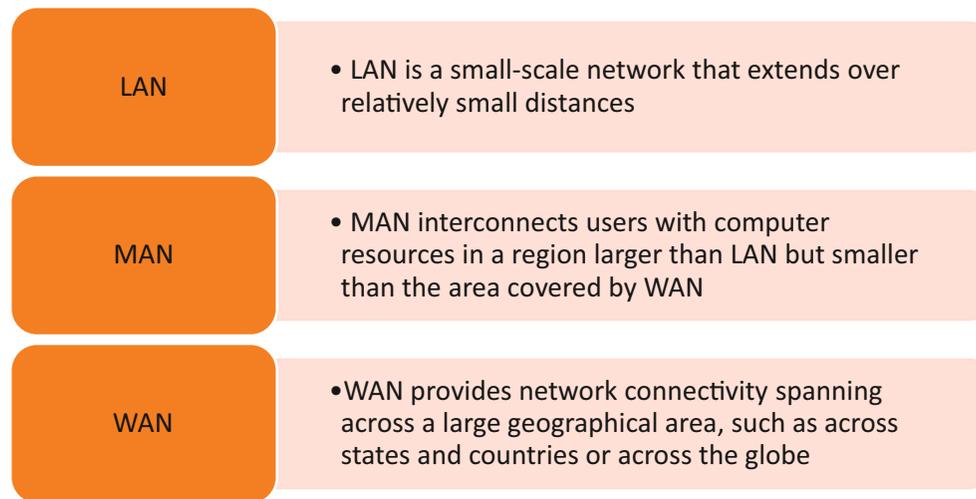


Fig 1.2.1: Type of network

- Inform the participants that network communication technology deals with the technology aspect of networking communication.
- In addition, also tell them that communication is the process of sharing information and ideas through speech, symbols, signals or signs.

- Inform them about the various networking devices as shown in the following figure:

Switch

- It connects other devices electrically and logically in a network.
- It manages the flow of data in the network by transmitting network packets to their assigned destination .
- It works at the second layer of the open system interconnection (OSI) model.

Router

- It send packets from a host on one network to a host on another remote network with the help of IP routing.
- it works at the third layer of the OSI model.

Hub

- It is a hardware network device that connects ethernet devices together, making them part of a single network.
- It operates at the physical layer of the OSI model.

Bridge

- It joins two otherwise separate computer networks together with the help of LANs to enable communication between them.
- Bridge devices operate at the data link layer (Layer 2) of the OSI model.

Gateway

- It acts as a node that connects different networks, controls traffic among company networks and provides connection to the internet users.
- It can operate at any network layer of the OSI model.

Repeater

- It is used in a transmission system to regenerate distorted signals so that they can be transmitted over long distances and can be received on the other side.

Fig 1.2.2: Different networking devices

- Activity Handling Strategy: Choose the correct answer
 - Ask them to do the activity mentioned in the participant handbook.
 - Set a time limit of 5 minutes to complete the activity.
 - Once they are done, discuss the solutions which are as given below::
 1. a.
 2. b.
 3. c.
 4. b.

- Solution of Practical, Networking of two computers:
 - Prepare the computers to be connected.
 - Check whether the network adapters are plugged in or built-in.
 - Right-click on the 'My Computer' icon.
 - Select 'Properties'.
 - Select the 'Hardware' tab on the Properties window.
 - Click on the 'Device manager'.
 - Search for the network adapter and make sure that the device exists on both computers.
 - Locate the computer's Ethernet sockets or ports.
 - Connect one end of a CAT5 cable to the first computer's Ethernet socket and the other to the network hub.
 - Connect one end of another CAT5 cable to the second computer's Ethernet socket and the other end to the network hub.
 - Connect the two computers with a wireless router.
 - Ensure that a wireless network adapter is visible on both computers' Device Manager.
 - Connect the router into a modem using the Ethernet cable.
 - Configure the wireless router.
 - The wireless network name or service set identifier (SSID)
 - The wireless encryption (WEP) or Wi-Fi protected Access (WPA)
 - The administrative password used to configure network and router settings.
 - Save the router, the network settings, and disconnect the cable connecting the router to the computer.
 - Link the two computers with the wireless router.

UNIT 1.3: Software Basics

Unit Objectives

At the end of this unit, you will be able to:

- Explain operating system
- Define application software
- Explain security software and its importance

Ask

- Ask the participants if they know the basic difference between hardware and software.
- Ask them if they know about different web browsers.
- Ask them if they have ever installed any software from the Internet.

Say

- Tell the participants that an OS is an important system software which operates computer hardware and software resources.
- Tell them that there are various types of operating systems available in the market such as UNIX, Microsoft (MS) Windows and so on.
- Tell them that a security software is used to protect the system against security threats.

Notes for Facilitation

- Explain to the participants about software with the help of the following points:
 - Majority of software are written in high-level programming languages that are easier and more efficient for programmers, which means closer to a natural language.
 - High-level languages are translated into a machine language using a compiler or an interpreter or a combination of the two.
 - A software may also be written in a low-level assembly language, essentially, a vaguely mnemonic representation of a machine language using a natural language alphabet. This is then, translated into a machine language using an assembler.

- With the help of the following figure, explain that computer software can be classified into various types:

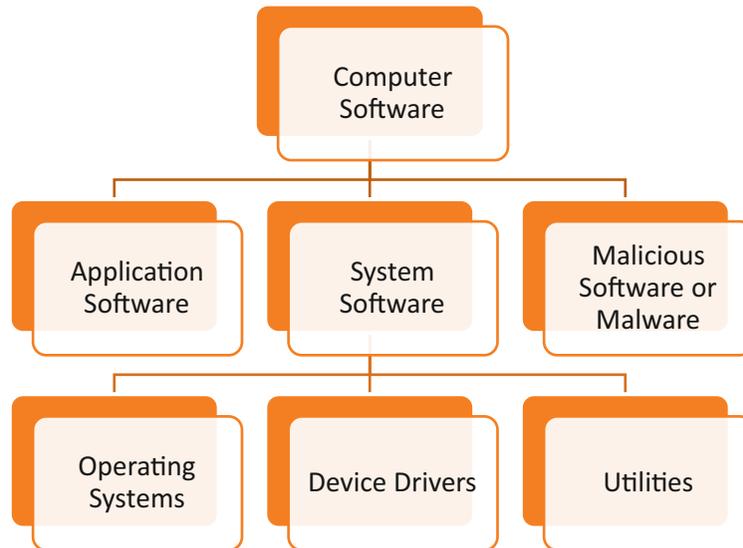


Fig 1.3.1: Computer software

- **Application software:** This software uses the computer system to perform special functions or provide entertainment functions beyond the basic operation of the computer itself. There are many different types of application software because the range of tasks that can be performed with a modern computer is large.
- **System software:** This software directly operates the computer hardware to provide basic functionality needed by users as well as other software and to provide a platform for running application software. System software includes:
 - **Operating system:** It is an essential collection of software that manages resources and provides common services for other software that run "on top" of them. Supervisory programs, boot loaders, shells and window systems are core parts of operating systems.
 - **Device driver:** It operates or controls a particular type of device that is attached to a computer. Each device needs at least one corresponding device driver. As a computer typically has at least one input device and one output device, it needs more than one device driver.
 - **Utilities:** These are the computer programs designed to assist users in the maintenance and care of their computers.
- **Malicious software or malware:** It is a software developed to harm and disrupt computers. Hence, malware is undesirable and is closely associated with computer-related crimes. These undesirable programs, which are usually added without a user's knowledge, can significantly slow down the performance of a computer. Keeping antivirus software up to date and running scans on a regular basis are the best ways to prevent virus infections.

- In addition, tell them about the different layers of software , such as shown in the following figure:

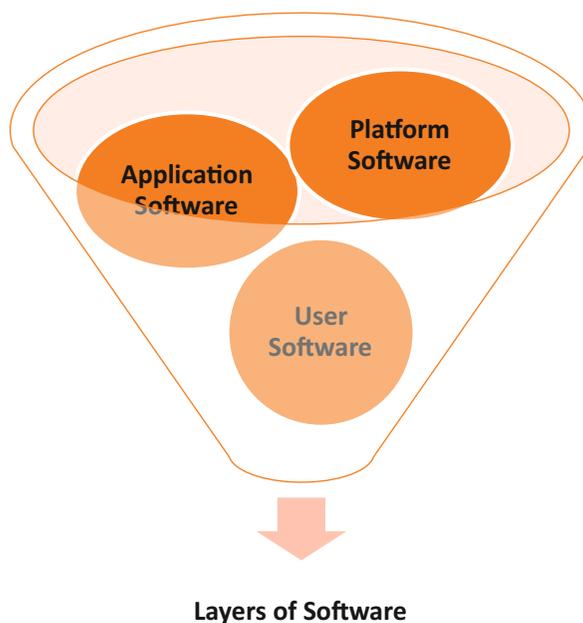


Fig 1.3.2: Layers of software

- **Platform software:** Platform software includes firmware, device drivers, an operating system and typically a graphical user interface which allows a user to interact with the computer and its peripherals. It comes bundled with the computer.
- **Application software:** Application software or applications are what most people think of when they think of a software. It is often purchased separately, apart from the computer hardware. They are usually independent from the operating system, though they are often tailored for specific platforms. Compilers, databases and other system software are not applications.
- **User software:** User software includes spreadsheets and word processor templates. Even email filters are a kind of user software. Users create this software themselves.
- Explain to them about different web browsers, cookies and cache.
- Tell them that computer security is also known as cyber security or IT security.
- Explain that cyber security refers to:
 - Protecting computer systems from unauthorized access
 - Protecting hardware and software by controlling access
 - Preventing theft of information
 - Preventing disruption or misdirection of services
- Explain to them that cyber security can be categorized as:
 - Application security
 - Information security
 - Network security
- Explain that anti-spyware is a type of software that detects and removes unwanted spyware programs.

- Tell them that a spyware is a type of malware that is installed on a computer without the user's knowledge to collect information about them.
- Activity Handling Strategy, Fill in the blanks:
 - Ask them to do the activity mentioned in the participant handbook.
 - Set a time limit of 5 minutes to complete the activity.
 - Once they are done, discuss the solutions which are as shown in the following figure:
 1. a.
 2. a.
 3. a.
- Solution for the practical, Creating restore point and restoring computer for windows 8:
 1. Save all open files and close all the programs.
 2. In Windows, search for restore.
 3. Open Create a restore point from the restore search results list.
 4. On the System Properties window, click Configure on the selected hard drive.
 5. From the System Protection for Local Disk window turn on the system protection.
 6. Create the restore point.
 - a. In the system properties window click Create.
 - b. Type descriptive name for the restore point.
 - c. Click Create.
 7. Save any open files and close all open programs.
 8. In Windows, search for restore.
 9. Open Create a restore point from the results.
 10. Click System Restore.
 11. Click the restore point that you want to use, then click Next.
 12. Confirm that the restore point opens.
 13. Click Finish to restore the system.



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N S D C
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Transforming the skill landscape

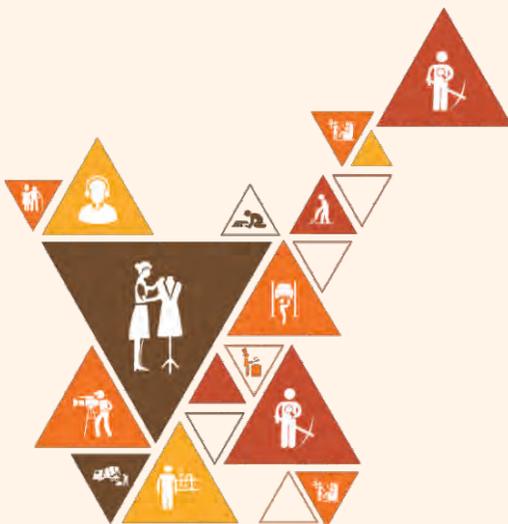


2. Basics of Electronics

Unit 2.0 – Objective of the Module

Unit 2.1 – Fundamentals of Electronics

Unit 2.2 – Other Electronic Concepts



ELE/N4612
ELE/N4613

Key Learning Outcomes



At the end of this module, you will be able to:

- Explain the fundamentals of electronics
- Define electronic circuits and components
- Define fundamentals of electricity
- Describe printed circuit board (PCB) and its layout
- Explain other concepts of electronics

UNIT 2.0: Objective of the Module

Objective of the Module

The objective of this module is to make the participants familiar with the fundamentals of electronics. The participants will be able to understand electronic circuits and their components like diodes, resistors, transformers and so on. They will also be introduced to the other electronic concepts such as voltage and power requirement for different hardware devices. In addition, they would be told about the motherboard (PCB) and its form factors.

Ask

- Ask the participants to share their expectations from this course.
- Enquire if the participants know about different electronic components. If the answer is yes, then ask them to name the components and their respective uses.
- Ask the participants to define voltage and current and tell voltage ratings of different hardware components, if they know.
- Ask if anyone has heard about motherboard.

Notes for Facilitation

- Initiate the session with the participants by discussing about the objectives of the module.
- Make the session interactive by asking the participants to share their expectations from the module on the blackboard/whiteboard.
- Introduce the topics to be covered and give some information about them.
- Give the participants a general idea about what will be covered in the module.

UNIT 2.1: Fundamentals of Electronics

Unit Objectives

At the end of this unit, you will be able to:

- Define electronics
- Explain the basic concepts of electronics
- Identify electronic components
- Explain the fundamentals of electricity

Do

- Carry electronic components such as resistors, solenoids, diodes, capacitors and inductors.

Ask

- Ask the participants about motherboard and its components.
- Ask them if they know the types of motherboards.
- Ask them about the motherboard form factors.
- Ask them what they know about processor technologies.
- Ask the participants if they know what bus slots are.

Say

- Start the session by telling the participants that electronics is a branch of science which deals with electrical circuits involving active and passive electronic components.
- Tell that electronic circuit is subdivided into analog and digital circuit.
- Say that in an analog circuit, there is continuous variation of voltage or current with time.
- Say that in a digital circuit, high voltage (generally 5v) represents 1 value and low voltage represents 0 value.

Notes for Facilitation

- Tell the participants that electronic components are the fundamental building blocks of the electronic or electrical circuit.
- Show the electronic components such as diodes, resistors, solenoids and so on.
- Tell them that active components depend on a source of energy to perform their functions.
- Tell them that passive components don't require an external source of energy to perform their functions.

- Inform them that analog circuits are comprised of basic components such as resistors, capacitors, inductors and diodes.
- In addition, tell them that the fundamental building block of analog circuits are series and parallel connections.
- Tell them about the formulae of calculating resistance in a series connection and a parallel connection with the help of the following table:

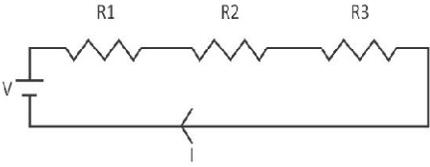
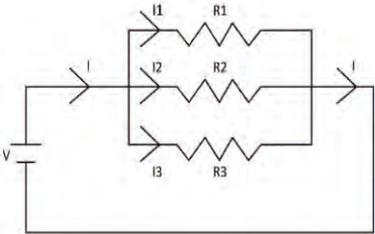
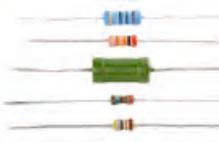
Type of connection	Formulae	Circuit Diagram
Series Connection	$R = R_1 + R_2 + R_3$	
Parallel Connection	$1/R = 1/R_1 + 1/R_2 + 1/R_3$	

Fig 2.1.1: Calculation of resistance

- Further, tell them that a binary scheme is used by digital circuits for digital signalling. Two different voltages (high or low) are represented by different logic levels. High voltage, generally 5V, represents one value and the other value represents low voltage that is generally 0V.
- Further, explain that load, supply source and conductors are the general categories of components. The basic electronic components of a circuit are as shown in the following table:

Components	Name Identifier	Image	Function
Resistors	R		Resists the flow of current
Transistors	Q		Amplifies or switches electrical power

Capacitors	C		Stores electric charge
------------	---	--	------------------------

Fig 2.1.2: Basic electronic components

- Tell the participants that a motherboard usually includes a CPU, chipset, input/ output (I/O)ports, basic input output system (BIOS) ROM chips, memory, expansion slots, and the peripheral controllers
- Explain a motherboard to them with the help of an analogy.
- Explain the types of motherboard as shown in the following table

Types	Specifications
Non-Integrated Motherboard (older)	Peripheral controllers were not on the motherboard. Addition boards (called add-on-cards) were installed in expansion slots as per requirement.
Integrated Motherboard (Latest)	Most of the peripheral controller cards are integrated on the mother-board itself.

Fig 2.1.3: Types of motherboard

- Examples of motherboard form factors are as shown in the following figure:

Advanced Technology (AT) and Baby Advanced Technology (Baby AT)

- Baby AT is designed to hold peripheral devices like keyboard, video and mouse.
- It could not accommodate the combination of a processor, a heat sink and a cooling fan.

Advanced Technology Extension (ATX)

- It provides software controlled shut down and power up.
- Here expansion slots were placed on separate riser cards.

Micro ATX

- It has more space for I/O connectors at the rear end.

Low Profile Extension (LPX)

- It is not suitable for upgrading and offers poor cooling.
- It has sound and video to be integrated on to the motherboard.

New Low Profile Extension (NLX)

- It is suited for low profile desktop cases
- It is small in size

Fig 2.1.4: Motherboard form factors

- Explain to the participants, the different types of bus slots as mentioned below:
 - Industrial Standard Architecture (ISA) Bus Slots
 - Peripheral Component Interconnect (PCI) Bus Slots

- Peripheral Component Interconnect Extension (PCI-X) Bus Slots
- Extended Industry Standard Architecture (EISA) Bus Slots
- Micro Channel Architecture (MCA) Bus Slots
- Activity Handling Strategy: Match the following:
 - Ask them to do the activity mentioned in the participant handbook.
 - Set a time limit of 5 minutes to complete the activity.
 - Once they are done, discuss the solutions which are as shown in the following figure:

1.	d.
2.	c.
3.	a.
4.	b.

UNIT 2.2: Other Electronic Concepts

Unit Objectives

At the end of this unit, you will be able to:

- Define voltage and power
- Identify voltage and power requirement for different hardware devices

Say

- Tell the participants that voltage is the potential difference between a negative charged component and a component with positive charge.
- Say that power is the electrical energy per unit time given by an electrical circuit.
- Say that current or electric current is a flow of electric charge, which is carried by moving electrons in a wire.
- Say that resistance is the hindrance caused in the path of the current.

Notes for Facilitation

- Explain to the participants that electricity is the movement of electrons. The electrons create charge when they move and this charge generates electricity.
- Explain that:
 - Voltage is the difference between the charges at two points. It is measured in volts and is denoted by the symbol, 'V'.
 - Current is the rate of flow of charge. It is measured in amperes and is denoted by the symbol, 'A'.
- Explain that the amount of current that a wire can carry, depends on:
 - Type of metal used to make the wire
 - Diameter of the wire
 - Type of insulation covering the wire
- Explain that there are two types of currents:
 - Alternating current (AC)
 - Direct current (DC)
- Explain to them that power is the rate at which electrical energy is consumed in a circuit.
- Explain that power depends on voltage and current and is measured in watts.
- Tell them that electric power can also be defined as the work done by an electric current in a unit time.

- Explain that the power consumed within a structure is measured with the help of electricity meters provided by the power company such as the one shown in the following image:



Fig 2.2.1: Electricity meter

- Explain that the consumers are charged for electricity by the amount they use.
- Explain that the unit of measurement of power consumed is watts-hour, that is the consumer pays for:

$$\text{Watts-hour} = \text{Total watts consumed} \times \text{time in hours}$$

- Explain the features of AC with the help of the following figure:

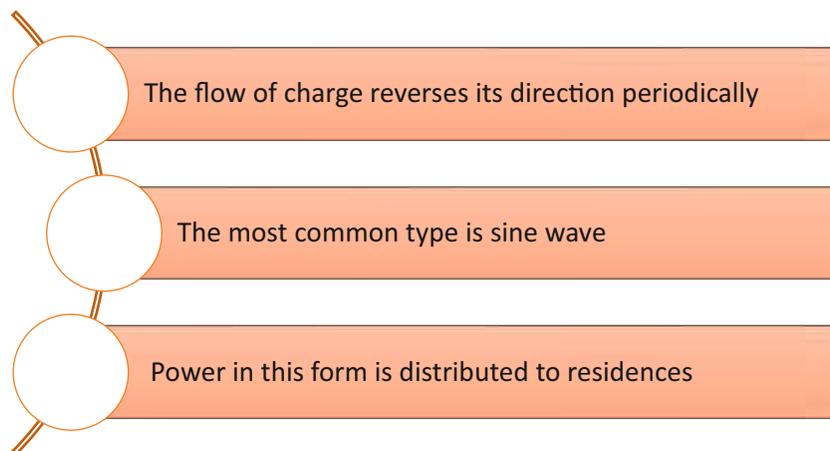


Fig 2.2.2: Features of alternating current

- Explain the features of DC with the help of the following figure:

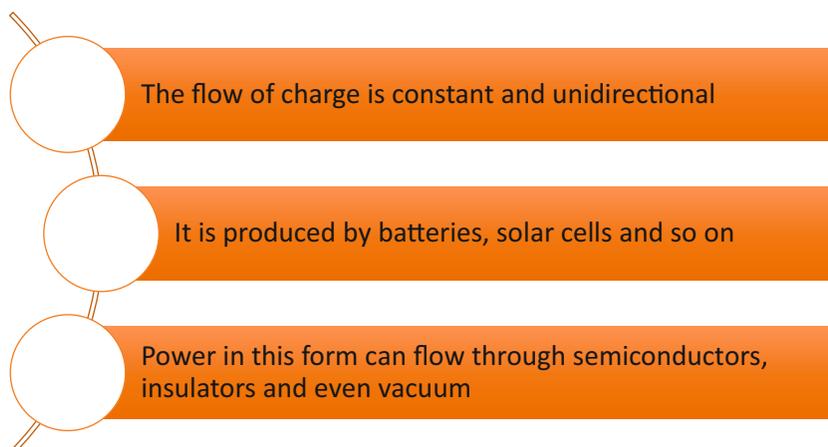


Fig 2.2.3: Features of direct current

- Explain AC and DC with the help of the following diagrams:

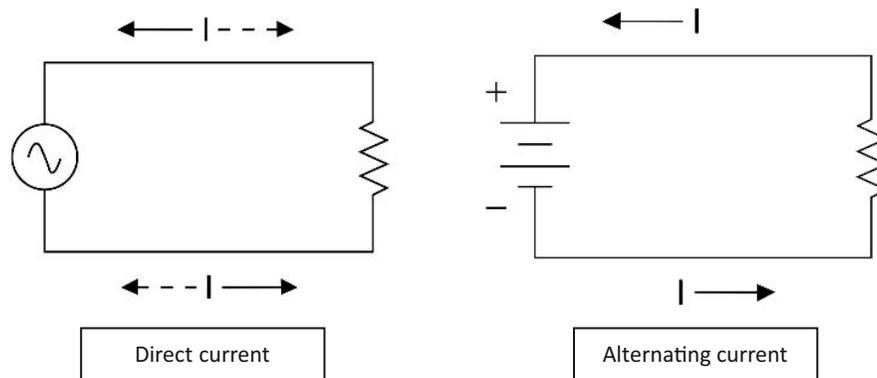


Fig 2.2.4: AC and DC current

- Tell them the difference between AC and DC with the help of the following table:

Parameter	AC	DC
Direction	It reverses its direction while flowing in a circuit.	It flows in one direction in the circuit.
Current	It is the current of magnitude, varying with time	It is the current of constant magnitude.
Obtained from	A.C generator and mains	Cell or battery
Passive Parameters	Impedance	Resistance
Power Factor	Between 0 and 1	It is always 1
Types	Sinusoidal, Trapezoidal, Triangular, Square	Pure and pulsating

Fig 2.2.5: Difference between AC and DC

- Explain to them the purpose of a power supply unit (PSU) with the help of a diagram.
- Further, tell them that a PSU provides power source by converting AC voltage to desired DC voltage for internal components of a computer.
- In addition, tell them about the different cables present inside a PSU and their colour codes in detail.
- Activity Handling Strategy:
 - Randomly select any participant to answer the questions.
 - Ask each question from 4-5 participants and reveal the correct answer at the end.

- Make two columns. One column is of components and the other is of their voltage requirement. The following table represents the solution for the activity:

S.No	Components	Voltage Requirement (in volts)
1.	USB Ports	5
2.	CPU Fan	5
3.	Motherboard	12
4.	Graphics Card	12
5.	CPU	3.3



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3. Networking Essentials

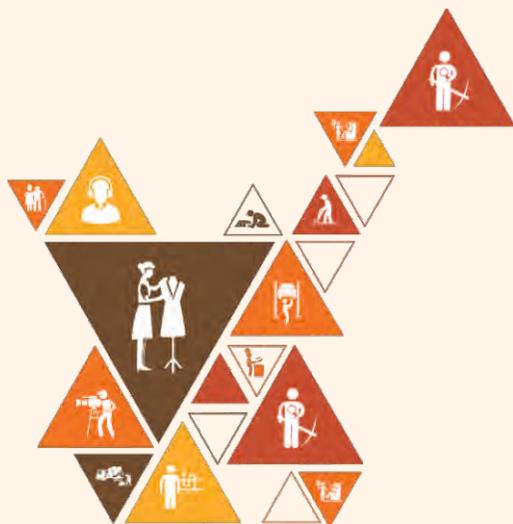
Unit 3.0 – Introduction of the Module

Unit 3.1 – Networking Concepts

Unit 3.2 – TCP/IP Protocol

Unit 3.3 – Wireless Network

Unit 3.4 – Cables and Connectors



ELE/N4612
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Key Learning Outcomes



At the end of this module, you will be able to:

- Understand basic concept of networking
- Describe TCP/IP protocol and their layers
- Discuss wireless networks
- Identify cables and connectors

UNIT 3.0: Introduction of the Module

Objective of the Module

The objective of this module is to make the participants familiar with the basic concepts of networking. The participants will be able to understand different network topologies and open system interconnection (OSI) model. They will also be introduced to the transmission control protocol/internet (TCP/IP) protocol and its different layers in detail. In addition, they would be told about the IP addressing and wireless networks. The participants will also be able to perform crimping of cables.

Ask

- Ask the participants to share their expectations from this course.
- Enquire if the participants know about different networking topologies. If the answer is yes, then ask them to name some topologies.
- Ask the participants to define OSI model and its different layers.
- Ask if anyone has heard about wireless networks.
- Ask if they know about TCP/IP protocol and its different layers.

Notes for Facilitation

- Make the session interactive by involving the participants in a discussion and introduce the topics to them.
- Ask the participants about their expectations from the course. Then, inform them briefly about the major topics that will be covered in this course.
- Invite the participants to share their expectations on the whiteboard/blackboard.
- Give the participants a brief overview of what all will be covered in the course.

UNIT 3.1: Networking Concepts

Unit Objectives

At the end of this unit, you will be able to:

- Define network topology
- Identify different types of topology
- Describe the Open system interconnection (OSI) model and its layers

Ask

- Ask the participants to define networks.
- Ask the participants if they know about the network topologies.
- Ask if anyone knows about the OSI model.
- Ask them to share their expectations from this course

Explain

- Tell the participants about definition of network.
- Then explain network categories.
- Explain about the network topology and its types.
- Explain about OSI model and its layers.

Say

- Start the session by telling the participants that network topology refers to the arrangement of the different elements (links and nodes) of a network.
- Tell them that they need to understand the OSI module for getting an overview of the TCP/IP protocol discussed in the next unit.
- Tell that this explains the need of the next units in this module.

Notes for Facilitation

- Tell the participants about the categories of network and its topology.
- Tell them that an OSI model provides a global set of rules that makes various manufacturers and developers create software and hardware that is compatible with each other, thus enabling organized communications. Then, explain the seven layers of network communication.
- Activity Handling Strategy: Match the following:
 - Ask them to do the activity mentioned in the participant handbook.
 - Set a time limit of 5 minutes to complete the activity.

○ Once they are done, discuss the solutions which are as shown below:

- | | |
|----|----|
| 1. | d. |
| 2. | a. |
| 3. | b. |
| 4. | c. |

UNIT 3.2: TCP/IP Protocol

Unit Objectives

At the end of this module, you will be able to:

- Explain TCP/IP protocol and its layers
- Describe IP addressing
- Discuss IPv4 addressing

Ask

- Enquire from the participants if they know anything about TCP/IP. If yes, then ask them to name its layers.
- Then, ask them if they can identify the layers of TCP/IP protocol.
- Ask them if they know about IP address and its classes.

Explain

- Explain to the participants about the TCP/IP protocol reference model.
- Explain about the TCP /IP protocol suite and department of defence (DOD) model.
- Explain how to find IP address of a node.
- Explain the basic concept of IPv4 addressing.

Notes for Facilitation

- Define TCP and IP as network interconnections used to connect remote machines. The features of TCP/IP reference model are:
 1. Support for a flexible architecture. Adding more machines to a network was easy.
 2. The network was robust, and connections remained intact until the source and destination machines were functioning.
- In addition, explain to them that TCP /IP and the DOD model contain four layers:
 1. Process/Application layer
 2. Host-to-Host layer /Transport layer
 3. Internet layer
 4. Network access layer
- Explain to the participants that an IP address is part of the systematically laid out interconnected grid. It governs online communication by identifying both initiating devices and various Internet destinations, thereby, making two-way communication possible.
- In addition, tell them that an IP address is a unique identifier for a computer or any other device attached to the network. It is a 32-bit value. IP addresses are written in four decimal numbers which are separated by dots.
- Further, tell them the steps involved in identifying the IP address of a node.

- Activity handling strategy:
 - Activity: Find out the network address and host address for the given IP addresses .
 - Ask them to do the activity mentioned in the participant handbook.
 - Set a time limit of 5 minutes to complete the activity.
 - Once they are done, discuss the solutions which are as follows:

IP Address	Network Address	Host Address
10.10.48.80	10.10.48.0	0.0.0.80
28.212.250.254	28.212.250.0	0.0.0.254
10.10.250.1	10.10.250.0	0.0.0.1

UNIT 3.3: Wireless Network

Unit Objectives

At the end of this unit, you will be able to:

- Define wireless network
- Identify different types of wireless networks
- Define Bluetooth

Ask

- Ask the participants what they know about wireless networking.
- Ask them if they know about the standard for wireless local area network (WLANs).
- Ask them if they know about Bluetooth.

Explain

- Tell the participants the definition of wireless networking.
- Explain the wireless networks terms.
- Explain the standards for WLAN's
- Then explain the identification and elements of Radio Frequency Identification (RFID)

Notes for Facilitation

- Explain to the participants that wireless networking, also known as Radio Frequency(RF), utilizes radio waves and/or microwaves to access the Internet from any wireless or mobile device. A user can do everything they want from a normal computer such as networking of computers, sharing files, sending/receiving e-mails, accessing printers and other tasks without having to be connected by burdensome cables.
- Describe about wireless networks terms, such as wireless wide area network (WWAN), WLAN and wireless personal area network (WPAN).
- Tell the participants about the standards for WLAN's, such as 802.11, 802.11a, 802.11b, 802.11g, 802.11n and HiperLAN.
- Explain to the participants about Bluetooth that it is one of the more popular WPANs. It is a computing and telecommunications industry specification that describes how mobile phones, computers and personal digital assistants can easily interconnect with each other.
- There are three categories of connecting devices together as shown in the following table:

Categories	Description	Examples
Voice/data access points	A voice/data access point involves connecting a computing device to a communicating device.	Linking a mobile phone to a computer to access the Internet.

Peripheral interconnects	Peripheral interconnects involves connecting other devices such as keyboards, mouse, and joysticks over a wireless link.	Building a Bluetooth link in the computer to connect a mouse.
Personal area networking	Wireless personal area networking involves the networking of several computers together in an independent basic service set (IBSS).	Building a wireless office network link using WANS.

Fig 3.3.1: Categories of connecting devices

- Tell the participants about Bluetooth security. Three modes of security can be selected:
 - Mode 1 is not secure.
 - Mode 2 has security imposed at the request of applications and services.
 - Mode 3 has security imposed when any new connection is established.
- Define Radio Frequency Identification (RFID) as a term that describes the use of radio frequency signals to provide automatic identification of items and the applications which use it, such as:
 - Electronic toll collection (ETC)
 - Railway car identification and tracking
 - Intermodal container identification
 - Asset identification and tracking
 - Item management for retail, health care and logistics applications
 - Access control
 - Animal identification
 - Fuel dispensing loyalty programs
 - Automobile immobilizing (security)
- Then, describe the components of RFID.
- Finally, define wireless router as a device that performs the functions of a router but also includes the functions of a wireless access point and a network switch and then tell them about its characteristics.

UNIT 3.4: Cables and Connectors

Unit Objectives

At the end of this unit, you will be able to:

- Define cable and its types
- Explain connectors
- Describe the process of crimping

Ask

- Start the session by showing the participants different kinds of cables and ask them what they are.
- If there are valid answers, then ask them to give some examples of cables.

Explain

- Tell the participants that cables are the conventional media used to setup networks.
- Explain the types of twisted pair cables.
- Then explain the crimping of the network cable.

Notes for Facilitation

- Tell the participants that cables are the conventional media used to setup networks.
- Tell them that there are three types of cables - coaxial cables, twisted pair cables and fibre-optic cables. Of these types, shielded twisted pair cables (STP) and unshielded twisted pair cables (UTP) are sub-types of twisted pair cables; and single-mode and multimode are sub-types of fibre-optic cables.
- Tell the participants about the crimping of the network cable as preparing the network cables using the standard colour code combination of straight cable and cross cable.
- Tell the participants about the types of connectors along with their functions.
- Tell them the steps for crimping of a network cable:
 - Step 1 – Grab one end of the cable and, if necessary, snip it to get a straight cut. Strip off about one inch of the jacket of the cable.
 - Step 2 – When the jacket is stripped, four twisted pairs of wires can be seen. Each pair is represented by a solid colour in stripe each of brown, green, orange and blue.
 - Step 3 – Now separate the pairs, so that there are eight individual wires.
 - Step 4 – When the wires are in a sequence, double check with the diagram in case one or two slipped out of position.
 - Step 5 – With the wires pushed into the plug, fit the plug into the crimping slot in the crimping tool.
 - Step 6 – Now flip the cable around and assemble the other end.

- Activity Handling Strategy, Identification of cables:
 - Make a group of five people.
 - Show the different given cables to each individual in a group and ask them to identify them.
 - In the end, provide the following solution to the participants:
 - 1. Optical fibre cable (multi-mode)
 - 2. Crossover cable
 - 3. Optical fibre cable
 - 4. Coaxial/Helix cable
 - 5. Optical fibre cable (single-mode)



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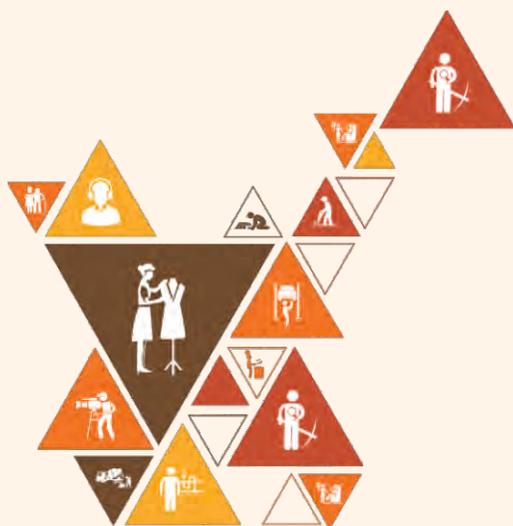
4. Installing Hardware and Software

Unit 4.0 – Introduction of the Module

Unit 4.1 – Installing Hardware

Unit 4.2 – Configuring and setting up peripherals

Unit 4.3 – Completing the installation process



ELE/N4612

Key Learning Outcomes



At the end of this module, you will be able to:

- Install the hardware
- Configure and set up peripherals
- Set up the software
- Verify the installations

UNIT 4.0: Introduction of the Module

Objective of the Module

The objective of this module is to make the participants familiar with the procedure of installing hardware at customer's site. The participants will be able to understand how to deal with customer's requirements. They will also be introduced how to open packaging of new products and to identify the specifications for setting up the system. The participants will also be able to install peripherals and software applications. In addition, they will understand safety procedure to be taken care of while operating hardware.

Ask

- Ask the participants to share their expectations from this course.
- Enquire if the participants know about installation procedures for setting up hardware at customer's site.
- Ask the participants to define electrostatic discharge (ESD).
- Ask if anyone has heard about user manual. If yes, then ask them to explain its contents.
- Ask if they know how to provide guidance and demo to customers.

Notes for Facilitation

- Make the session interactive by involving the participants in a discussion and introduce the topics to them.
- Ask the participants about their expectations from the course. Then, inform them briefly about the major topics that will be covered in this course.
- Invite the participants to share their expectations on the whiteboard/blackboard.
- Give the participants a brief overview of what all will be covered in the course.

UNIT 4.1: Installing Hardware

Unit Objectives

At the end of this unit, you will be able to:

- Explain the installation procedures
- Identify the specifications for setting up the system
- Check site conditions and customer requirements
- Connect the system
- Follow standard operating procedures

Say

- Tell the participants about the importance of reading user manuals before installing a hardware.
- Say that all components must be checked after opening the packaging of the products.
- Tell the participants that a field technician has to perform the tasks assigned by the superior either remotely or at the customer's site.
- Tell the participants that they must meet the customers' satisfaction by fulfilling their requirements properly.
- Say that before installing a hardware, a field technician should understand the specifications required for setting up the system.
- Tell the participants to follow standard operating procedures while handling the hardware.
- Tell the participants about electrostatic discharge (ESD).

Notes for Facilitation

- Inform the participants that the first time fix rate is of prime importance for a customer's satisfaction. Sometimes, a field technician is unable to repair a broken piece of equipment for the customer, which annoys the latter. The reasons for failure are countless. A few of them could be wrong tool usage, wrong spare parts, wrong fault diagnosis and wrong engineer skill set. These reasons for failure can be avoided through better:
 - training
 - field service management system
 - control
- Explain to them the procedure of opening the packaging of the products.
- Tell them that to ensure smooth installation, the modules inside the package must be checked for the following points:
 - Cracks on the monitor screen
 - Missing of any hardware component
 - Damage to any hardware component

- Tell them that a field technician should also follow the safety standards to stay safe while working with the electrical and electronic components.
- Explain to them that after checking all the modules, it is important to make the connections, for which correct identification of the ports is necessary.
- Show them the different ports present in a laptop/desktop for proper connection of various hardware, with the help of a suitable diagram.
- Explain to them in detail about the different contents of a user manual as shown in the following figure:



Fig 4.1.1: Sections of user manual

- Explain the working of the tools one by one along with a live demonstration of the opening of the packaging of the products.
- Explain the importance of taking safety precautions before assembling and disassembling a computer or a laptop.
- Inform them that they must take the following safety precautions:
 - Shut down and unplug the computer
 - Remove all metal objects from arms or fingers
 - Protect against ESD
 - Use an anti-static wrist band, mat and gloves
 - Ensure that hands are completely dry
 - Handle all parts with care
 - Avoid forcefully removing the components
 - Hold the motherboard with care
 - Refrain from attempting to remove the power source
 - Take care not to drop small parts into unreachable areas

- Protect the parts from moisture, dirt and debris
- Tell the participants that ESD is the sudden build-up of static electricity when two differently charged objects are brought together .
- In addition, tell them in detail about ESD protection tools as listed below:
 - Gloves
 - Wire strap
 - Safety clothes
 - ESD mat
 - ESD wrist band
- Activity Handling Strategy:
 - Solution for the activity, Match the following:
 - 1. E
 - 2. D
 - 3. A
 - 4. B
 - 5. C
- Solution for the practical: Installation of a new hard disk:

The participants must be able to follow these steps:

 1. Open the computer case.
 2. If you are installing an IDE drive, set the master/slave jumpers on both the old and new drives; for SCSI drives, set the SCSI ID jumpers to a unique SCSI ID number.
 3. Write down the drive parameters (cylinders, heads, sectors per track and so on.) before mounting the drive into the PC.
 4. Physically mount the drive into the case; use screws and/or drive rails as needed.
 5. Attach the cable to the drive(s) and be sure to attach the power cable from the power supply.
 6. Switch on the power of the PC, enter the BIOS setup program and then, enter the drive parameters into the complementary metal-oxide-semiconductor (CMOS).
 7. Save the new information to the CMOS and reboot the PC.
 8. Boot the PC from a bootable floppy disk.
 9. Run the fixed disk or format disk (FDISK) utility and create a partition table on the new drive.
 10. If partitions exist on the new drive:
 - a. Backup the old data
 - b. Delete the existing partition
 - c. Recreate a new disk partition
 11. Once the computer re-boots from the floppy drive, run FORMAT to format the new drive and give the drive a volume label.
 12. Install the operating system software and the application software as needed.
 13. Replace the computer case.
 14. Do not install the cover until you know the drive is working properly.
 15. If the PC isn't booting at all:
 - a. Make sure you have at least the minimum requirement in the machine to make it work: a processor, a full bank of memory, a video card and a drive.

- b. Make sure that all of these are inserted correctly into the motherboard, especially the memory.
 - c. Partially inserted memory modules can cause all sorts of bizarre behavior.
16. Remove all optional devices from the motherboard, including expansion cards and external peripheral devices and check whether the problem is resolved.
17. Carefully check all the jumper settings on the motherboard twice. Ensure their correctness. Check the processor type, clock multiplier, bus speed and voltage jumpers in particular. Also, make sure that the CMOS are clear and flash BIOS jumpers are in their normal, default operating positions.
18. Reset all BIOS settings to default, conservative values to make sure an overly aggressive BIOS setting isn't causing the problem. Set all cache, memory and hard disk timing to as slow as possible. Turn off the BIOS shadowing and see if the problem goes away.
19. Double-check all the connections to the motherboard.
20. Check the inside of the case to see if any of the components seem to be overheating.
21. Inspect the motherboard physically:
 - a. Check to make sure the board itself isn't cracked. If it is cracked, replace it.
 - b. Make sure that there are no broken pins or components on the board; if there are, you will have problems with the component of the PC using that connection.
 - c. Check for any socketed components that may be loose in their sockets and push them gently but firmly back into the socket if this has happened.
22. Make sure that the keyboard is inserted correctly into the motherboard.
23. A failed cache module or using the wrong type can cause motherboard problems. If you suspect it, troubleshoot the secondary cache.
24. An overheated processor can cause system problems. Try troubleshooting the processor.
25. Troubleshoot the system memory. Memory problems are often mistaken for motherboard faults, especially on systems that don't have the protection of using memory error detection.
26. Try troubleshooting the video card or replacing it with another one, preferably a simple straight video graphic array (VGA) card that is confirmed to be in a working condition. It could be from another system that functioned properly.
27. If the power supply is old or the case is cheap or you have added many new drives to a system with a weak power supply (especially one that is less than 200W), then you may have a power supply problem. You may want to try replacing it.
28. You may have a BIOS bug or other problem. Check your manufacturer's technical support resources for any known problems with your motherboard. Check on UseNet as well.
29. Contact the technical support department of your system or motherboard manufacturer for additional troubleshooting information. If this is a new

motherboard, you may want to exchange it, in case you have exhausted all other troubleshooting avenues.

30. Some newer viruses, when activated, overwrite part of the BIOS code in systems that employ a flash BIOS. If the BIOS is corrupted, the system won't boot.
31. Try swapping the motherboard with another one and see if the problem resolves itself. If it does, then the original motherboard is probably faulty, but it could just have been misconfigured or installed incorrectly.

- Solution for the practical: Installation of a Network Interface Card (NIC):

The participants must be able to follow these steps:

1. Turn off the system .
2. Open the PC case.
3. Wear the ESD wrist band.
4. Install the NIC card into one of the PCI slots by aligning the guide notches with the PCI slot.
5. Attach the card to the PC.
6. Turn on the system.
7. Connect the system with the Internet and check the connectivity.

UNIT 4.2: Configuring and Setting up Peripherals

Unit Objectives

At the end of this unit, you will be able to:

- Identify the customer's peripheral requirements and their placement
- Connect all the peripherals
- Install the peripherals

Demonstrate

- Show the participants the correct way to connect peripherals in the computer system.
- Show the steps to install software in the computer system.
- Show them the way to handle hardware while installing them using different equipment.

Notes for Facilitation

- Explain to them that a customer's requirement is one of the foremost responsibilities of a technician's job role
- Inform them that a field technician needs to understand and analyse the requirement before going ahead with the plan of action or visiting the customer's site .
- Further explain the steps of connecting a wireless mouse and a keyboard to the computer:
 - Connect the USB receiver into the USB port of the computer
 - Turn off the computer
 - Remove the plastic battery tab
 - Install batteries in both the wireless mouse and the keyboard
 - Switch on the small power buttons on both, the mouse and the keyboard
 - Turn on the computer
- Additionally, tell the participants about how they can install a printer:
 - Install the cartridges in the printer and place paper on its tray.
 - Insert the installation CD. Run the set-up application.
 - Connect the printer to the PC using the USB cable.
 - Turn it on.
 - Print a test page
- Tell that as a field technician, the participants must know how they should install MS office and a basic antivirus:
 - Installing MS office:
 - Sign in with your Microsoft Account
 - Click the 'Install' button
 - Click 'Run' to start the installation
 - Follow the instructions in the installer

- Stay online while MS Office installs
- Installing antivirus
 - Acquire an antivirus program
 - Install the antivirus program
 - Update the program
 - Scan the computer
 - Set a scan schedule
 - Keep Windows and the antivirus database updated
- Tell the participants that an operating system is the most important software that runs on a computer. It manages the computer's memory, the processes and all its software and hardware.
- Explain to them that the three most commonly used operating systems are Windows, Mac OS and Linux OS.
- Further, explain to them the following points about Microsoft Windows :
 - It is owned and operated by Microsoft.
 - The latest version is Windows 10, which includes touchscreen support.
 - Architecture of Windows NT:
 - The Windows NT operating system architecture consists of two main layers that are user and kernel mode, with many different modules within both of these layers.
 - User Mode: The user mode consists of different system-defined processes and dynamic link library (DLLs). An environment subsystem acts as an interface between the applications of the user mode and an operating system kernel functions. The four main environment subsystems are the Win32 subsystem, an OS/2 subsystem, the Windows Subsystem for Linux and a POSIX subsystem.
 - Kernel mode: The Windows NT kernel mode has full access to the hardware and system resources of the computer and runs code in a protected memory area. It prevents the user mode applications to access critical areas of the operating system. It controls all interaction with hardware and access to scheduling, thread prioritization and memory management.
- Further, tell them the steps involved in installing the latest edition of windows operating system (windows 10) on the computer:
 - Enter the computer's BIOS.
 - Find the BIOS's boot options menu.
 - If the boot options menu can't be found, then search the name of the BIOS.
 - Select the CD-ROM drive as the first boot device of the computer.
 - Save the changes of the settings.
 - Shut down the computer.
 - Switch on the power of the PC and then insert the Windows 10 disc into the CD/DVD drive.
 - Select language, time and currency format and also the keyboard input format and click on Next.
 - Click on Install.

- Wait for a few seconds for the setup to start.
- If the product key is available, enter it, otherwise click on Skip.
- Accept the license terms and click on Next.
- Select 'Custom: install Windows only (Advanced)'.
- Select the drive where Windows 10 needs to be installed.
- Choose Windows 10.
- Enter a serial key, otherwise click on 'Do this later' to skip this option.
- Click on 'Use express settings' to use the recommended settings.
- Enter a name and password to create an account.
- Windows 10 has been successfully installed.
- Next, tell them that Mac OS, earlier known as Mac OS X, is the current series of Unix-based graphical operating systems developed and marketed by Apple Inc. It is designed to run on Apple's Macintosh computers and is preinstalled on all Macs since 2002.
- Tell them the steps which are involved in installing and configuring Linux OS with the help of a disc. The steps are as follows:
 - Select Install or upgrade existing system options
 - Select Language.
 - Select keyboard type.
 - Choose skip media test.
 - Select storage device.
 - Type the computer name or hostname.
 - Select time zone location.
 - Enter password for root user.
 - Select the type of installation, review the partitioning layout carefully and also choose the Encrypt system.
 - Review the partitioning layout and modify if needed.
 - Create partition and formatting file systems.
 - Configure boot loader options; give the boot loader password for security reason.
 - Select applications to install and select customize now.
 - Customize package selections.
 - Installation has been completed successfully.
 - Reboot the computer and login with root credentials as it was set in the initial step.
- Inform them that an antivirus is also known as anti-malware software. It is a set of programs that is used to prevent, detect and remove software virus, worms, adware, Trojans and so on.
- Lastly, tell them about certain guidelines that must be followed to ensure own safety and that of the co-workers such as using protective equipment and keeping the work area clean and free from clutter.
- Solution to the practical: Install a printer
The participants must be able to follow these steps:
 1. Install the cartridges in the printer and place paper on its tray
 2. Insert the installation CD. Run the set up application.
 3. Connect the printer to the PC using the USB cable.

4. Turn it on.
5. Print a test page
- Solution to the practical: Install Microsoft Office (MS Office) 2016
The participants must be able to follow these steps:
 1. Start the system.
 2. Insert the MS Office media disc into the DVD drive.
 3. The Windows will launch the setup automatically.
 4. Enter the product key when prompted and click "Continue." Read the license terms and then check "I Accept the Terms of This Agreement."
 5. Click "Continue."
 6. If there is a need to install some of the products, click "Customize."
 7. Select the first program or tool from the list.
 8. Repeat the previous steps for each application or feature.
 9. Click "Install Now" to install MS Office on the laptop.
- Activity Handling Strategy: No audio output
The participant must be able to perform the following steps:
 1. Shut down and restart the system.
 2. Check whether the sound driver is installed and updated.
 3. Check the default playback device. If the system has more than one sound card installed, check that the default playback device is the sound card to which the audio output is connected.
 4. Run it to verify that all components of the sound card are operating properly.
 5. Connect the headphone directly to the Line-out on the sound card to isolate the problem to the system itself.
 6. Verify that the audio output is linked to the Line-out rather than to the Line-in or Microphone jack.
 7. Verify that the CMOS Setup settings are correct for the OS type.
 8. Check the compatibility of the sound card with the motherboard.
 9. Uninstall the drivers, restart the system and reinstall the drivers . Ensure that the drivers are updated.
 10. Remove and reinsert the sound card to a different PCI slot and reinstall the drivers.
 11. Replace the sound card:
 - a. In the Control Panel settings, go to Add/Remove Programs to remove audio drivers and supporting software.
 - b. Turn off the PC.
 - c. Remove the screw holding the card and then lift the card up and out of its slot.
 - d. Take the new card and hold it by its edges.
 - e. Place it over the appropriate slot, either PCI or PCI-Express 1x.
 - f. Now push the card slowly into the slot.
 - g. Run the installation program for the sound card.
 - h. Screw the card in the slot.
 - i. Test the functioning.
 12. If the replaced sound card also shows the same symptoms, try installing a different model of the sound card.

UNIT 4.3: Completing the Installation Process

Unit Objectives

At the end of this unit, you will be able to:

- Check the functioning of the system
- Check the functioning of the installed software such as an antivirus
- Ensure product functions are tested
- Provide demo to the customer
- Resolve customer queries
- Take feedback from the customer

Notes for Facilitation

- Tell the participants that after the installation is completed, they should check the functioning of the installed modules.
- Then, tell them that to ensure the proper functioning of the computer there are certain standards such as the proper system requirements (hardware and software compatibility) which should be followed.
- In addition, tell them about a few basic questions which they need to answer after the completion of the installation process such as shown in the following figure:

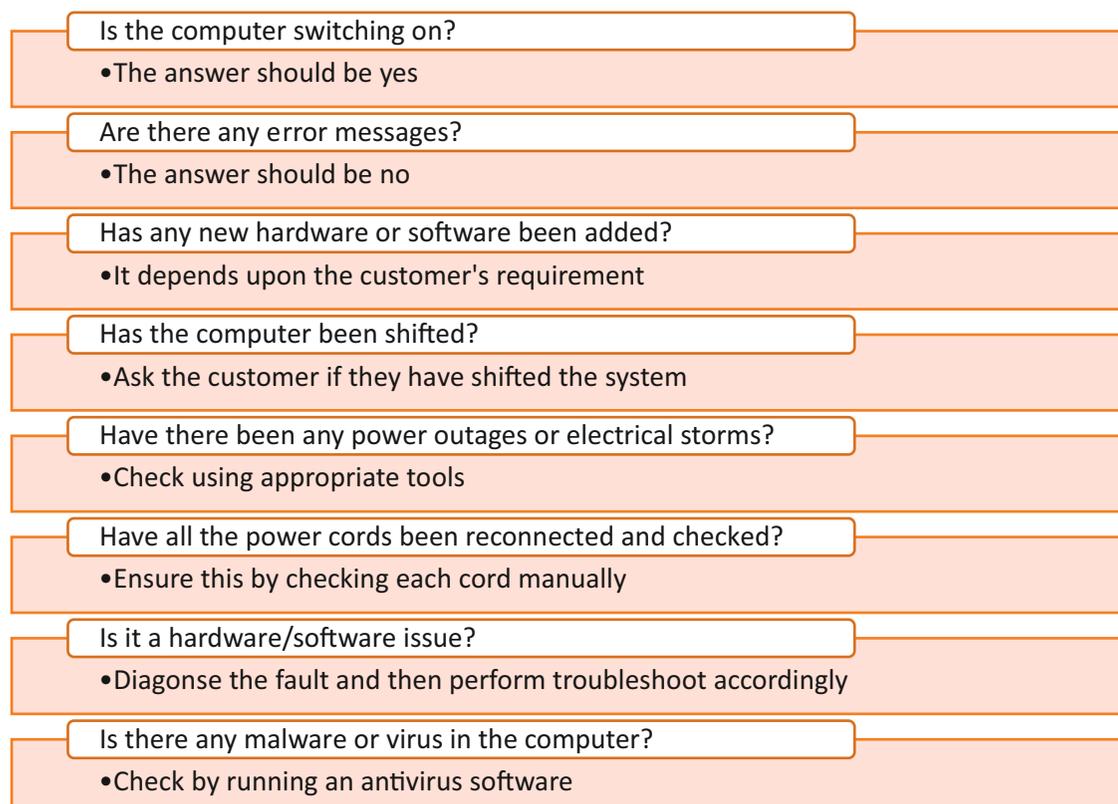


Fig 4.3.1: Basic questions of installation process

- Then, inform them about the three types of testing required for checking the system's functioning, which are hardware testing, software testing and functional testing.
- Further, briefly tell them about these testing methodologies.
- Inform them that after installing the software, it is mandatory to check its functioning.
- In addition, also tell them how to check the performance of a system's OS with the help of the following points:
 - Turn on the system
 - Check whether the correct OS name is displayed. For example, if the system has Windows 10 then its name "Windows 10," should be displayed.
 - Then select the "Start" button.
 - Look for an "About Windows" window to appear.
 - Then right click on my computer and open the properties option.
 - Look at the "System Properties" window that displays about the system configuration, protection, device manager and so on.
- Further, tell them how to check the functioning of an anti-virus software. Then, briefly tell them about quick scan, full scan, select folder scan and boot-time scan.
 - Quick scan - This will guide the antivirus to perform a scan on the area on the computer most susceptible to malware infection.
 - Full scan – This performs an in-depth scan of the computer. All the files are scanned. It can take time to complete as it is a detailed scan.
 - Select folder scan – If malicious files are only in a particular folder, select the folder(s) and perform scan on the specific or multiple folders.
 - Boot-time scan – Some viruses are in the system but they do not show up after the computer is started. Perform a boot-time scan to detect and remove such viruses while booting.
- Further, tell them about demonstration of installing hardware to customer.
- Explain why the participants must understand the importance of a demo session.
- Explain the rules of demonstration to the participants – customisation of the demo, the user's role to be highlighted, go through the demo before presentation, test everything prior to the presentation and close the queries after the deal.
- Discuss with the participants about the key pointers that are necessary for effective operation of an installed equipment.
- List the basic pointers:
 - Listing all the hardware and software required
 - Reading the user manual/help book for demonstration of the hardware/software
 - Ensuring all equipment are in working condition
 - Ensuring all software are up to date
 - Using the equipment for the required purpose
 - Handling the equipment with due care
 - Planning a schedule to keep a track of equipment maintenance
- Tell them about the importance of getting feedback from the customer, which will represent the participant's performance in terms of key performance indicator(KPI).

- Solution to the practical: Steps to set automatic updates of an antivirus.
The participants must be able to perform the following steps:
 - Open the antivirus menu
 - Go to settings
 - Click on Automatic update in 'how to update' – choices in the dropdown:
 - a. Automatic update
 - b. Ask when an update is available
 - c. Manual update





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5. Installation and Configuration of Storage and Networking Devices

Unit 5.0 – Introduction of the Module

Unit 5.1 – Installation and Configuration of Networking Devices

Unit 5.2 – Installation and Configuration of Storage Devices



ELE/N4612
ELE/N4613

Key Learning Outcomes



At the end of this module, you will be able to:

- Install and configure networking devices
- Install and configure storage devices

UNIT 5.0: Introduction of the Module

Objective of the Module

The objective of this module is to make the participants familiar with basic networking concepts. The participants will be able to identify networking components and the symbols to represent these components. They will also be able to configure and install networking devices and storage devices. They will also be able to understand basic concepts of internet.

Ask

- Enquire if anybody knows about networking components and how to represent them in a network.
- Ask if anyone knows about internet, intranet and extranet.
- Ask the participants if they know about NAS.
- Ask the participants to share their expectations from this course.

Notes for Facilitation

- Make the session interactive by involving the participants in a discussion and introduce the topics to them.
- Ask the participants about the expectations from the course. Then, inform them briefly about the major topics that will be covered in this course.
- Invite the participants to share their expectations on the whiteboard/blackboard.
- Give the participants a brief overview of what all will be covered in the course.

UNIT 5.1: Installation and Configuration of Networking Devices

Unit Objectives

At the end of this unit, you will be able to:

- Define networking devices
- Identify networking components
- Define internet, intranet and extranet
- Install networking devices
- Configure networking devices

Ask

- Start the session by asking the participants about network devices and how they function.
- Ask if they know about the relay networking devices.
- Ask them if they know about Layer 2 switching.
- Ask the participants if they know what a router is.
- Then, ask them if they can tell what a router does.

Explain

- Explain to the participants about network devices and their functions.
- Then, explain the different components of networking devices.
- Explain the symbols used to represent components in a network.
- Explain to the participants about a router.
- Tell them about the configuration and installation process of networking devices.

Notes for Facilitation

- Tell the participants that even the most basic of networks require s devices to provide connectivity and functionality.
- Tell them how networking devices operate and the functions they perform and also tell that operating them are essential skills for any network administrator and requirements for a networking candidate.
- Tell them that various devices used to link LAN segments operate at different layers of the OSI model. Each of the relay devices provides a different type of connectivity, performing different functions. Therefore, most networks will have more than one type of relay device in use.
- Explain that a local relay device is designed to connect two LANs directly. A remote relay device crosses at least one intermediate network.

- Tell the participants that Layer 2 switching is the process of using devices' MAC addresses on a LAN to segment a network. Switches and bridges are used for Layer 2 switching.
- In addition, tell them that CSMA/CD (Carrier sense multiple access with collision detection) helps hosts do decide when to send packets on a shared network segment and to detect collisions.
- Tell the participants that components of networking are classified as shown in the following figure:

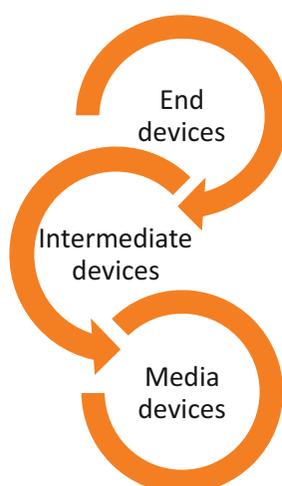


Fig 5.1.1: Components of networking devices

- In addition, tell them that these components are represented by their respective symbols as shown in the following figure:

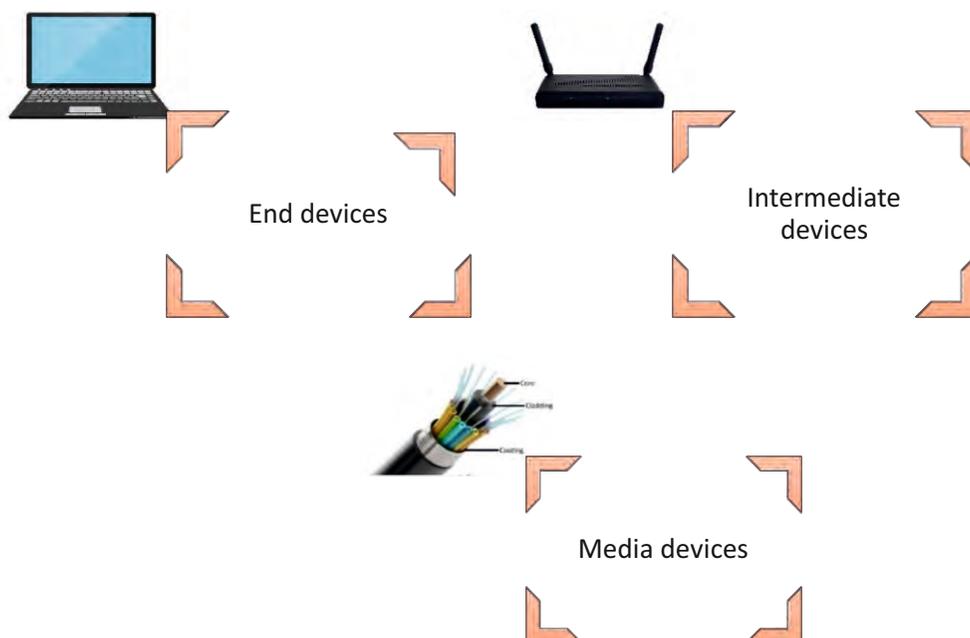


Fig 5.1.2: Symbol representation of components

- Tell them about network communication technology such as Internet, Intranet and Extranet.

- Further, tell them that communication technology also deals with the mode of transmission of data. Mode refers to the direction of data flow over the network. There are three types of mode:
 - **Simplex:** It is a type of connection in which the flow of data is unidirectional i.e. the data flows in only one direction.
 - **Half-duplex:** It is a type of connection in which the flow of data is in one direction or the other, but it cannot be both at the same time.
 - **Full-duplex:** It is a type of connection in which the flow of data is bidirectional. Each end of the line can thus transmit and receive at the same time. This means that the bandwidth is divided into two for each direction of data transmission, if the same transmission medium is used for both directions of transmission.
- Further, tell them that there are other types of modes of transmission such as synchronous and asynchronous communication mode, parallel and series mode and so on.
- Explain to them about Network Operating System (NOS) with the help of the following points:
 - It runs on a server and provides the server the capability to manage data, users, groups, security, applications and other networking functions.
 - The primary purpose of the NOS is to allow shared file and printer access among multiple computers in a network. For example, it allows sharing through a LAN and also through a private network with other networks.
 - Examples of network operating systems are Microsoft Windows Server 2003, Microsoft Windows Server 2008, UNIX, Linux, Mac OS X, Novell NetWare and BSD.
 - Tell that the advantages of network operating systems are as shown in the following figure:

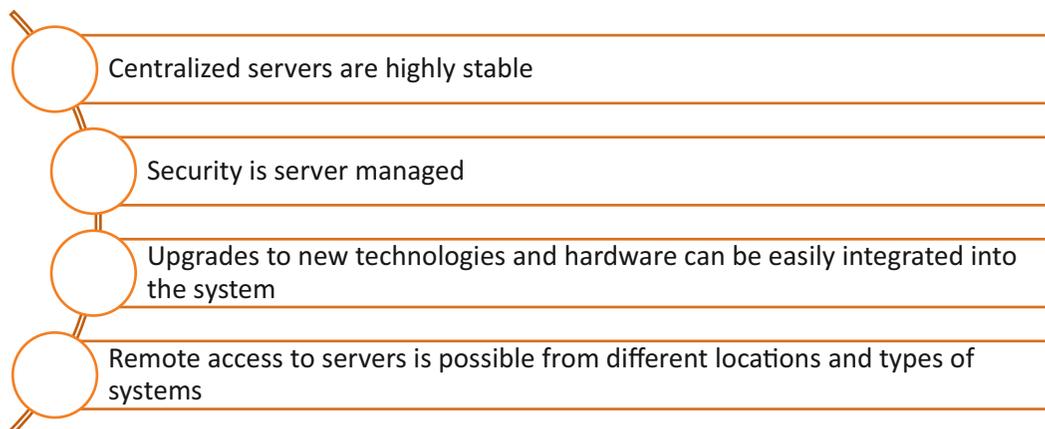


Fig 5.1.3: Advantages of network operating system

- Lastly, tell them how to install and configure various networking devices such as modem, router and so on.
- Activity Handling Strategy: Match the following
 - Make a group of five students and ask them to solve the activity.
 - At the end, provide the solutions as shown below:
 1. d.

- 2. c.
- 3. a.
- 4. b.
- Solution to the practical, Installing and configuring of CSF (Config Server Firewall) on CentOS 7:
The participant must be able to perform the following steps:
 1. Install the dependencies for CSF.
 2. Install CSF.
 3. Configure CSF.
 4. Enter Basic CSF commands. Then, check the basic functioning of the system.
 5. Set up advanced configuration in the system.
- Solution for the practical: Setup of a home network router
The participant must be able to perform the following steps:
 1. Choose a suitable location for placing the router
 2. Connect the computer to the router.
 3. Open the administration console of the router.
 4. Update the MAC address of the router.
 5. Configure addition network security features.

UNIT 5.2: Installation and Configuration of Storage Devices

Unit Objectives

At the end of this unit, you will be able to:

- Install storage devices
- Configure storage devices

Ask

- Ask the participants if they know what a storage device is and how is it useful.
- Ask if anyone knows about the different types of storage devices.
- Ask the participants if anyone knows about configuring storage devices, data backup or creating restore point in Windows.
- Depending on the response, ask the participants to briefly explain the steps.

Explain

- Explain to the participants in detail about storage devices and their role in the IT world.
- Explain about the storage forms.
- Explain in detail about network attached storage (NAS).
- Explain how to configure storage devices.
- Explain how to setup a backup using storage devices.
- Explain how to restore data using a restore point.

Notes for Facilitation

- Explain to the participants in detail about the role of storage in IT world.
- Explain in detail about several types of storages, especially about Persistent (non - volatile) and Non-Persistent (volatile).
- Tell the participants to add a hard-drive to Windows 8 by right-clicking on the computer icon. Then click on Manage. Then go to Disk management and click OK.
- Explain to the participants how to set up a Backup in Windows 8.
- Ask the participants to type File recovery which will start search. Then click on settings. Then Windows 7 File Recovery will appear.
- 'Windows 7 File Recovery' window will open. Choose 'Setup backup'. Backup starts up when they select backup drive and then click Next. Click on 'Let Windows Choose' and then click Next.
- Tell that they can choose a schedule by clicking on 'Change schedule'. Once they have the backup open, click 'Save settings and run backup.'
- Explain how to create a restore point in Windows 8.
- Tell them that they need to type 'restore point' in search and select 'Create restore

point'. Then they need to use their restore point when performing a system restore.

- Ask them to check if there is enough free space to create restore.
- Lastly, tell them that NAS is a self-sufficient computer which is linked to a network and provides data storage facility to the devices connected on the network.



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6. Troubleshooting of Networking Devices, Storage and Other Components

Unit 6.0 – Introduction of the Module

Unit 6.1 – Understanding Customer Complaints

Unit 6.2 – Troubleshooting Process

Unit 6.3 – Completing Repairs

Unit 6.4 – Reporting to Superior



ELE/N4613

Key Learning Outcomes



At the end of this module, you will be able to:

- Classify customer complaints
- Identify system level problem on field
- Troubleshoot storage and other devices
- Complete the repairs
- Report to superior

UNIT 6.0: Introduction of the Module

Objective of the Module

The objective of this module is to make the participants familiar with basic computer troubleshooting, maintenance and repair. The participants will be able to identify a faulty module and perform troubleshooting. They will also be able to perform soldering manually. In addition, they will be told about maintenance and repair of networking devices. They will also be able to assemble and disassemble a desktop.

Ask

- Enquire if anybody knows what troubleshooting is.
- Ask if anyone knows about troubleshooting hardware and software problems.
- Ask the participants to share their expectations from this course.

Notes for Facilitation

- Make the session interactive by involving the participants in a discussion and introduce the topics to them.
- Ask the participants about the expectations from the course. Then, inform them briefly about the major topics that will be covered in this course.
- Invite the participants to share their expectations on the whiteboard/blackboard.
- Give the participants a brief overview of what all will be covered in the course.

UNIT 6.1: Understanding Customer Complaints

Unit Objectives

At the end of this unit, you will be able to:

- Identify the concerns of the customers
- Interact with the customer on phone
- Commence field trip based on the type of complaint
- Explain product warranty, terms and conditions
- Identify the type of problem and carry relevant tools and equipments
- Assess to do replacement or repair
- Carry approved and verified replaceable parts

Say

- Tell the participants that within an organization, the customers' issues are reported to a field technician through a telephone call.
- In addition, tell them that a field technician also needs to be aware of the critical hardware used at a customer's facility.
- Tell them that it is necessary to satisfy the customers by providing them proper services according to their needs.
- Tell them that a field technician should know how to read a warranty and other conditions written on the products.
- Tell them about the hardware and software related issues and how to handle these issues at a customer's site.

Notes for Facilitation

- Tell them that if a field technician does not reach on time for providing the required services at a customer's facility, then it can annoy the customer. Reaching on time, every time, can sometimes be difficult due to unpredictable traffic conditions, even with the availability of route scheduling tools such as Route4me, flexiroute and Routific. If they are found punctual, then it will help to pin down other less valid causes such as excessive breaks and lingering to chat with customers. These causes can suppress the person's performance.
- Tell the participants that a field technician has to perform the tasks assigned by the superior either remotely or at the customer's site. Besides these duties, there are some repetitive tasks such as scheduled scripts, checking hardware log files and checking antivirus and malware log files. These tasks must be done at regular intervals.
- Tell them that hardware problems refer to faults in physical components of a computer. As compared to the software problems, hardware problems are difficult to spot and cure.
- Tell the participants that troubleshooting refers to the process of identifying the source of a problem so as to fix the problem with the hardware or software.

- Explain that the following symptoms point towards a problem being hardware related:
 - The problem occurs regularly even though no new software is installed
 - The problem occurs every time a specific device is accessed
 - The problem occurs randomly, such as the computer rebooting in between work
 - The computer fails to boot, shows errors on POST or produces beeps while starting
- In addition, explain that irrespective of what the actual issue is, there are only three ways to troubleshoot a hardware problem.
- Explain these three ways with the help of the following figure:

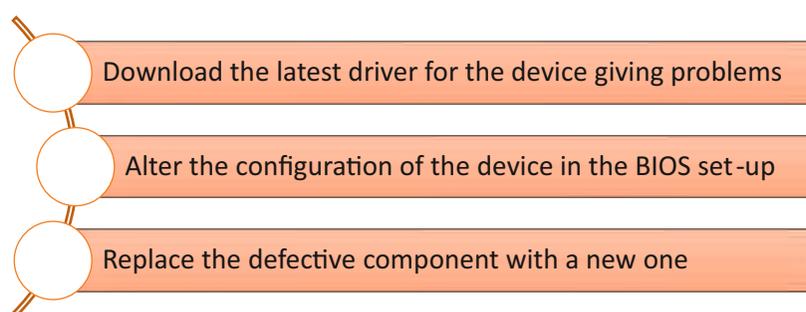


Fig 6.1.1: Troubleshooting a hardware problem

- Tell the participants that a warranty is a manufacturer's affirmation to a purchaser that an item or a service is or shall be provided as represented. It might be thought to be a legal agreement between a purchaser and a manufacturer (or vendor) which comes into effect after the sale of the item or a service.
- Explain to them about warranty costs. In addition, also tell them that there are various ideas of warranty costs such as:
 - warranty cost/unit
 - warranty cost over an interval
 - warranty cost/time or warranty cost rate
- Tell them that there are two main factors on which the warranty costs depend, which are product reliability and product usage.
- Tell the participants that to know the clear-cut expectations of a customer, the customer service department could be of great help, as they have a quantifiable and measurable set of standards which is desired by the customer. In addition, tell them that these standards ensure that the customer service is consistently at the highest possible level.
- Tell them about the importance of calling the customer and asking about the problem in detail and then suggesting a possible solution.

UNIT 6.2: Troubleshooting Process

Unit Objectives

At the end of this unit, you will be able to:

- Identify the customer's problems at their premises
- Use appropriate tools and equipment
- Perform root-cause analysis
- Disassemble and check each part of the computing system
- Follow standard operating procedures
- Identify the solution design and troubleshoot the storage devices
- Perform soldering
- Identify and fix the errors

Say

- Tell the participants that the customers' issues should be reported carefully and suitable solutions should be found for them.
- Tell them that a field technician should be aware of the types of applications that run on the systems of the customers and the importance of these applications to them.
- Further, tell them that a field technician needs to identify whether the root cause of the problem lies in the hardware or the software. Thereafter, they need to troubleshoot the related components to look into the details of the problem.
- Tell them about software fault tolerance by saying that it refers to the ability of a software to continue operation even if there are system or hardware faults present in the system.
- Next, give them a brief introduction of some techniques of software fault tolerance which a field technician should know, such as timeouts, audits and incremental reboot.
- In addition, tell them that they will also learn about hardware fault tolerance techniques in this module.

Notes for Facilitation

- Inform them that there are some issues that are beyond the scope of work. These issues should be reported to the appropriate person in the organization. For example, some hardware are under the annual maintenance of the supplier. If there is a problem with these hardware, the field technician should report to the suppliers.
- In addition, also tell them that there are some software or hardware systems that are very critical. This is because their breakdown means loss to the organization. The field technician should have knowledge about these systems and if there is a problem with them, it should be taken as priority.
- Give them some more examples of typical hardware problems and tell that a field technician may need to carry spares to resolve the problems.

- Further, tell them about some common problems that a customer may be encountering with the hardware, such as:
 - Blank monitors: It is one of the most common problem found in a computer. The solution to resolve this problem is to test the supply cord and power systems for their functionality. Check the video cable and if found loose, then simply push the it into its place. Next step is to check the CPU by connecting it to another monitor. If everything is fine, then the problem must be in the monitor or its wire. If the monitor displays some different colours, then check that all the pins of the monitor are properly acquired by the CPU.
 - Dead Hard drive: As a hard drive is one of the main hardware components, so a dead hard drive can cause a major hardware issue, which can involve a huge expense. It is almost impossible to repair the hard drive and the only solution is to recover the data using specialized software available for the recovery. Another solution is to escalate the hard drive recovery issue.
- For troubleshooting, consider another example. A customer's mouse and keyboard are not functioning. The field technician must:
 - Check the configuration settings on the system
 - Check the compatibility and installation of the device drivers
- N+X Redundancy – The setup of N+X redundancy is less expensive than that of One for One setup due to the fact that N modules can be backed up by only X modules. The disadvantage of this setup is that it provides less system availability if all the N modules fail simultaneously.
- Then, explain to them about the various hardware fault tolerance techniques. Discuss the techniques and tell them the pros and cons of each technique.
- Emphasize that the main drawback of the Memory Mirroring setup is the need of a specialized hardware. In addition, processor's overall performance is also low in this setup.
- Next, explain fault detection and fault avoidance.
- Discuss the various fault handling mechanisms.
- Tell them that Power On Self-Test (POST) checks that the basic system devices, peripheral devices and other hardware elements are present and functioning properly.
- Inform them that the common hardware problems are as follows:
 - No power
 - Unresponsive program
 - Keyboard not working
 - Mouse not working
 - Computer has no sound
 - Computer not connecting to network
 - Blank screen
 - Printer error
- Tell them how to replace faulty modules at a customer's site and to take the necessary tools prior to the customer's site visit.

- Explain the issues that can crop-up after installing the following components:
 - Hard Drive:
 - Computer does not boot, and no error message appears on the screen
 - The screen remains blank when the system is powered up
 - The system does not recognize the drive
 - The system hangs in FDISK or fails to create or save the partition record
 - The disk operating system (DOS) message "Disk Boot Failure," "Non-System Disk" or "No ROM Basic - SYSTEM HALTED" appears
 - The system error message, "HDD controller failure" appears
 - The system is inoperative. Keyboard lights are on, power indicator lights are lit and hard drive is spinning.
 - The system does not boot from the hard disk drive but can be booted from the floppy disk drive
 - The system only boots from the floppy disk. Hard Disk can be read and applications can be used, but booting from hard disk is impossible
 - The screen message says, "Invalid Configuration" or "CMOS Failure"
 - Cannot boot the system after installing the second hard drive
 - New Network Card:
 - Unable to connect to a server or if Windows reports an error after double-clicking Network Neighbourhood
- List the problems on the whiteboard and explain the solution of each problem, one by one.
- Wherever possible, give a live demonstration of the troubleshooting process.
- Solution to the practical, Replacement of hard disk drive for desktop:
 - Make recovery disk or image using recovery software
 - Turn off the system.
 - Open the cabinet case.
 - Check the connector supported by your system which is either serial advanced technology attachment. (SATA) or integrated development environment (IDE) power connectors.
 - Locate the existing hard drive.
 - Disconnect the data and the power connectors.
 - Remove the screws holding the drive to the hard drive cage.
 - In case of IDE hard drive:
 - Move the jumpers on the replacement drive so as to match the settings of the original drive.
 - Set the jumper setting to Master, Slave or Cable Select as per the previous hard drive.
 - For SATA drive connect the jumpers as per the original drive.
 - Connect the data and the power cable.
 - Slide the hard drive to its position.
 - In case of installation of primary drive, reinstall the operating system.

UNIT 6.3: Completing Repairs

Unit Objectives

At the end of this unit, you will be able to:

- Report percentage of call closure in multiple visits against the benchmark
- Ensure no sub-standard or unverified parts are used in replacing
- Complete the function within the agreed Turn Around Time (TAT)
- Meet monthly or daily targets given

Demonstrate

- Show the correct way to create schedule reports.
- Demonstrate the way of using google calendar to set targets.

Notes for Facilitation

- Tell the participants that the job of a field technician is not to just examine or maintain the equipment but also to create a detailed report about number of visits to a customer's site, reason for the visit and so on.
- In addition, tell them to use only verified parts/modules, as an unverified part can cause damage to the system's performance.
- Tell them that it is the responsibility of the field technician to use verified parts while replacing faulty modules.
- Inform the participants that just like any other job profile in an organization, meeting the targets set down by the management is very important. A field technician needs to be clear about the goals and visions of the organization to achieve all the designated targets.
- Then, explain to them about the key points which will help them to meet the targets.
- Inform them that an excellent service leads to a happy and loyal customer.
- Tell the participants about the importance of turnaround time and the ways to reduce stress.
- In addition, tell them about google calendar and if possible, demonstrate it.
- Tell them that since IT industry evolves at a very fast pace, a field technician needs to be updated with the latest products, their software ecosystem and methods to operate the technologically advanced machines. Inform that new tech savvy hardware comes with a specific set of rules and operating methods.

- Further, tell them that a field technician may come across a situation that may require escalation of the situation to the supervisor, as shown in the following figure:

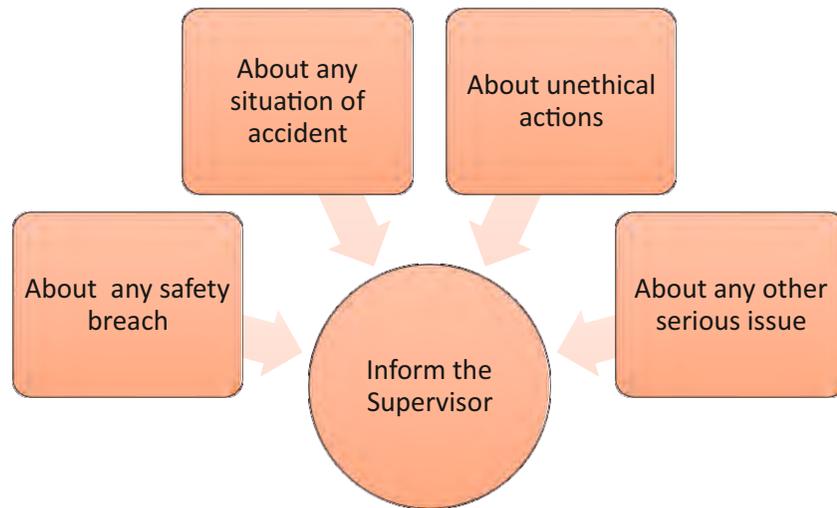


Fig 6.3.1: Escalation of situation to supervisor

UNIT 6.4: Reporting to Superior

Unit Objectives

At the end of this unit, you will be able to:

- Take work order from the Supervisor
- Report 100% on time completion
- Submit the feedback form
- Report work status accurately
- Create knowledge bank

Ask

- Start the session by telling the participants the importance of a feedback form.
- Ask the participants if they know the importance of the documentation process.
- Ask the participants if they know the importance of adherence to time and quality.

Say

- Tell the participants why an understanding of the work requirements is necessary.
- Tell them about the responsibilities of a field technician, which is important to fulfil the customer's requirement.
- Explain to the participants in detail about the steps to read a document.
- Explain to the participants the questions they should ask themselves:
 - Why was the document written?
 - Who is the target audience?
 - What type of a document is it?
 - Why should the document be read?
- Explain to the participants about the best way of reading a document.
- Discuss with the participants that as a field technician, one needs to keep visiting the portals to identify changes that may be done to improve the feel of it.
- Tell the participants that after completion of work, ask the customer to fill the feedback form.
- Tell the participants that for a field technician in any organization, one of the major roles and responsibilities is to understand the work requirements.
- Then, tell them that while working in any organisation, it is important to understand the work requirements.
- In addition, tell them about work ethics, by saying that work ethics means differentiating between the right and the wrong way of doing a job and adopting the right conduct.
- Next, tell them about the importance of feedback with the help of the following points:
 - Tell the participants that feedback helps to understand problems and outlines the scope for further improvement.

- It helps to identify the areas of competency in the work which they have done. It also makes the customer feel happy that they can give feedback regarding the service.
- The feedback also helps the supervisor to monitor their work efficiency and other key performance aspects of their work that may relate to appraisals and further assignments.
- Lastly, tell them about the importance of record keeping.
- Tell them that record keeping is very beneficial, especially in case of conflicts and contradictions in the work committed and the work done. Record keeping provides several benefits.



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7. Interacting with Customers

Unit 7.0 – Introduction of the Module

Unit 7.1 – Identify Customer's Requirements

Unit 7.2 – Interacting with Customers Prior to Site Visit

Unit 7.3 – Suggesting Solutions to Customer's Problems

Unit 7.4 – Maintaining Schedules and Records

Unit 7.5 – Achieving Productivity and Quality



ELE/N4601
ELE/N9909

Key Learning Outcomes



At the end of this module, you will be able to:

- Identify customer's requirements
- Learn how to interact with customers
- Suggest resolutions to the problems of customers
- Learn how to maintain records of customer's complaints and resolutions
- Describe the importance of productivity and quality

UNIT 7.0: Introduction of the Module

Objective of the Module

The objective of this module is to make the participants understand the customer's requirement and how to educate them about aspects of installing hardware. The participants will be able to know about annual maintenance contract and its importance. They will also be able to analyse location requirements for setting up hardware. In addition, they will be told how to maintain schedules. They will also be able to know about warranty coverage of products.

Ask

- Enquire if anybody knows about annual maintenance contract.
- Ask if anyone knows how to analyse location requirements for installing hardware.
- Ask if they know about how to deal with customer's queries and provide solutions for it.
- Ask the participants to share their expectations from this course.

Notes for Facilitation

- Make the session interactive by involving the participants in a discussion and introduce the topics to them.
- Ask the participants about the expectations from the course. Then, inform them briefly about the major topics that will be covered in this course.
- Invite the participants to share their expectations on the whiteboard/blackboard.
- Give the participants a brief overview of what all will be covered in the course.

UNIT 7.1: Identify Customers' Requirements

Unit Objectives

At the end of this unit, you will be able to:

- Identify a customer's requirement
- Educate customers about different aspects of installing and repairing hardware

Notes for Facilitation

- Start the session by telling the participants that for any person to work, it is important to understand the work requirements.
- Tell them why an understanding of a customer's requirement is necessary.
- Tell the participants about the responsibilities of a field technician, which is important to fulfil a customer's requirement.
- Tell the participants that when on a visit to a customer's site, to ensure good service, the customer's requirement should be understood and a solution should be suggested.
- Then, tell them that while working in any organisation, it is important to understand the work requirements. The work requirements include responsibilities as shown in the following figure:

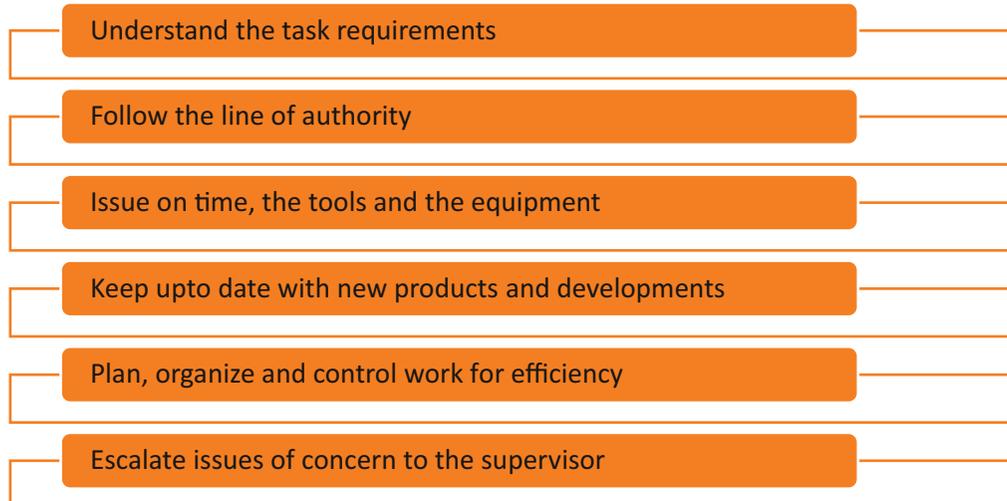


Fig 7.1.1: Work requirements

- Tell the participants about the ways of educating the customer about the products and their operation.
- Discuss with the participants that they must listen to the complainant carefully about the issue they are trying to raise, ask more and more questions until they get a clear understanding of what the problem is and solve the problem as long as it fits in the scope of their job role. In case they are unable to resolve an issue, they must escalate the problem and seek help of a learning resource centre or customer care centre for further assistance.

UNIT 7.2: Interacting with Customers Prior to Site Visit

Unit Objectives

At the end of this unit, you will be able to:

- Analyse location requirements for the hardware devices
- Ask customers about their issues
- Inform customers about the repair procedure and warranty coverage of devices
- Educate customers about the annual maintenance contract

Notes for Facilitation

- Educate the participants about proper location requirements required to set up hardware devices at a customer's site.
- Tell them to listen carefully to the customer's requirement and find the best possible solutions for it.
- Tell them that they must always interact politely with the customer. The customer's feedback should always be shared with the supervisor.
- Tell the participants that there will be various types of customers whom they will meet. Some may be calm and polite while others may be angry and impatient. However, the technician should always be patient and polite. They should not fight with the customer or reply back in the same rude tone as of the customer.
- Further, tell them how to assist and educate customers about warranty and precautions.
- Explain to them the term "annual maintenance contract" in detail along with its importance.
- Tell them to understand a customer's issues and maintain a document for future reference.

UNIT 7.3: Suggesting Solutions to Customers' Problems

Unit Objectives

At the end of this unit, you will be able to:

- Provide solutions to the customers' problems
- Inform the customer about the estimated cost of repairing under warranty and time required to repair the faulty equipment
- Explain to the customer the reasons for replacement, if the module requires it

Say

- Introduce the unit to the participants by explaining to them about how to deal with a customer's problem.
- Tell the participants to discuss with the customer, all possible solutions to their problems.
- Tell them that it is the responsibility of a field technician to inform the customers whether the module has to be replaced or repaired, with reasons.

Notes for Facilitation

- Start the session by telling the participants that customer satisfaction is of prime importance to a field technician.
- Tell them how to deal with customer problems and how to find out solutions for them.
- Tell them the steps required to replace faulty modules.
- Tell the participants to enquire from the customer whether to replace the module or not, depending upon the situation.
- Tell them to ask the customer to maintain the copy of the invoice and the warranty for future purpose.

UNIT 7.4: Maintaining Schedules and Records

Unit Objectives

At the end of this unit, you will be able to:

- Explain maintenance schedules
- Tell the customer to retain the copy of the invoice and provide the same

Say

- Start the session by telling the participants that support services are services that address problems with a service or product sold to a customer.
- Tell them that a field technician is responsible for attending to problems to resolve or perform maintenance functions by visiting the client or remote locations.
- Tell them that an invoice is a copy from a manufacturer given to the customer after purchase of goods and services.

Notes for Facilitation

- Tell them that a field technician is responsible for attending to problems to resolve issues or perform maintenance functions by visiting clients' or remote locations.
- Explain to the participants, the roles and responsibilities of a field technician with the help of the following points:
 - Attends to problems to resolve them
 - Performs maintenance functions by visiting clients' or remote locations
 - Assesses and installs or fixes the equipment or machinery.
 - Provides support and service in different fields such as IT and Biomedical
- Tell them that a field technician provides hardware and related software service and maintenance. The maintenance may include installation or repair of hardware equipment or associated software by monitoring, troubleshooting and replacing faulty modules.
- Explain to them the importance of doing regular preventive maintenance of the equipment.

- Explain that a regular maintenance plan ensures the benefits as shown in the following figure:

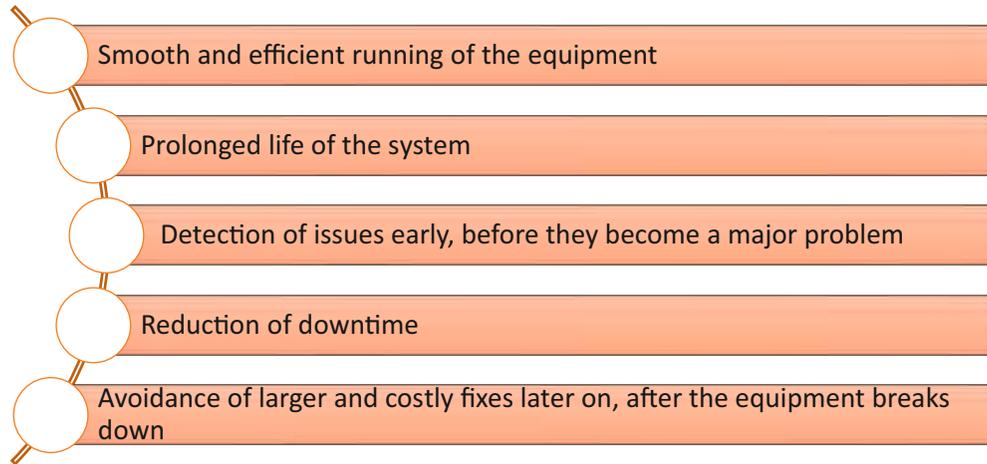


Fig 7.4.1: Benefits of regular maintenance plan

- Explain that the following steps should be followed to keep the system efficient:
 - Use Microsoft Fix It
 - Reduce items that run on start-up
 - Remove programs no longer in use
 - Clean the system drive
 - Clean the browser
 - Scan for and remove malware
 - Scan and remove viruses and spyware
 - Make adjustments for better performance
 - Defrag system drive
 - Add more ram memory
 - Upgrade to an SSD drive
- Explain the importance of performing software maintenance.
- Explain that software maintenance consists of the following four techniques:
 - Corrective maintenance
 - Adaptive maintenance
 - Perfective maintenance
 - Preventive maintenance
- Explain the importance of doing regular software updates.
- Explain that malware, short for malicious software, is especially designed to gain access to a computer or damage it without the knowledge of the owner.
- Explain the importance of performing Windows maintenance.
- Explain that Windows automatic maintenance schedules the maintenance only when the system is on and idle.
- Explain that the first step of hardware maintenance is cleaning a computer and its components. Cleaning the physical components is essential as it:
 - Keeps everything in good working order
 - Allows proper air flow

- Prevents spreading of germs
- Tell the participants about the importance of having a proper toolkit before starting cleaning and maintenance work.
- Explain to them that the hardware tools can be classified into four categories:
 - Electrostatic tools
 - Hand tools
 - Cleaning tools
 - Diagnostic tools
- Tell the participants about the importance of maintaining invoice and also tell the customer about the same.
- In addition, tell them it is necessary to maintain schedules and reports for future purpose and to keep track of all activities.

UNIT 7.5: Achieving Productivity and Quality

Unit Objectives

At the end of this unit, you will be able to:

- Deliver service within the service level agreement (SLA) time
- Identify customers' requirements and put them at ease by providing appropriate solutions
- Achieve customers' satisfaction
- Maintain no repeat or second escalation from a customer

Notes for Facilitation

- Explain to them about SLA by saying that a Service Level Agreement is a formal contract between the service provider and the customer, defining services, responsibilities, scope and duties of both the parties.
- Then, tell them about the importance of an SLA.
- Explain to the participants that there is a formal process of addressing IT related issues and problems when they appear. This process is called as escalation process.
- Explain to them about functional and hierarchical escalation with the help of the following points:
 - Functional and hierarchical type of escalations can regularly be found inside the IT Service managed condition when incident and problem management orders are executed.
 - With functional escalations, the incident/problem is routed to a more experienced level that can deliver the next level of support.
 - Hierarchical escalations act more as a correspondence and intend to caution both the staff and the administration, in a proactive way, of potential SLA (Service Level Agreements) breaches.
- In addition, tell them about the activities involved in an escalation management process such as initiating the escalation, logging the escalation and developing an escalation management action.
- Lastly, tell them about the importance of record keeping.
- Tell them that record keeping is very beneficial, especially in case of conflicts and contradictions in the work committed and the work done. It provides several benefits.
- Inform them that there is a written escalation process available at all IT departments and all the staff members are trained to its use. Under this process:
 - Priority levels are assigned to various issues
 - Delegated responsibilities are assigned to some particular personnel
 - A particular time is allocated to some personnel to resolve the issue before escalation



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8. Understanding Organizational Policies and Standards Modules

Unit 8.0 – Introduction of the Module

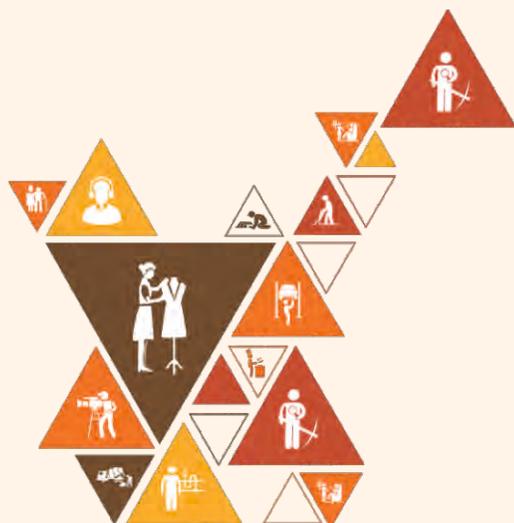
Unit 8.1 – Company's Policies

Unit 8.2 – Company's Product/Quality Standards

Unit 8.3 – Company's Safety Policies and Standards

Unit 8.4 – Interact with Supervisor

Unit 8.5 – Interact with Colleagues



ELE/N9909

Key Learning Outcomes

At the end of this module, you will be able to:

- Explain company's policies
- Identify company's product/quality standards
- Describe company's safety policies and standards
- Interact with supervisor
- Interact with colleagues

UNIT 8.0: Introduction of the Module

Objective of the Module

The objective of this module is to make the participants familiar with the company's policies and products. The participants will be able to understand company's safety policies and standards. They will also be able to interact with supervisor and colleagues. They will be able to work on enterprise resource planning (ERP) software and learn to resolve conflicts among them.

Ask

- Enquire if anybody knows about basic company's policies.
- Ask if anyone knows about ERP software.
- Ask the participants to share their expectations from this course.

Notes for Facilitation

- Make the session interactive by involving the participants in a discussion and introduce the topics to them.
- Ask the participants about the expectations from the course. Then, inform them briefly about the major topics that will be covered in this course.
- Invite the participants to share their expectations on the whiteboard/blackboard.
- Give the participants a brief overview of what all will be covered in the course.

UNIT 8.1: Company's Policies

Unit Objectives

At the end of this unit, you will be able to:

- Identify the company's customer care policies
- Identify the company's code of conduct policies
- Describe the organisational culture and typical customer profile
- Explain the company's reporting structure
- Define company's policy on product's warranty
- Identify the company's line of business, product portfolio and competitors

Ask

- Enquire if anybody knows about what type of services a technician helpdesk provides to customers.
- Ask the participants to tell some work ethics.
- Ask if anyone knows about the documentation process.
- Ask the participants to share their expectations from this course.

Notes for Facilitation

- Start the session by telling the participants that a technician helpdesk provides services that addresses problems with a service or product sold to a customer.
- Tell the participants that a technician helpdesk includes tasks as shown in the following figure:

Evaluation of prospective customers

Telemarketing

Processing of purchase orders and fulfilment services

Information and tracking of delivery schedules

Customer relationship management services

Formulation of customer service

Fig 8.1.1: Tasks of technician

- Further, tell them that after sales service provided by a field technician ensures that the customers are satisfied with the products and services of the company or organization.

- In addition, tell them that after sales service ensures that the sold products and services meet or exceed the expectations of the customers.
- Tell them about IT hardware support services with the help of the following figure:

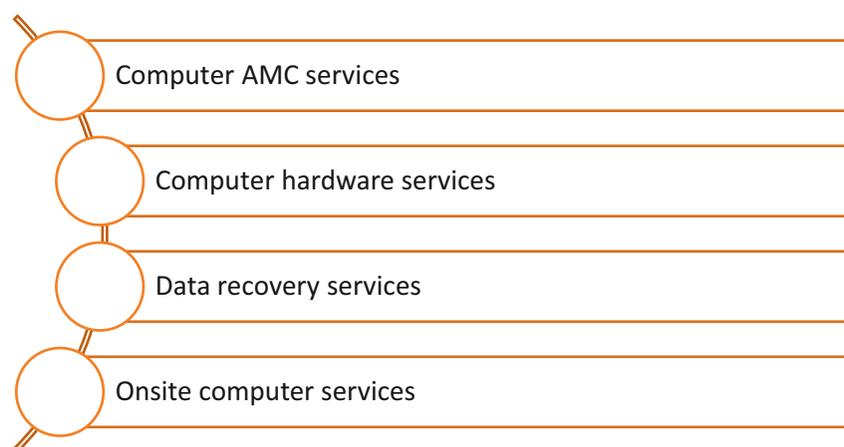


Fig 8.1.2: IT hardware support services

- Inform them that support services can be provided in two ways, onsite service and offsite service.
- Tell the participants about organisational culture and how to behave within that culture.
- Tell them to remember that all the members of a team, whether a senior or a junior, may work together or may work on different projects to fulfil the organizational goals. Therefore, it is important to understand that the role of each team member is significant for the organization.
- Also, tell them that organizations that have a large number of systems require IT support. They need a virtual private network which connects the field technician's remote computer to the systems in the organization securely. Inform them that a secure private network is required to monitor and sometimes fix the systems remotely due to the following reasons:
 - Due to time restrictions
 - Due to urgency of work/fix required
 - Unavailability of a field technician to visit the customer's facility
- Tell that sometimes, just to check the health of the organization's network and systems, as well as to maintain the computers, a field technician needs to monitor the systems remotely.

- Show the following diagram and explain the concept of an organization's virtual private network:



Fig 8.1.3: Virtual private network

- Explain to the participants about the importance of following workplace etiquette. Workplace etiquette is the accepted social behaviour while working along with others in a team. It includes the norms as shown in the following figure:

Arrive on time for work and show positive enthusiasm at work

Behave in a respectful manner with others

Maintain yourself and keep the tools in a clean and organized condition

Never indulge in negative or irrelevant talk

Always be eager to learn new things

Fig 8.1.4: Workplace etiquette

- Explain to them about a customer's profile which depends upon the customer's site and location as listed below:
 - Domestic site
 - Industrial site
 - Small scale site
- Lastly, explain to them about the documentation process and the reporting structure.

UNIT 8.2: Company's Product/Quality Standards

Unit Objectives

At the end of this unit, you will be able to:

- Identify the company's products and the reporting of recurring problems

Ask

- Ask the participants if they know about the different hardware products sold by the company to their customers.
- Enquire if they know about the different recurring problems related to hardware.

Demonstrate

- Show the participants different hardware products such as a mouse, a laptop, a hard disk and a CPU and also networking devices such as a modem, a switch and so on.
- Show them the steps required to resolve recurring problems faced by the customer.

UNIT 8.3: Company's Safety Policies and Standards

Unit Objectives

At the end of this unit, you will be able to:

- Identify the safety procedures to follow
- Identify the quality standards to be followed
- Explain electrostatic discharge(ESD)

Say

- Tell the participants about the different safety procedures to be followed at a workplace.
- Say that the work allotted by the supervisor should be completed within the standard time.
- Tell them about the ESD protection required to be taken at a customer's site.

Notes for Facilitation

- Tell the participants that safety is mandatory while working or repairing faulty modules at a customer's site.
- Explain to the participants the points which will help them in understanding the plan to achieve 100% quality and timely completion of work. Tell them about:
 - Establishing a compliance plan on the basis of which the steps towards achieving a goal will be taken.
 - Building a communication strategy so that every aspect related to the plan of action is communicated to the designated people involved in the workability of the project.
 - Developing an effective work schedule, where working on various parameters of the project is feasible.
 - Creating a review plan to re-check the work that has been carried out to accomplish the set target.
 - Testing the product to see if revisions are required.
- Talk to the participants about why a plan needs to be flexible.
- Tell them about following a proper code of conduct in terms of behaviour and work output delivered.
- Explain the challenge at a workplace of discovering ways for increasing productivity and keeping the quality of production intact.
- Tell them the importance of being healthy such as:
 - Helps to prevent absence from work
 - Improves work performance
 - Demonstrates work responsibility
 - Reduces accidents and work-related ill health

- In an organization, there are several policies followed by the employees. As a part of the organization, a field technician must follow the safety policies. The following figure lists some of them:

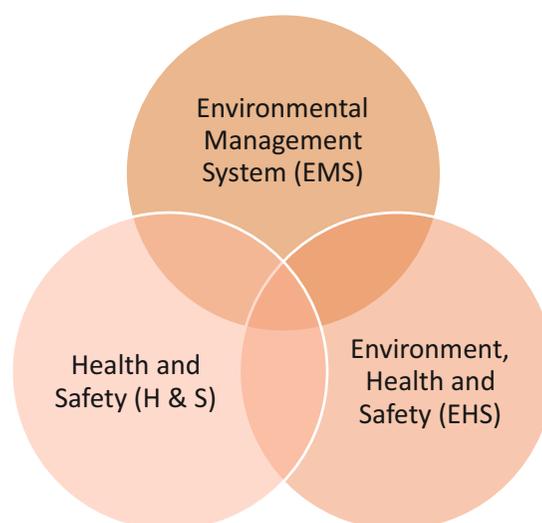


Fig 8.3.1: Safety policies

- A workplace requires a health and safety policy for the following reasons:
 - To show complete commitment towards the health and safety of employees
 - To prove to the employees that safety performance and work performance are in harmony with each other
 - To give a clear statement of the company’s objectives, principles, plans, ideas and procedures
 - To increase buy-in through all divisions of the company
 - To provide a definite outline of the accountability of the organization for the health and safety of the workers and also give a clear idea of the responsibility of the employer and the employees
- Tell the participants that ESD is the sudden build-up of static electricity when two differently charged objects are brought together .
- Briefly explain to them that there are two types of electrostatic tools as shown in the following table:

Tool	Image	Description
Anti-static wrist band		Used to prevent ESD damage to computer equipment
Anti-static mat		Used to place hardware on it to prevent static electricity from building up

Fig 8.3.2: Electrostatic tools

- Activity Handling Strategy:
 - Create a group and ask the participants to tick the options which can prove to be a threat to the health and safety of a field technician.
 - After that, discuss the correct options with the participants as shown:
 - Smoking near combustible substances
 - Oil spill near customer interaction area
 - Tools lying on the table of a technician
 - Working in dim light
 - Touching a live wire hanging out of a cable

UNIT 8.4: Interacting with Supervisor

Unit Objectives

At the end of this unit, you will be able to:

- Describe and assess work requirements
- Identify the targets and incentives
- Explain documentation of work on enterprise resource planning (ERP) software
- Resolve personnel issues
- Communicate potential hazards at a particular location
- Deliver work of expected quality despite constraints

Explain

Explain to the participants that:

- Work that is assigned to them will also have certain timelines which they should follow. It is important to adhere to the targets and timelines so that there is no conflict between the team members and there is no delay.
- Work done should always match to the company's delivery standards. There are incentives for commendable work. Be aware of such incentives and perform to achieve them. This leads to having a sense of satisfaction and achievement.
- The manager has certain duties and responsibilities. It is the duty of the manager to get the task done, which may not involve working directly on the computer hardware.
- Similarly, a supervisor may direct about the work which is to be done. The task could involve getting all the field technicians to perform the work as per the allocation and to maintain healthy and safe working conditions.
- A field technician should communicate any potential hazard to the supervisor.

Notes for Facilitation

- Tell the participants about work requirements and customer satisfaction related to the work.
- Tell the participants that to know the clear-cut expectations of the customer, the customer service department could be of great help as they have a quantifiable and measurable set of standards which is desired by the customer. In addition, tell them that these standards ensure that the customer service is consistently at the highest possible level.

- Explain to them the features of customer service standards with the help of the following figure:

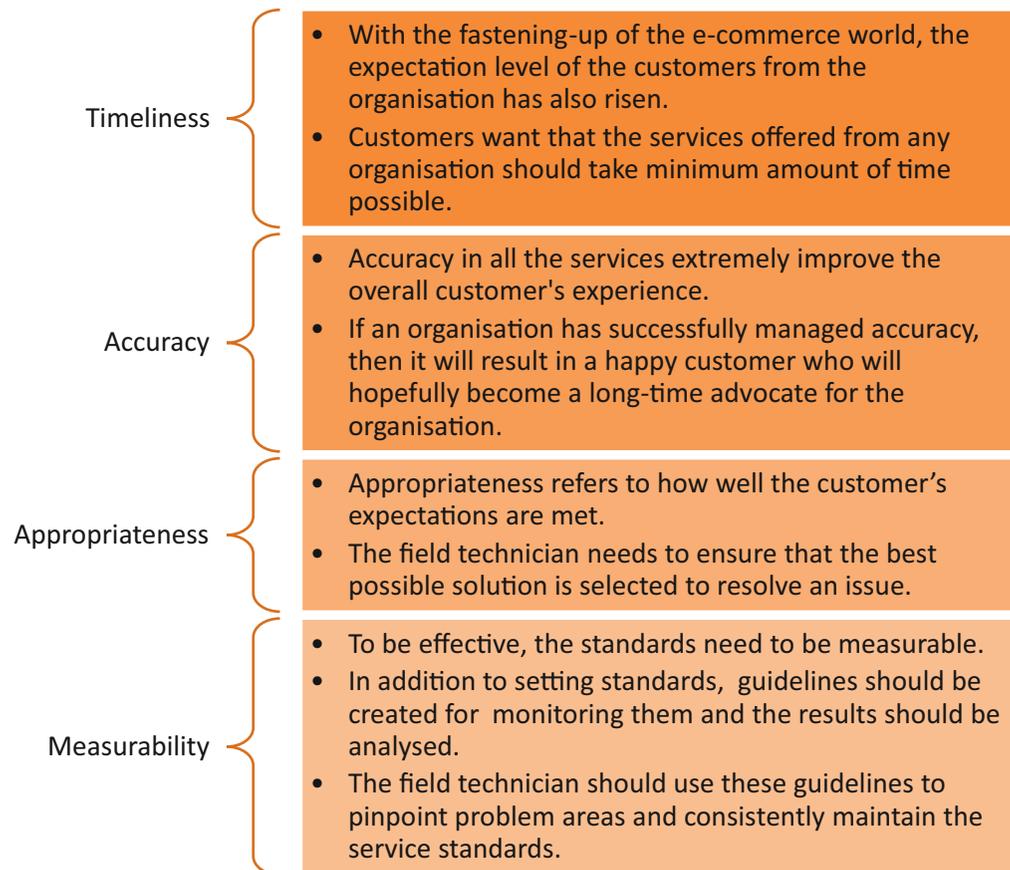


Fig 8.4.1: Features of customer service standards

- Tell them that a field technician should get in touch with the higher management if the raised concerns are not being addressed. There can be unnecessary bottlenecks created by supervisors and such behavioural anomalies can hamper the productivity of a facility.
- Next, tell them that it is important to understand that all the possible hazards that can happen in a facility are the responsibilities of a field technician. One possible cause of a hazard could be the lack of clear understanding about the company's code of conduct or reference handbook. This handbook puts constraints on the use of equipment for purpose that is against the code of conduct.
- Then, explain to them about the systematic approach for handling hazards

- Tell them about the steps required to be taken to report any hazard to a superior as shown in the following figure:

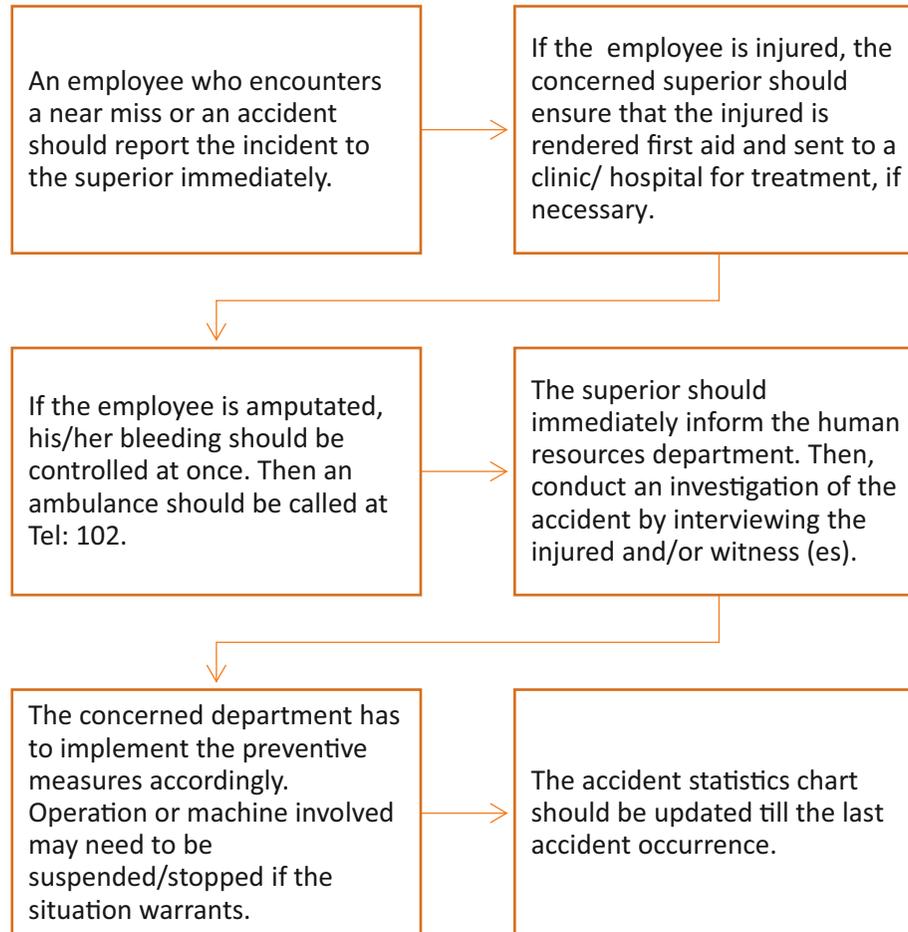


Fig 8.4.2: Steps to report potential hazard

- Activity Handling Strategy: Role play:
 - One participant can act as the supervisor.
 - Another participant acts a colleague, while a third one acts as Ravi.
 - The supervisor asks the colleague to brief Ravi about the line of hierarchy chart and also tell him about safety measures and tools.
 - The colleague briefs Ravi about work, safety tools, equipment that will be used and the work completion report format to be used.

UNIT 8.5: Interacting with Colleagues

Unit Objectives

At the end of this unit, you will be able to:

- Receive spares from tool room or stores or deposit faulty modules and tools to stores
- Pass on customer complaints to colleagues
- Assist colleagues in resolving field problems
- Resolve conflicts and achieve smooth workflow

Explain

Explain to the participants that:

- The field technician should be able to work in harmony with the other colleagues or members in the team. In case of any conflict, the objective should be to resolve it by communicating with each other. Sometimes an intervention by a senior may be required to resolve the conflict. At such times, the matter should be reported to the supervisor.
- While performing work or any other interaction related to work, the interest of the organization should be the kept at the forefront.
- All the members may work together or may work on different projects to fulfil the organizational goals.
- It is important to understand the role and the responsibility of each one of the team members and the task being performed by that person.

Notes for Facilitation

- Tell the participants that every worker works towards a common goal in an organization, still all of them are divided by certain roles and activities and the way they accomplish that objective.
- Draw the following figure on the black/white board which represents the key points to consider while interacting with colleagues:

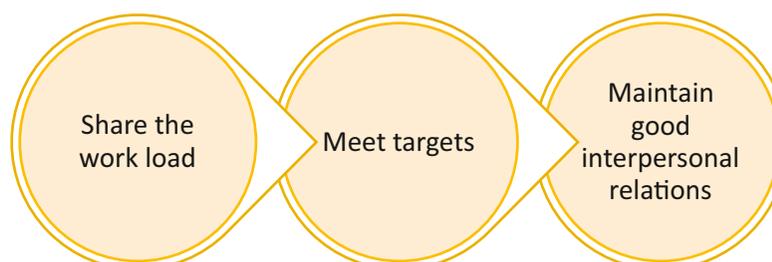


Fig 8.5.1: Key points to interact with colleagues

- Tell them that getting the job done in a process depends on information communication. Furthermore, accuracy of the end result entirely depends on effective inter -personnel communication.
- Further, tell them that to maintain a healthy interpersonal relationship, it is important to adhere to the points shown in the following figure:

Inter- Personal Relationship	Resolve interpersonal conflict and ensure smooth flow of work
	Pass on customer complaints to colleagues in respective geographical locations
	Assist colleagues to resolve field problems

Fig 8.5.2: Interpersonal relationship

- Then, explain to them about each point in detail.
- Next, explain to them about cross functional interaction by saying that the success of an organizational plan depends on effectiveness of training, goal -oriented action planning and motivation. However, another key element that deserves a special consideration is cross-functional communication. It is a method of understanding the importance of liaising and collaborating with other key departments of an organization.
- Lastly, explain to them about team work with the help of the following points:
 - Teamwork is defined as coming together of people to achieve a common goal.
 - The goal here are the organizational goals.
 - The daily tasks which are assigned are a part of the organizational goals. Team work means that each member in the team is contributing their bit to the overall tasks.
 - In a team, all the members are important and might be dependent on each other for work. Sometimes the members do the work individually.
- Tell that, the collective result is a team effort, similar to what will be seen in a game of cricket, or during the construction of a building or building an aircraft.
- Tell that it is also important to understand that the progress of work may depend on the completion of the tasks. Therefore, for smooth progress of work, the tasks should be completed on time.
- Activity Handling Strategy: Role Play
 - Ask one participant to play the role of the technician and the other to play the role of the colleague who is shouting.
 - Ask a third participant to be the customer.
 - After the role play, discuss with other participants/viewers about what the players could have done better or if they missed a step/process.



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9. Soft Skills

Unit 9.0 – Objective of the Module

Unit 9.1 – Writing Skills

Unit 9.2 – Interacting with People

Unit 9.3 – Decision Making

Unit 9.4 – Team Work and Multitasking

Unit 9.5 – Relative and Critical Thinking

Unit 9.6 – Personal Grooming



ELE/N4601

Key Learning Outcomes



At the end of this module, you will be able to:

- Write reports and fill forms as needed for the role
- Interact with people
- Make decisions
- Work in a team and perform multitasking
- Identify how to enable relative and critical thinking while performing tasks
- Identify various aspects of personal grooming

UNIT 9.0: Objective of the Module

Objective of the Module

The objective of this module is to introduce the participants about the importance of communication skills. In this process, they will be able to understand the correct way to fill a job sheet and invoice. They will also be able to understand the workplace ethics to be followed. They will understand the importance of documentation and correct way to complete them.

Say

- Tell the participants that workplace ethic is important to follow at workplace to maintain harmony and peace among colleagues.
- Tell them the proper way of completing documents and their importance.

Notes for Facilitation

- Make the session interactive by involving the participants in a discussion and introduce the topics to them.
- Ask the participants about the expectations from the course. Then, inform them briefly about the major topics that will be covered in this course.
- Invite the participants to share their expectations on the whiteboard/blackboard.
- Give the participants a brief overview of what all will be covered in the course.

UNIT 9.1: Writing Skills

Unit Objectives

At the end of this unit, you will be able to:

- Write down the problems and details of the work done on the job sheet.
- Make reports and fill forms

Demonstrate

- Show the participants:
 - A sample of a job sheet to be filled by a field technician
 - A sample of an invoice given to the customers by a field technician
 - A sample of a checklist to be filled for a specific job/task.

Say

- Tell the participants about the job sheet filling procedure in detail along with its importance.
- In addition, tell them the content of a job sheet as shown in the following figure:



Fig 9.1.1: Content of job sheet

- Tell the participants that sometimes it is possible that the field technician has to fill some field in the invoice.
- In addition, tell them a field technician may also need to adhere to and fill a checklist for a specific job/task.
- Tell the participants that to fill the checklist, the technician should be able to read it correctly and then fill correct responses based on the task completed.

UNIT 9.2: Interacting with People

Unit Objectives

At the end of this unit, you will be able to:

- Identify the basic communication skills
- Define listening, communication, critical thinking and decision making
- Identify critical thinking skills
- Recognize factors that limit decision making skills

Explain

- Explain to the participants that to be able to listen actively and to ensure that they can respond and understand efficiently, they need to:
 - Stop talking to listen to what the other person has to say.
 - Remove any external noise or distractions.
 - Deter from jumping to a conclusion or responding the moment the other person begins to speak.
 - Try not to be defensive in a conversation, especially when receiving a feedback.
 - Show interest in listening to a person, who is speaking, through non- verbal clues such as a nod or words such as hmm and yeah.
 - Ask for details to get the complete information.

Say

- Tell the participants that communication is a two -way process.
 - The sender, who has a need to communicate with another person, the receiver, can send a message. This happens in a medium and reaches the receiver who then responds, based upon the understanding of the message.
 - Communication can be said to be complete only when the receiver understands the message in context in which it was meant to be understood.
- Give an example to the participants. In the morning when they join for work, their supervisor allocates the task for the day. Manual and diagram is the written medium of communication. What their supervisor tells them, becomes the spoken communication. In this case, they are the receiver of the message. When they respond after having understood the message that becomes a feedback.
- Tell the participant that communication includes:
 - Verbal Communication – It mainly consists of the spoken words, such as, talking to team members and talking on phone with the customer.
 - Non-verbal communication – It consists mainly of gestures, facial expressions and movements. Showing thumbs up to say that the connection of a wire is done to an assistant, who is far away, or calling the assistant, by waving, to come closer with the cord are types of non-verbal communications.

- Written communication – It is the written form of communication such as, reports, analysis and e-mails. A written document can be a report which has been submitted or an application.
- Then, inform the participants about some basic dos and don'ts of communication using the following points:

Dos	Don'ts
Communication should be very clear and precise. Mention all the details required to take action. Also, mention clearly the action intended.	Do not communicate when you are not sure. Also, never give incorrect details.
Communication should be concise or short. It should not have irrelevant details which is of no concern to the recipient of the message.	Never give an incomplete message.
Communication should be concrete. Mention the specific and actionable things.	Never communicate in an uncourteous way
The message in communication should be coherent or should be related. If something extra has to be mentioned, then mention clearly that it is an addition. Meaning is derived when the entire message is in context.	Do not use jargons that the recipient may be unfamiliar with. Do not use complex words or sentences.

Fig 9.2.1: Dos and don'ts of communication

- Lastly, tell them the 5 C's of communication skills as shown in the following figure:

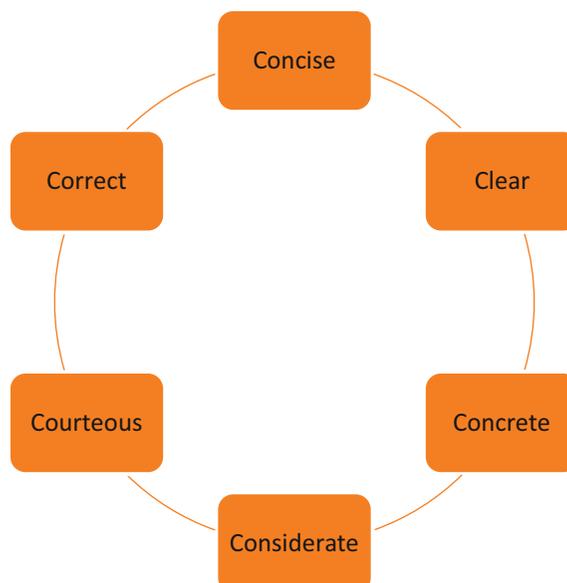


Fig 9.2.2: 5 C's of communication

UNIT 9.3: Decision Making

Unit Objectives

At the end of this unit, you will be able to:

- Make on-spot decisions in the field
- Decide whether to call customer care or not

Ask

- Ask the participants what decision making is.
- Ask them if they think that decision making is difficult and the reason for it.
- Ask them to tell what they know about reflective thinking. Also, ask the participants what they understand by the term “critical thinking”.

Say

Tell the participants that decision making process has the following steps:

- The first step in a decision-making process is to identify the problem.
- Then, gather details about the problem and its possible solution. The more data they have the better decision making they can do.
- Third step is to analyse the problem. They may need to use mathematical or statistical tools to arrive at a point which will help them to take a decision.
- Develop alternatives, which will help to have a plan B in case plan A does not work.
- Finally, choose the best option.

Then, tell the participants about some pointers that they need to keep in mind for decision making and critical thinking.

- It is based upon previous knowledge and they will draw their learning from it.
- It will help them to understand the process and suggest improvements by eliminating the waste.
- It requires them to be thorough with the process and also be updated with new developments.
- It will help them to spot process disruptions and the reasons for them.
- It will help them analyse the reason for delay and how improvements can be done.
- The critical thinking process can be defined as given in the following figure:



Fig 9.3.1: Critical thinking process

UNIT 9.4: Team Work and Multitasking

Unit Objectives

At the end of this unit, you will be able to:

- Identify essential aspects of working in a team
- Share work load as required
- Achieve the targets given on service and sales

Explain

- Explain to the participants that a field technician should be able to work in harmony with the colleagues or members in a team. In case of any conflict, the matter should be resolved by communicating with them. If the need for an intervention by a senior is felt, then the matter should be reported to the supervisor.
- Tell them that while doing work and any interaction related to work the interest of the organization should be the focus.
- Tell that all the members may work together or may work on individual projects to fulfil the organizational goals.
- Inform them that it is important to understand the role and responsibility of each one of the team members and the task being performed by that person.
- Explain that teamwork is defined as coming together of people to achieve a common goal. The goal here are the organizational goals. The daily tasks which are assigned are a part of the organizational goals. Team work means that each member in the team is contributing their bit to the overall tasks.
- Tell that in a team, all the members are important and might be dependent on each other for work. Sometimes, the members do the work individually. However, the collective result is a team effort, similar to what will be seen in a game of cricket, or during the construction of a building or building an aircraft. It is also important to understand that the work may depend on the completion of the tasks. Therefore, for smooth progress of work, the tasks should be completed on time.
- Activity Handling Strategy: Case Discussion
 - Tell the participants that the objective of the activity is to understand the importance of the following:
 - Planning and scheduling of work
 - Organizing task
 - Handling work pressure
 - Maintaining helping but assertive behaviour
 - Being responsible and accountable for work
 - Make four groups. Let the participants discuss the case for 20 minutes and come up with solutions for their colleagues. Have a presentation where all the groups should individually present the case.

UNIT 9.5: Relative and Critical Thinking

Unit Objectives

At the end of this unit, you will be able to:

- Define reflective thinking
- Use critical thinking to improve work processes
- Reduce repetition of errors
- Spot process disruptions and delays
- Report customer concerns to superiors without delay

Notes for Facilitation

- Tell the participants that every organization has its own defined work processes to manage IT operations at its facility. For a field technician, it is important to learn these work processes and follow them.
- Explain the work processes briefly. Tell them that generally, most of the work processes are automated by IT support software systems while others need to be performed manually or physically. A field technician should be aware of the common IT work processes of the organization he/she works in, to work efficiently.
- Tell the participants to consider a situation where a customer complains that a computer lost network connectivity. There can be numerous explanations for the problem such as:
 - Defect in a physical component such as a cable break or a faulty router
 - A faulty configuration on the computer or a network device
 - Loss of network connectivity to a network resource such as an email, which led the customer to assume that all network connectivity was lost
- Tell that a successful field technician uses critical thinking skills to isolate the real cause of the issue by formulating questions, gathering information, and determining what is relevant.
- Tell the participants that when on a visit to a customer site, to ensure good service, the customer's requirement should be understood and a solution should be suggested .
- Activity Handling Strategy: Case discussion (Role duplicity)
 - Tell the participants that the objective of the activity is to understand the importance of the following:
 - Verbal communication
 - Leadership
 - Team work
 - Make a group of two and ask them to discuss about negative impact of taking long breaks and improper communication among employers and employees.
 - Later, after the activity, you can comment on how the discussion could have been better.

UNIT 9.6: Personal Grooming

Unit Objectives

At the end of this unit, you will be able to:

- Identify the importance of personal grooming
- Use proper etiquette during customer interaction

Ask

Ask the participants if they know about the personality traits and skills required for the job of a field technician.

Say

Tell the participants that they should know the right way to handle the customers, understand their needs and provide the right service to them as per the company's standards and policies.

Explain

Explain to the participants about the importance of communication with the customer to know their requirement.

A technician should be able to understand the correct requirement in order to give the right kind of service. The complaints or work requirements will flow in from the customer care centre or from the supervisor.

After a complaint has been lodged, the technician should have clarity about the work, customer location and details of the product's problem before going to visit the customer. There can be a situation when a technician might be able to understand the real problem only after physical examination, but it always helps to understand the problem briefly before a visit to the customer. This might save an extra visit, which could happen because of incomplete information.

Explain to the participants about the importance of personal grooming.

Tell the participants that they represent the company in front of the customer and therefore they should take care of personal grooming.

Explain to the participants the importance of personal hygiene, for e.g. when they visit the customer their clothes should be neat and tidy. Their hair should be trimmed. They must not smell of sweat as this creates an unhealthy impression in front of the customer.

Explain to the participants the importance of following workplace etiquette. It is the accepted social behaviour while working along with others in a team.

- Workplace etiquette includes the norms as shown in the following figure:



Fig 9.6.1: Workplace etiquette

Notes for Facilitation

Activity Handling Strategy, Group Discussion on personal grooming:

- Ask the participants to get together in groups and write things related to dos and don'ts to be practiced at a customer's home. Then discuss with all the groups together.
- Do corrections wherever required.



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10. Employability & Entrepreneurship Skills

Unit 10.1 – Personal Strengths & Value Systems

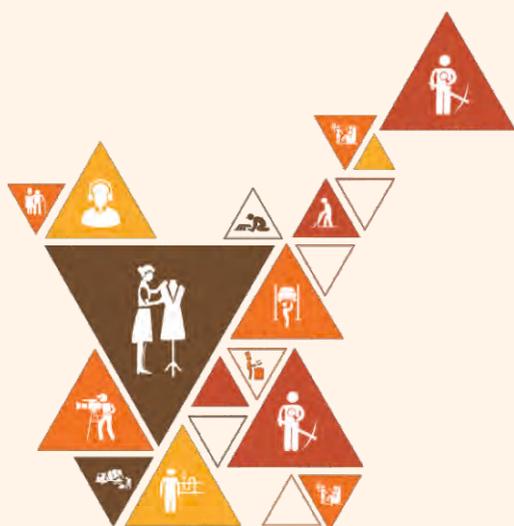
Unit 10.2 – Digital Literacy: A Recap

Unit 10.3 – Money Matters

Unit 10.4 – Preparing for Employment & Self-Employment

Unit 10.5 – Understanding Entrepreneurship

Unit 10.6 – Preparing to be an Entrepreneur



Introduction: Employability and Entrepreneurship Skills

This Facilitator's guide includes various activities which will help you as a facilitator to make the sessions participative and interactive.

Ice breaker

- You can begin the module with the following ice breaker:

Five of Anything Ice Breaker Steps:

- Divide the participants into groups of four or five by having them number off. (You do this because people generally begin a meeting by sitting with the people they already know best.)
- Tell the newly formed groups that their assignment is to share their five favorite movies of all time, their five favorite novels or their five least liked films. The topic can be five of anything - most liked or disliked.
- This ice breaker helps the group explore shared interests more broadly and sparks lots of discussion about why each person likes or dislikes their selected five.
- Tell the groups that one person must take notes and be ready to share the highlights of their group discussion with the class upon completion of the assignment.

Expectation Mapping

During the first session and after ice breaker session, ask the participants to answer the following question: "What do I expect to learn from this training?"

1. Have one of the participants write their contributions on a flip chart sheet.
2. Write down your own list of covered material in the training on another flip chart sheet.
3. Compare the two sheets, commenting on what will and what will not be covered during the training.
4. Set some ground rules for the training sessions. Ask the participants to put these rules on a flipchart and display it in the class.
5. You may get back to those sheets once again at the end of the last session of the training.
6. Benefits of doing this activity:
 - Participants feel better as their opinions are heard.
 - Participants get to know what they should expect from the training.
 - The facilitator gets to know which points to emphasize, which to leave out, and which to add during the training.
7. Expectations from the participants:
 - Must sign the attendance sheet when they arrive for class.
 - Conduct themselves in a positive manner
 - Be punctual, attentive, and participative
8. Explain the contents that are going to get covered one by one and connect it with the expectation mapping done earlier.
9. By the end of this exercise, the participants should have a clear understanding of what to

expect from the session and what are the areas that will not get covered.

Defining Objectives

1. Defining the objectives in the beginning of the units sets the mood for the unit.
2. To begin with the end in mind sets the expectations of the participants as what could be the important takeaways from the session.
3. It is also a way of making participants take responsibility of their own learning process.
4. For the facilitator, the objectives decide a designed path to progress on so that the learning stays aligned and on track.
5. Read the objectives slowly, one by one, and ask the participants to explain what they think it means.
6. At the end of the session, you could again revisit the objectives to find out from the participants about how many objectives have been achieved.

In order to effectively facilitate this workshop:

1. You must have thorough knowledge of the material in the Participant Handbook and be prepared to answer questions about it.
2. You may also wish to read other material to enhance your knowledge of the subject.
3. There may be issues raised with which you are not able to deal, either because of lack of time or knowledge.
You can either state that you will obtain answers and get back to the participants with the information. In case the query can be turned to an assignment to the class, do so. You can work with the participants on the assignment.
4. You must have a very clear understanding of what the participants want to accomplish by the end of the workshop and the means to guide the participants.
5. As the facilitator, it is your responsibility to make sure that all logistical arrangements are made for the workshop. This may involve doing it yourself or confirming that someone else has made all necessary arrangements associated with the workshop. Assume nothing and check everything before the workshop begins.
6. To break the monotony and boredom during sessions, introduce mini breaks in the form of stretching exercises, jokes, some group songs or games.
7. Invite discussion from the participants.
8. Probe the participants further and lead them to come to affirmative conclusions.
9. Let the participants answer. No answer is incorrect.
10. Ask one participant to write all the points on the whiteboard.
11. Build the sessions from the answers provided by the class.
12. Prepare for the sessions in advance so that the resources like flipcharts, handouts, blank sheets of paper, marker pens, etc. can be kept ready.
13. Ensure that resources like board, markers, duster etc. is available before your session starts.

General instructions for role playing:

1. You are not being asked to be an actor or to entertain. The purpose of the role play is to

provide a situation in which you can practice certain skills.

2. When you read the brief, try to imagine yourself in the situation described and behave in a way you feel to be natural – but be conscious of the fact that your role may require a different approach from that which you might normally use.
3. You (and others) may benefit from the change in approach and behavior. Therefore, try to use the approach you feel to be most appropriate for the circumstances described in your brief.
4. The brief is just the starting point. It simply sets the scene and the tone of session or activity. Try not to keep referring to the brief as this will affect the spontaneity of the meeting. Allow the role play to develop as you think it might in real life and change your reactions in line with the behavior and responses of others involved.
5. If you find that you have too little information to answer questions or to describe what has happened in the situation, do feel free to add your own thoughts and ideas. Try to keep these within the framework of the role you are taking and try to make your improvisations as realistic as possible.

UNIT 10.1: Personal Strengths & Value Systems

Key Learning Outcomes

At the end of this unit, participants will be able to:

1. Explain the meaning of health
2. List common health issues
3. Discuss tips to prevent common health issues
4. Explain the meaning of hygiene
5. Discuss the purpose of Swachh Bharat Abhiyan
6. Explain the meaning of habit
7. Discuss ways to set up a safe work environment
8. Discuss critical safety habits to be followed by employees
9. Explain the importance of self-analysis
10. Discuss motivation with the help of Maslow's Hierarchy of Needs
11. Discuss the meaning of achievement motivation
12. List the characteristics of entrepreneurs with achievement motivation
13. List the different factors that motivate you
14. Discuss the role of attitude in self-analysis
15. Discuss how to maintain a positive attitude
16. List your strengths and weaknesses
17. Discuss the qualities of honest people
18. Describe the importance of honesty in entrepreneurs
19. Discuss the elements of a strong work ethic
20. Discuss how to foster a good work ethic
21. List the characteristics of highly creative people
22. List the characteristics of highly innovative people
23. Discuss the benefits of time management
24. List the traits of effective time managers
25. Describe effective time management technique
26. Discuss the importance of anger management
27. Describe anger management strategies
28. Discuss tips for anger management
29. Discuss the causes of stress
30. Discuss the symptoms of stress
31. Discuss tips for stress management

UNIT 10.1.1: Health, Habits, Hygiene: What is Health?

Unit Objectives

At the end of this unit, the participants will be able to:

- Explain the meaning of health
- List common health issues
- Discuss tips to prevent common health issues
- Explain the meaning of hygiene
- Discuss the purpose of Swachh Bharat Abhiyan
- Explain the meaning of habit

Resources to be Used

- Participant Handbook

Ask

- What do you understand by the term “Health?”
- According to you, who is a healthy person?

Say

- Discuss the meaning of health and a healthy person as given in the Participant Handbook.

Ask

- When did you visit the doctor last? Was it for you or for a family member?

Say

- Discuss the common health issues like common cold, allergies etc. Refer to the Participant Handbook.
- Let us do a small activity. I will need some volunteers.

Role Play

- Conduct a small skit with volunteers from the class. Consider one of the villagers has been appointed as a health representative of the village, what measures will you as a health representative suggest to the common villagers to prevent common health issues discussed.
- You will need at least 4 volunteers (Narrator, Health Representative, Head of the Village,

Doctor).

- Explain the health concerns of the village to the Narrator. The Narrator will brief the class about the skit.
- Give the group of volunteers, 5 minutes to do discuss.
- At the end of 5 minutes, ask the group to present the skit to the class assuming them as the villagers.
- The class can ask questions to the group as a common villager.

Summarize

- Through this activity we got some tips on how we can prevent these common health issues.

Say

- Let us now see how many of these health standards we follow in our daily life.

Activity

- Health Standard Checklist from the Participant Handbook.

Ask

- How many of you think that you are healthy? How many of you follow healthy habits?

Say

- Let's do an exercise to find out how healthy you are.
- Open your Participant Handbook section 'Health, Habits, Hygiene: What is Health?', and read through the health standards given.
- Tick the points which you think are true for you.
- Try to be as honest as possible as this test is for your own learning.

Do

- Ensure that all the participants have opened the right page in the Participant Handbook.
- Read aloud the points for the participants and explain if required.
- Give them 5 minutes to do the exercise.
- At the end of 5 minutes, ask the participants to check how many ticks have they got.

Summarize

- Tell them that they need to follow all the tips given in this checklist regularly in order to remain healthy and fit.

Ask

Discuss:

- Is it necessary to practice personal hygiene every day? Why?
- How does a person feel when they do not practice good personal hygiene? Why?
- Can good personal hygiene help a person feel good about his/her self? How?

Say

- Discuss the meaning of hygiene as given in the Participant Handbook.

Activity

- Health Standard Checklist: Hygiene

Say

- Let's do an exercise to find out if we maintain good hygiene habits or not.
- Open the Participant Handbook and read through the Health Standard checklist given.
- Tick the points which you think are true for you.
- Try to be as honest as possible as this test is for your own learning.

Do

- Ensure that all the participants have opened the right page in the Participant Handbook.
- Read aloud the points for the participants and explain if required.
- Give them 5 minutes to do the exercise.
- At the end of 5 minutes, ask the participants to check how many ticks have they got.
- Ask them to calculate their score.
- Tell them what each score indicates by reading aloud what has been mentioned in the Participant Handbook.

Ask

- How many of you have heard about “Swachh Bharat Abhiyan”?
- Can you tell the class what it is about?

Summarize

- Tell them about Swachh Bharat Abhiyan as given in the Participant Handbook and request them to take a pledge to keep our country clean.

Ask

- What is a habit?

Say

- Discuss some good habits which can become a way of life.

Summarize

- Tell them about good and bad habits and the reasons to make good habits a way of life.

UNIT 10.1.2: Safety

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss ways to set up a safe work environment
- Discuss critical safety habits to be followed by employees

Resources to be Used

- Participant Handbook
- Safety signs and symbols
- Safety equipment
- Blank papers
- Pens

Say

- There are many common safety hazards present in most workplaces at one time or another. They include unsafe conditions that can cause injury, illness and death.
- Safety Hazards include:
 - Spills on floors or tripping hazards, such as blocked aisles or cords running across the floor. Working from heights, including ladders, scaffolds, roofs, or any raised work area.
 - Unguarded machinery and moving machinery parts; guards removed or moving parts that a worker can accidentally touch.
 - Electrical hazards like cords, missing ground pins, improper wiring.
 - Machinery-related hazards (lockout/tag out, boiler safety, forklifts, etc.)

Team Activity

Safety Hazards

- There are two parts to this activity.
- First part will cover the potential safety hazards at work place.
- Second part will cover a few safety signs, symbols and equipment at work place.
- Use this format for the first part of the activity.

PART 1		
Hazard	What could happen?	How could it be

Ask 

- How could you or your employees get hurt at work?

Say 

- Let's understand it better with the help of an activity. You will be given a handout within your groups. You have to think about the possible hazards of your workplace, what damage these hazards could cause and about the corrective action.

Do 

- Divide the class into five to six groups of four participants each.
- Put the format on the board for the activity.
- Give blank papers and pens to each group.
- The group is expected to think and discuss the potential safety hazards in the workplace.
- Ask the group to discuss and fill the format using the blank sheet.
- Give the groups 5 minutes for the activity.
- For the second part of the activity, show the class some pictures of safety signs, symbols and equipments.
- Now they will put down a few safety symbols, signs or equipment against the safety hazards identified.
- Give them 5 to 10 minutes to discuss and draw/note it.
- At the end of 10 minutes the groups will present their answers to the class.

Say 

- Now, let's discuss the answers with the class.
- All the groups will briefly present their answers.

Do 

- Ask the audience to applaud for the group presentation.
- Ask de-brief questions to cull out the information from each group.
- Keep a check on time.
- Tell the group to wind up the discussion quickly if they go beyond the given time limit.

Ask

De-briefing

- What did you learn from the exercise?
- As an entrepreneur, is it important to ensure the safety of your employees from possible hazards? Why?

Summarize

- Ask the participants what they have learnt so far.
- Ask if they have any questions related to what they have talked about so far.
- Close the discussion by summarizing the tips to design a safe workplace and non-negotiable employee safety habits.

UNIT 10.1.3: Self-Analysis- Attitude, Achievement Motivation: What is Self-Analysis?

Unit Objectives

At the end of this unit, participants will be able to:

- Explain the importance of self- analysis
- Discuss motivation with the help of Maslow's Hierarchy of Needs
- Discuss the meaning of achievement motivation
- List the characteristics of entrepreneurs with achievement motivation
- List the different factors that motivate you
- Discuss the role of attitude in self- analysis
- Discuss how to maintain a positive attitude .
- List your strengths and weaknesses

Resources to be Used

- Participant Handbook
- Old newspapers
- Blank papers
- Pencils/ pens

Activity

This is a paper pencil activity.

What are the three sentences that describe you the best?
--

What do you need to live happily?

What are your strengths and weaknesses?

Do

- Write the three questions on the board/ flipchart before the session begins.
- Give plain papers and pencils/ pens to each participant.
- Tell participants to write the answer for the three questions on the paper.
- Tell them the purpose of this activity is not to judge anyone but to understand more about self.

Say 

- Discuss the concept of Self-Analysis and motivation with reference to Maslow's Hierarchy of Needs as discussed in the Participant Handbook.

Team Activity **Tower building**

- Each group which will create tower using the old newspapers.

Do 

- Divide the class into groups.
- Give them some old newspapers.
- The task is to create a tower out of the newspapers.
- The group which will create the highest tower standing on its own will be considered the winning group.
- Groups can use as many newspapers as they want to and in any way, they want.

Ask 

- What did the winning group do differently?
- If you were given a chance, how would you have made the tower differently?
- How did you feel while making the tower?
- Did you feel motivated?

Say 

- Discuss the concept of achievement motivation and characteristics of entrepreneurs with achievement motivation as discussed in the Participant Handbook.

Ask 

- Is your attitude positive or negative?

Say 

- Let me tell you a story:

It's Little Things that Make a Big Difference.

There was a man taking a morning walk at the beach. He saw that along with the morning tide came hundreds of starfish and when the tide receded, they were left behind and with the morning sun rays, they would die. The tide was fresh, and the starfish were alive. The

man took a few steps, picked one and threw it into the water. He did that repeatedly. Right behind him there was another person who couldn't understand what this man was doing. He caught up with him and asked, "What are you doing? There are hundreds of starfish. How many can you help? What difference does it make?" This man did not reply, took two more steps, picked up another one, threw it into the water, and said, "It makes a difference to this one." What difference are we making? Big or small, it does not matter. If everyone made a small difference, we'd end up with a big difference, wouldn't we?

Ask

- What did you learn from this story?

Activity

What Motivates You?

- This is an individual activity.
- It is an exercise given in the Participant Handbook.

Do

- Ask the class to open their Participant Handbook and complete the exercise given in the section What Motivates You?
- Ensure that the participants have opened the correct page for the activity.
- Give the class 5 minutes to complete the activity.

Say

- Discuss the concept of attitude and how to cultivate a positive attitude as discussed in the Participant Handbook.

Summarize

- Close the discussion by summarizing how self-analysis, knowledge about what motivates you and your positive attitude can help in your business as well in life.

UNIT 10.1.4: Honesty & Work Ethics

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss the qualities of honest people
- Describe the importance of honesty in entrepreneurs
- Discuss the elements of a strong work ethic
- Discuss how to foster a good work ethic

Resources to be Used

- Participant Handbook

Ask

- What do you understand by honesty?
- Why is it important for entrepreneurs to be honest?
- Do you remember any incident where your honesty helped you in gaining confidence?
- Do you remember any incident where someone lost business due to dishonesty?

Say

- Discussed in the Participant Handbook.
- “Let's understand it better with the help of some case scenarios. You will be given some cases within your groups. You have to analyse the case scenario that has been given to you and then find an appropriate solution to the problem.
- Keep your discussion focussed around the following:
 - What went wrong?
 - Who was at fault?
 - Whom did it impact- the customer or the businessman?
 - How would it impact the business immediately? What would be the long-term impact?
 - What could be done?
 - What did you learn from the exercise?

Do

Divide the class into four groups of maximum six participants depending on the batch size.
Give one case study to each group.
Instruct them to read the case carefully.

- Put down the de-brief questions on the board and ask the groups to focus their discussion around these questions.
- The group is expected to analyse and discuss the case amongst them and find a solution to the given problem.
- Give the class 5-10 minutes to discuss the case and note down their solutions.
- At the end of 10 minutes the team should present their case solution to the class. The presentation can be a narration or a role play.
- Ask the group to select a group leader for their group. The group leader to discuss and assign roles to the group members for the presentation.

Team Activity

Case Study Analysis

Scenario 1

Aakash has a small mobile retail sales and repair shop in Allahabad. He has one of the most popular outlets and has great rapport with his customers. It's around 11 AM when a customer barges in to the shop and starts shouting at Aakash for giving her a faulty instrument. The screen of her mobile is cracked from one side. Aakash remembered thoroughly checking the handset before handing it over to the customer. The customer threatens to sue him and to go to Consumer Court for cheating her. Now, the problem occurred somewhere outside the shop but as other customers were listening to the conversation, it might impact his business. The situation needs to be managed very sensitively. What would you do if you were in Aakash's place?

Scenario 2

Rajni does beautiful Phulkari embroidery on suits and sarees. She has a small home-based business. She has a huge list of customers on Facebook and WhatsApp who give her orders regularly. Smita is one of her old and regular customers. As her sister-in-law's wedding was around the corner, Smita wanted to buy few handcrafted Phulkari duppatta. She placed an order for three duppattas via WhatsApp and requested Rajni to send them as soon as possible. When the parcel reached Smita through courier she found that out of the three duppattas, only one was hand embroidered and the other two had machine embroidery on them. Even the length and the quality of the material was not as desired. Smita was heartbroken. It was a complete waste of money and moreover she couldn't wear what she had planned to during the wedding functions. She sent a message to Rajni on WhatsApp, expressing her anger and disappointment.

Smita has also sent a feedback and expressed her disappointment on the social media... this will directly affect Rajni's business. What would you do if you were in Rajni's place?

Scenario 3

Shankar is a tattoo artist who has a small tattoo showroom in a big, reputed mall in New Delhi. Mr Saksham had an appointment for today, at 11:00 am but he reached at 11:50 am. Meanwhile, Shankar had to reschedule his next appointment. After availing Shankar's services, Mr Saksham started yelling in an abusive language, refusing to pay the requisite amount, and finding faults in the services provided by him. Who was at fault in this case? What should Shankar do? Should he confront Saksham or give in to the demands of the client?

Scenario 4

Shailender is an online cloth reseller who does business through social networking sites such as Facebook and WhatsApp. Priyanka made online payment for a dress to Shailender. But she did not receive the dress for a month. When she asked for a cancellation, Shailender started misleading her. For almost 45 days, he kept promising her that he will pay the amount today, tomorrow, day after etc. Even after repeated calls and messages when she did not receive the payment or the dress, she decided to write a post against him on a popular social media platform. As a result, Shailender lost lots of customers and his flourishing business faced a major crisis. How could this situation have been managed?

Say 

- Now, let's discuss the problem and solution with the larger group.
- The group will first briefly describe the case to the class.
- Then discuss the issue identified and the proposed solution.
- Once the presentation is over, the class can ask their questions.

Do 

- Congratulate each group for the group presentation.
- Ask the audience to applaud for them.
- Ask de-brief questions to cull out the information from each group.
- Keep a check on time. Tell the group to wind up the discussion quickly if they go beyond the given time limit.

Summarize 

- Ask the participants what they have learnt from the exercise/ activity.
- Ask if they have any questions related to what they have talked about so far.
- Close the discussion by summarizing the importance of honesty and work ethics for entrepreneurs.

UNIT 10.1.5: Creativity and Innovation

Unit Objectives

At the end of this unit, participants will be able to:

- List the characteristics of highly creative people
- List the characteristics of highly innovative people

Resources to be Used

- Participant Handbook
- Chart papers
- Marker pens

Ask

- You must be aware of the term 'Rags to riches' and heard stories related to the term.
- What do these stories tell us?
- What was so special about these people?

Say

- Let's have a look at these stories.
- There are some inspiring stories about people which I would like to share with you.
- Narrate these stories to the class.

A.P.J. Abdul Kalam

Who has not heard of A.P.J. Abdul Kalam: Avul Pakir Jainulabdeen Abdul Kalam hailed from a very humble background. His father was a boat owner. To help his family, Kalam would work as a newspaper vendor. With limited resources, he graduated in Physics and studied aerospace engineering. He was instrumental in India's step towards nuclear energy. In 2002, he became the 11th President of India.

Water filter/purifier at source

Two young boys studying in classes 4 and 5, from Lingzya Junior High School, Sikkim designed a simple innovative low-cost water purifier.

Inspiration behind the idea: Most people today prefer to use a water filter/purifier at their home. Both the children have given idea to have filter/purifier at the source of water so that everyone has access to clean water without having to make an investment in purchasing a filter/purifier. Soring's idea is to have a centralized purification system at the point of distribution like water tank while Subash's idea is to have such purifiers attached to public taps.

Source: <http://www.rediff.com/getahead/report/achievers-top-31-amazing-innovations-from-young-Indians/20151208.htm>

Solar seeder

This is a story of a innovative solar seeder and developed by Subash Chandra Bose, a class 8, student from St Sebastiyar Matriculation School, Pudukkottai, Tamil Nadu. Subash has developed a solar powered seed drill, which can undertake plantation for different size of seeds at variable depth and space between two seeds.

Source: <http://www.rediff.com/getahead/report/achievers-top-31-amazing-innovations-from-young-Indians/20151208.htm>

Looms for physically challenged

Now this is really inspiring of two sisters, Elakkiya a Class 6 student and Pavithra a Class 9 student of SRC Memorial Matriculation, Erode, Tamil Nadu.

The two sisters have come up with loom for lower limbed physically challenged. In their loom, they have replaced the pedal operated system with a motor and a gearbox attached to a pulley mechanism.

Source: <http://www.rediff.com/getahead/report/achievers-top-31-amazing-innovations-from-young-Indians/20151208.htm>

Ask 

- If they can, why can't you?
- Discuss concepts related to 'Creativity and Innovation' with the participants as given in the Participant Handbook.

Say 

- Recall the stories on motivation.
- What is the inner drive that motivates people to succeed?
- Let's learn more about such creative and innovative entrepreneurs with the help of an activity.

Team Activity 

- This is a group activity.

- Think of any one famous entrepreneur and write a few lines about him or her.

Activity De-brief

- Why did you choose this particular entrepreneur?
- What is his/her brand name?
- What creativity does he/she possess?
- What was innovative about their ideas?

Do

- Instruct the participants that this is group work.
- Divide the class into small groups of 4 or 6 depending on the batch size.
- Give each group a chart paper.
- Tell the participants they have to write a few lines about any one famous entrepreneur.
- Give the participants 10 minutes to discuss and write.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.
- Ask each group to read out what they have written.
- Ask the de-brief questions.

Summarize

- Summarize the unit by asking participants if they know of some people who are highly creative and innovative in their approach.
- Ask them to share some experiences about these people with the class.

Notes for Facilitation

- Source for stories on innovations:
<http://www.rediff.com/getahead/report/achievers-top-31-amazing-innovations-from-young-Indians/20151208.htm>

UNIT 10.1.6: Time Management

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss the benefits of time management
- List the traits of effective time managers
- Describe effective time management techniques

Resources to be Used

- Participant Handbook

Ask

Does this sound like you?

- I can never get enough time to finish what I am doing in a day.
- I have so many things to do that I get confused.
- I want to go for a walk and exercise, but I just do not have the time.
- I had so much to do, so I could not deliver that order on time.
- I would love to start my dream business; but, I just do not have the time.

Example

- Let's look at these two examples:

Example 1:

Ankita works from home as a freelance writer. She says she can easily put in 8 hours of dedicated work in a day. Because she works from home, she saves money on travel and has a comfortable work routine. But there is a challenge and it is distraction. As she works from home, she can easily just get up and sit down on the sofa to watch TV, wasting valuable time. She may have chores to do, errands to run and bills to pay. She ends up working only two to three hours a day and the result is, her work gets piled up. She is unable to take on more work due to this. Even though her quality of work is appreciated her clients are not very happy about the delay in submission.

Example 2:

Javed has started a successful online selling company from home and makes a good living from his sales. He has set up a small office space in his living room. As both his parents are working full-time, he also has the role of taking care of his two younger siblings. He almost spends half of his day with the younger kids. He does not mind it but it means taking time away from the work. He is still able to manage his online business with these commitments. He wants to spend some more dedicated hours so as to increase his profits. He also wants to look into new business avenues. What should he be doing.

Ask 

- Does this happen with you too?
- Do you find it difficult to prioritize your work?
- Are you able to manage your time effectively?

Activity 

- Conduct a group discussion based on the above examples.
- Direct the discussion on how to prioritize work and manage time effectively.

Say 

- Time management is not only about how hard you work but also about how smart you work.
- Discuss “What is Time Management” with the participants as given in the Participant Handbook.

Ask 

- Why is it important to manage time? How does it help?
- What happens when you don't manage your time effectively?
- Do you find it difficult to prioritize your work?

Say 

- Discuss the benefits of time management given in the Participant Handbook.
- Let's learn effective time management with the help of an activity.

Activity **Effective Time Management**

- This activity has two parts:

Part 1 To Do List

- You have to make a to-do list.
- List all of the activities/ tasks that you have to do.
- Try to include everything that takes up your time, however unimportant it may be.
- If they are large tasks, break them into action steps, and write this down with the larger task.
- You can make one list for all your tasks or have separate to -do lists for personal and professional tasks.

PART 2

URGENT-IMPORTANT GRID

- You have to make a grid as shown on the board here.
- This grid has four boxes. As you can see, each box has a different heading.
- At the heart of the urgent-important grid, are these two questions:
 - Is this task important?
 - Is this task urgent?
- Now, you have to think about each activity that you have written in your to-do list and put it into one of the four categories.
- **What do these categories depict?**
- **Category 1: Urgent/Important**
 - This category is for the highest priority tasks. They need to get done now.
- **Category 2: Not Urgent/Important**
 - This is where you want to spend most of your time.
 - This category allows you to work on something important and have the time to do it properly.
 - This will help you produce high quality work in an efficient manner.
 - The tasks in this category are probably the most neglected ones, but also the most crucial ones for success.
 - The tasks in this category can include strategic thinking, deciding on goals or general direction and planning – all vital parts of running a successful business.
- **Category 3: Urgent/Not Important**
 - This is where you are busy but not productive. These tasks are often mistaken to be important, when they're most often busywork.
 - Urgent but not important tasks are things that prevent you from achieving your goals.
 - However, some may be activities that other people want you to do.
- **Category 4: Not Important and Not Urgent**
 - This category doesn't really include tasks, but rather habits that provide comfort, and a refuge from being disciplined and rigorous with your time management.
 - Some may be activities that other people want you to do.
 - These might include unplanned leisure activities as well.

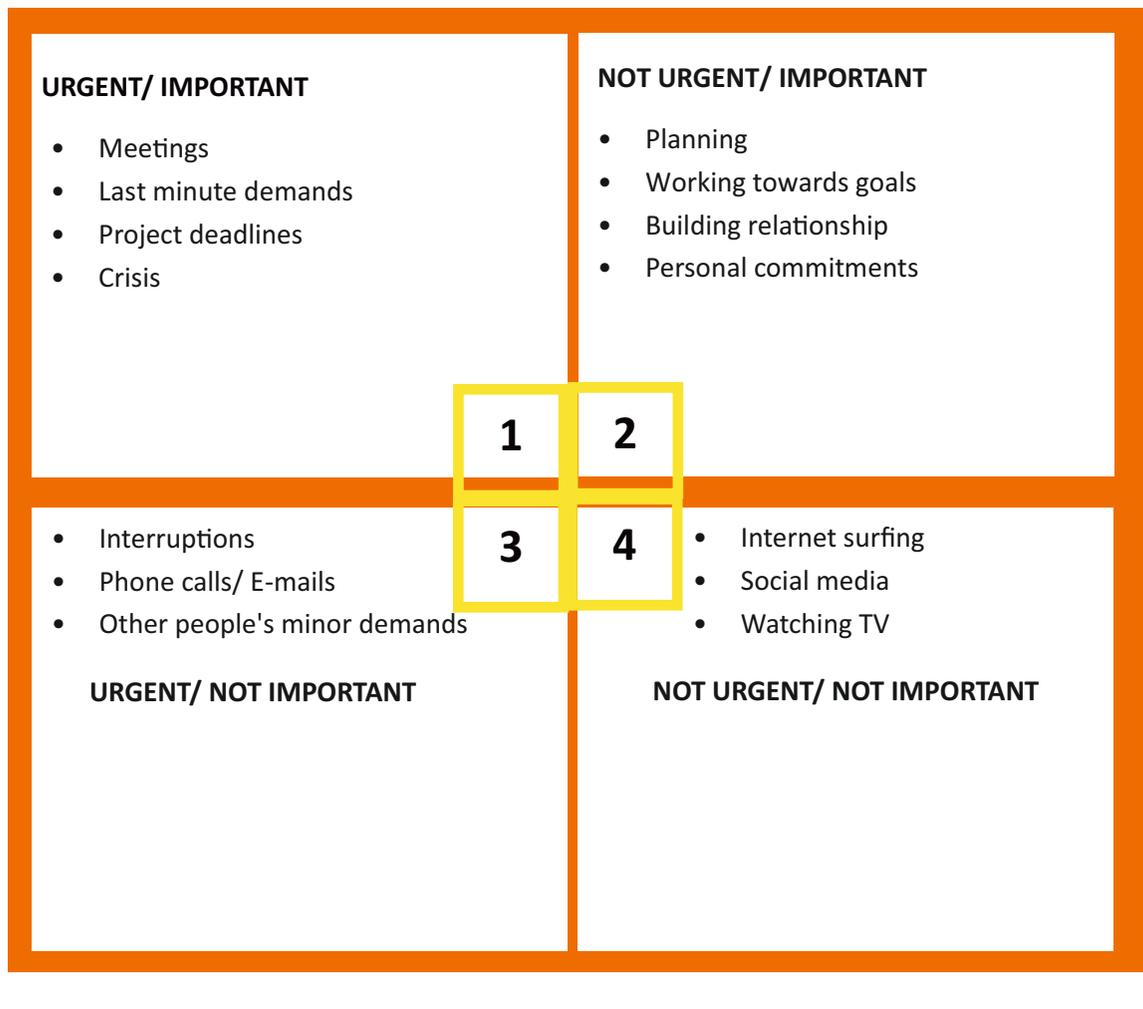
To – Do List Format

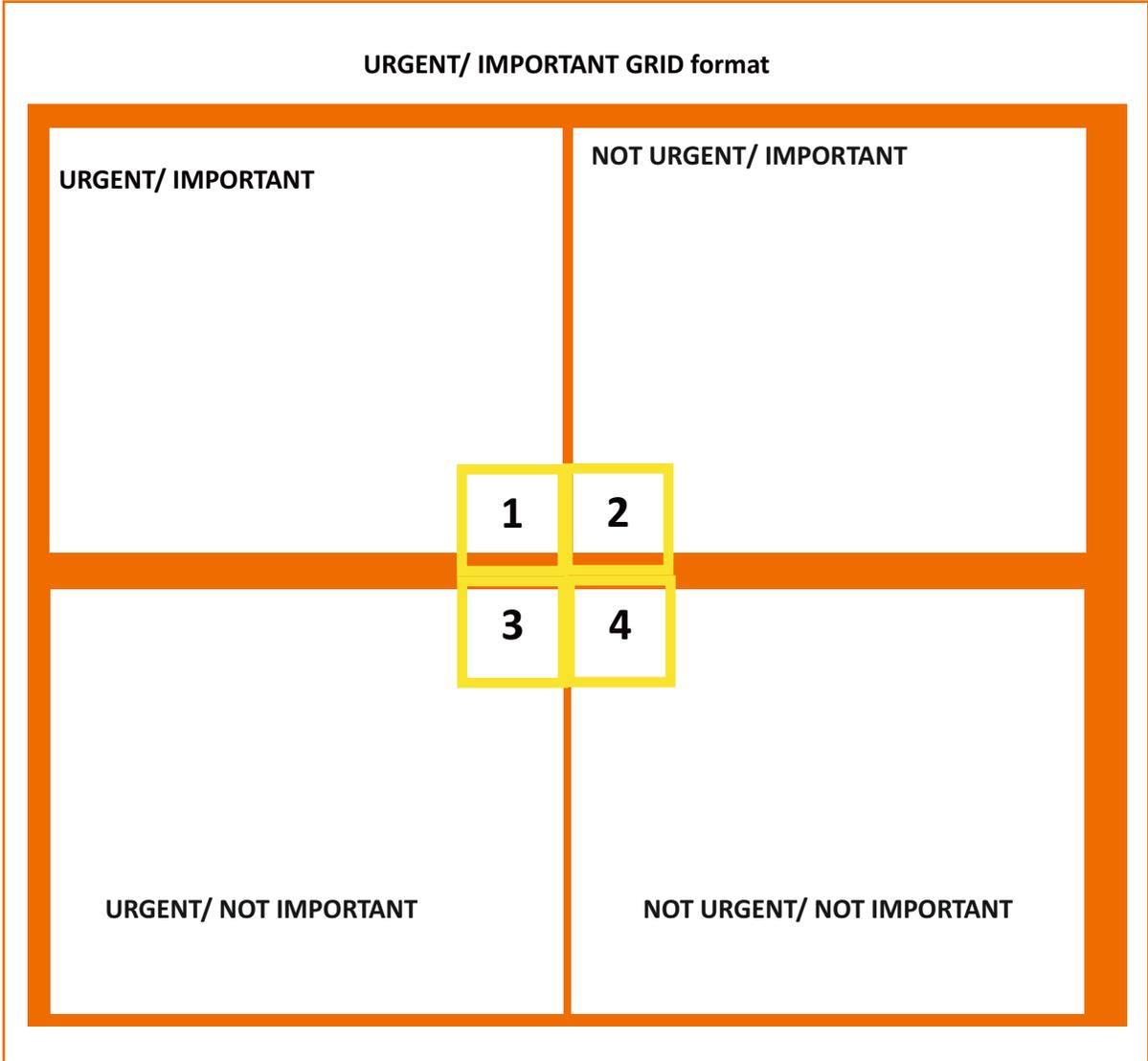
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URGENT-IMPORTANT GRID





Do 

- Put down the formats for the to-do list and the urgent/ important grid on the board.
- Instruct the participants to prepare their to-do list first.
- Give the participants 10 minutes to prepare the list.
- Once done, instruct them to divide the tasks in to-do list into the four categories.
- Explain the four categories to the participants giving examples specific to their context.
- As you explain the categories fill the grid with the type of tasks.
- Give the participants 40 minutes to fill the grid.
- Then explain how to balance the tasks between the four categories.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Say **Activity De-brief:**

How can we balance tasks between the four categories? How to manage time through this grid?

- **Category 1: Urgent/Important**
 - Try to keep as few tasks as possible here, with the aim to eliminate.
 - If you spend too much of your time in this category, you are working solely as a trouble shooter, and never finding time to work on longer-term plans.
- **Category 2: Not Urgent/Important**
 - Plan these tasks carefully and efficiently as they are most crucial ones for success.
 - If necessary, also plan where you will do these tasks, so that you're free from interruptions.
 - Include strategic thinking, deciding on goals or general direction and planning in your planning process.
- **Category 3: Urgent/Not Important**
 - Ask yourself whether you can reschedule or delegate them.
 - A common source of such activities is other people. Sometimes it's appropriate to say "no" to people politely, or to encourage them to solve the problem themselves.
- **Category 4: Not Important and Not Urgent**
 - You also want to minimize the tasks that you have in this category.
 - These activities are just a distraction – avoid them if possible.
 - You can simply ignore or cancel many of them.
 - Politely say "no" to work assigned by others, if you can, and explain why you cannot do it.
 - Schedule your leisure activities carefully so that they don't have an impact on other important tasks.
- Discuss the traits of effective time managers and effective time management techniques as given in the Participant Handbook.

Summarize



- Discuss the traits of effective time managers and effective time management techniques as given in the Participant Handbook.

Notes for Facilitation



- Here is a short story. You can conclude the session narrating the story. To make it more interesting you can perform the demonstration described and discuss the short story.
 - One day an expert in time management was speaking to a group of students. As he stood in front of the group, he pulled out a large wide-mouthed glass jar and set it on the table in front of him. Then he took out a bag of about a dozen rocks and placed them, one at a time, into the jar. When the jar was filled to the top and no more rocks would fit inside, he asked, "Is this jar full?" Everyone in the class said, "Yes." Then he said, "Really?"
 - He reached under the table and pulled out a bucket of gravel (small stones). He dumped some gravel in and shook the jar causing pieces of gravel to work themselves down into the space between the rocks. Then he asked the group once more, "Is the jar full?" By this time, the class began to understand. "Probably not," one of them answered. "Good!" he replied.
 - He reached under the table and brought out a bucket of sand. He started dumping the sand in the jar and it went into all of the spaces left between the rocks and the gravel. Once more he asked the question, "Is this jar full?" No!" the class shouted. Once again he said, "Good." Then he grabbed a jug of water and began to pour it in until the jar was filled to the brim. Then he looked at the class and asked, "What is the point of this illustration? "One student raised his hand and said, "No matter how full your schedule is, if you try really hard you can always fit some more things in it!" "No," the speaker replied, "that's not the point. The truth this illustration teaches us is: If you don't put the big rocks in first, you'll never get them in at all." What are the 'big rocks' in your life? Your children; your loved ones; your education; your dreams; a worthy cause; teaching or mentoring others; doing things that you love; time for yourself; your health; your mate (or significant other). Remember to put these BIG ROCKS in first or you'll never get them in at all. If you sweat about the little stuff (the gravel, sand, and water) then you'll fill your life with little things you worry about that don't really matter, and you'll never have the time you need to spend on the big, important stuff (the big rocks).
- End the story with these lines...

So, tonight, or in the morning tomorrow, when you are reflecting on this short story, ask yourself this question: What are the 'big rocks' in my life? Then, put those in your jar first.

UNIT 10.1.7: Anger Management

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss the importance of anger management
- Describe anger management strategies
- Discuss tips for anger management

Resources to be Used

- Participant Handbook

Ask

- What is anger? Is anger good or bad?
- Is anger normal or an abnormal behaviour? How can anger harm you?
- Why is it important for entrepreneurs to manage their anger?

Say

- Talk about anger and the importance of anger management in entrepreneurs as discussed in the Participant Handbook.
- Let us do a small activity. This is an individual activity.
- Think of the incidents and situations that angered you and hurt you.

Do

- Instruct them to note down these situations under different categories (as given in the Activity).
- Give the class 3-5 minutes to think and note down their answers.
- At the end of 5 minutes, ask some participants to volunteer and present their answers.
- They can also share these situations with their fellow participants if they do not wish to share it with the entire class.

Activity

- Do you remember any incident which has hurt?
 - you physically
 - you mentally
 - your career
 - your relationships.

Ask

- Do you ever get angry?
- What are the things that make you angry?
- Do you remember any incident where your anger management helped you in maintaining healthy relationship?
- Do you remember any incident where someone lost business/ friend/ relationship due to temper (anger)?

Say

- There are a few strategies which can help in controlling your anger. Let's do an activity to understand the anger management process better.
- This is an individual activity.
- Think of the incidents/ situations which trigger your anger (the cause).
- Then think what happened as a result of your anger (the effect).
- You need to come up with some techniques to manage your anger.

Do

- Give the class the anger triggers (the cause) as listed in the activity.
- Put down the activity format (Anger Triggers, Result of your Anger, Anger Management Techniques) on the board and instruct the class to write the answers under different categories.
- Give the class 3-5 minutes to think and note down their answers.
- At the end of 5 minutes, ask the participants who wish to volunteer and present their answers.

Activity

Trigger points and Anger Management Techniques Activity

Anger Triggers

List of triggers that make you angry:
Someone says you did something wrong.
You want something you can't have now.
You get caught doing something you shouldn't have been doing.
You are accused of doing something you didn't do.
You are told that you can't do something.

Someone doesn't agree with you.

Someone doesn't do what you tell him to do.

Someone unexpected happens that messes up your schedule.

Result of your anger:

Write the techniques that you use to manage your anger:

Anger Management Techniques

Say

- Now, let's discuss the problems and solution with all.
- The individual will first briefly describe trigger points to the class.
- Then discuss the result of the anger. Other participants are requested to remain quiet while one is making the presentation.
- Post presentation, other participants may ask questions.

Do

- Congratulate each individual for sharing their points.
- Ask the audience to applaud for them.
- Ask de-brief questions after the presentation to the class.
- Keep a check on the time. Ask the participants to wind up the activity quickly if they go beyond the given time limit.

Ask

De-brief questions:

- In the situation described by the presenter, who was at fault?
- How could you have handled this situation alternatively?

Summarize

- Close the discussion by summarizing the strategies and tips of anger management for entrepreneurs.
- Ask the participants what they have learnt from this exercise/ activity.
- Ask if they have any questions related to what they have talked about so far.

Notes for Facilitation

- Encourage the participants to share information about them while presenting the situations to the class.
- Keep the format of the Activity prepared in a chart paper so that it can be displayed during the session.

UNIT 10.1.8: Stress Management: What is stress?

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss the causes of stress
- Discuss the symptoms of stress
- Discuss tips for stress management

Resources to be Used

- Participant Handbook

Ask

- You are waiting in the reception for an interview or a very important meeting, suddenly your legs are shaky, your hands are cold, you are feeling nervous. Have you ever been in this kind of situation?
- Have you had days when you had trouble sleeping?
- Have you ever been so worried about something that you ended up with a terrible headache?

Say

- You've probably heard people say, "I'm really stressed out" or "This is making me totally stressed."

Ask

- What do you understand by stress?
- What gives you stress?
- How do you feel when you are stressed or what are the symptoms of stress?
- How can stress harm you?
- Why is it important for entrepreneurs to manage stress?

Say

- When we feel overloaded or unsure of our ability to deal with certain challenges, we feel stressed.
- Discuss about stress, causes of stress, and symptoms of stress as discussed in the Participant Handbook.
- Let's understand the causes of stress and how to deal with them with the help of some case scenarios.

- You will be given some cases.
- You have to analyse the case scenario and then find an appropriate solution to the problem.
- This will be a group activity.

Do

- Divide the class into four groups of 5- 6 participants (depending on the batch size).
- Assign one case scenario to each group.
- Instruct them to read the case carefully.
- The group is expected to analyse and discuss the case amongst them and find a solution to the given problem.
- Explain their discussion should result in getting answers for the following questions:
 - What was/ were the cause(s) of stress?
 - Was the stress avoidable or manageable under the given circumstances?
 - If yes, how do you think that the stress could be avoided (managed)?
 - If no, then why not?
- Give the class 10-12 minutes to discuss the case and note down their solutions.
- At the end of 12 minutes, the team should present their case solution to the larger group.
- Ask the group to select a group leader for their group.
- The group leader to discuss and assign roles to the group members for the presentation.

Team Activity

Case Study Analysis

Scenario 1

Akash's alarm doesn't go off and he gets late getting out of the house. He hits traffic and ends up 15 minutes late to work, which his boss notices. He gets to his desk and finds he has to complete 2 reports in next one hour. Just when he is about to begin work, a message pops up "Telecon with the client begins in 10 minutes. Please be in the conference room in 5 minutes ." He is not prepared for the call. He is stressed. He does not want to speak to his boss about this. He is stressed, feeling uncomfortable and sick. Not in a position to attend the call or finish the reports on time.

Scenario 2

While paying his overdue bills, Rahul realised that it's the middle of the month and he has only Rs 500 left in his account. He has already asked all of his friends, and family for loans, which he hasn't paid back yet. He is still contemplating over the issue when his phone rings. His sister's birthday is due next week and she has seen a beautiful dress which she wants to buy but cannot tell the parents as it is a bit expensive. She wishes if Rahul could buy the dress for her. Rahul has promised to buy her the dress for her birthday.

Rahul is stressed, does not understand what to do. He is unable to concentrate on his work and unable to complete the tasks assigned. His team leader has already warned him of the delay.

Scenario 3

Sheela calls the cable company as she has unknown charges on her bill. She has to go through the automated voice mail menu three times and still can't get through to a customer care executive. After 15 minutes of repeated efforts, her call is answered. She explains the entire issue to the customer care executive but before the person could suggest a way out, the call drops.

Now Sheela has to call back and repeat the whole process all over again with a new customer care executive. She is very angry and calls again but cannot connect this time.

She has to leave to office so she decides to call from office and check. When she connects this time, she is angry and argues with the executive on the call. All her co-workers around are looking at her as her volume has suddenly increased. She bangs the phone and ends the call.

Her co-worker Neelam enquires what has happened to her. She ignores her and just walks off. She has become irritable and her behaviour and tone with other co-workers is not acceptable.

Scenario 4

Arpit is a young entrepreneur who started doing business through Facebook few weeks back. He had always been into a job. Although Arpit has very few financial liabilities, it wasn't an easy decision to leave a comfortable job at once and look for newer pastures. Arpit's boss warned him of the consequences and the challenges of starting a business when nobody ever in his family had been in business.

He has not been able to get a good deal till now. This is an important life shift for him which comes with unknown variables. Arpit is nervous and is wondering if he has what it takes to fulfill the requirement of his new role, or the new experiences he's likely to face.

Ask

De-brief questions:

- What was/ were the cause(s) of stress?
- Was the stress avoidable or manageable under the given circumstances?
- If yes, how do you think that the stress could be avoided (managed)?
- If no, then why not?

Say

- Now, let's discuss the problem and solution with the larger group.
- The group will first briefly describe the case to the class.

- Then discuss the issue identified and the proposed solution.
- Post presentation, the other groups may ask questions to the group that has presented.

Do

- Congratulate each group for sharing their points.
- Ask the audience to applaud for them.
- Ask de-brief questions to cull out the information from each group.
- Keep a check on time. Tell participants to wind up the discussion quickly if they go beyond the given time limit.

Say

- While it is common and normal to feel some tension. This feeling nervous and tensed can interfere with your thinking process and can have a negative impact on your performance.
- Stress can deplete the most vibrant of souls. It can have a negative effect on every aspect of a person's life including their health, emotional well-being, relationships, and career. However, one needs to understand the causes and types of stress before looking for ways to manage it.

De-brief:

Scenario 1

The cause of stress was lack of time management and the habit of procrastinating. If Akash would have managed his time well, planned alternate ways to get up on time, finished prior tasks on time and planned for client meetings in advance then he wouldn't have faced stress.

Scenario 2

The cause of stress was lack of financial planning. Rahul should have planned his financial resources well in advance and saved some money for the rainy day. Also, differentiating between needs and wants and keeping a check on non-essential expenditure would have saved Rahul from this situation.

Scenario 3

Sometimes, stress is caused due to external factors instead of internal ones. In this case, the stress was unavoidable because we have no control over this customer care system. Every time, you will get in touch with a new executive and will have to explain all over again. This might cause stress but despite being frustrated and angry there is little that we can do about it. All Sheela could do was to find ways to calm herself down through some breathing exercises and meditation, reading some good book or listening to music and then start afresh.

Scenario 4

A positive, major life change can be a source of good stress. Regardless of how good the change is, it can be stressful. Stress caused by a positive and major life change can be beneficial because it causes a person to step out of their comfort zone and learn new skills. Here, Arpit may become a successful entrepreneur or learn new ways to do things differently. Now let us see this scenario, can I have a volunteer to read out this case to the class

Do 

- Ask one of the participant who can volunteer and read out this scenario to the class.

Scenario 5

Rakesh lives in Kathmandu with his wife and two beautiful daughters Sarah and Sanya. Nepal was hit by a massive earthquake and Rakesh's building collapsed during the earthquake. During evacuation, Rakesh realised that though his wife and Sarah were fine and suffered only minor bruises, Sanya was nowhere in the scene. Panic stricken, he started calling her name and searching her frantically. A little later, he heard a meek voice from beneath the debris. He quickly removed the rubble to find a huge bed. Rakesh was pretty sure that Sanya was trapped underneath. Though he was badly bruised, he gathered all his courage and with all his might, he lifted the several-ton bed to save Sanya's life. Everyone was relieved to see Sanya alive and also extremely surprised to see this father's ability to access superhuman strength.

- Ask the audience to applaud for the participant after the scenario is read completely.
- Discuss the scenario, ask de-brief questions:
 - What kind of stress was Rakesh undergoing in this case?
 - Was the stress avoidable or manageable under the given circumstances?
 - What was the result of the stress?

Say **De-brief:**

- Not all stress is harmful; good stress is actually energizing. This was a case of lifesaving stress, or hero stress, which is an important example of good stress. You may have heard stories in which a person performs an impossible feat of physical strength in order to save their life or the life of someone they love. This type of stress causing a surge of adrenaline is good for us.

Summarize 

- Close the discussion by summarizing the tips to manage stress as given in the Participant Handbook.
- Ask the participants what they have learnt from this exercise/ activity.
- Ask if they have any questions related to what they have talked about so far.

Notes for Facilitation

- Keep printed copies of the activities/ scenarios ready for the session.
- Put down the de-brief questions on a flip chart so that it can be displayed in the class during the activity.
- Encourage participation and make the discussions interactive.

UNIT 10.2: Digital Literacy: A Recap

Key Learning Outcomes

At the end of this unit, participants will be able to:

1. Identify the basic parts of a computer
2. Identify the basic parts of a keyboard
3. Recall basic computer terminology
4. Recall the functions of basic computer keys
5. Discuss the main applications of MS Office
6. Discuss the benefits of Microsoft Outlook
7. Identify different types of e-commerce
8. List the benefits of e-commerce for retailers and customers
9. Discuss Digital India campaign will help boost e-commerce in India
10. Describe how you will sell a product or service on an e-commerce platform

UNIT 10.2.1: Computer and Internet Basics: Basic Parts of a Computer

Unit Objectives

At the end of this unit, participants will be able to:

- Identify the basic parts of a computer
- Identify the basic parts of a keyboard
- Recall basic computer terminology
- Recall the functions of basic computer keys

Resources to be Used

- Participant Handbook
- Computer Systems with the required applications

Say

- Let's take a quick recap of the basic computer parts.
- Discuss 'Basic Parts of Computer' and 'Basic Parts of a Keyboard' with the class as given in the Participant Handbook.

Explain

- Explain all the parts of the computer and the keyboard by demonstrating on the real system.

Ask

- Do you know about internet?
- Have you ever used internet?
- Why do you think internet is useful?
- What was the last task you performed on internet?

Say

- Let's look at some basic internet terms.
- Discuss 'Basic Internet Terms' with the participants as given in the Participant Handbook.

Summarize

- Ask the participants what they have learnt from this exercise/ activity.
- Ask if they have any questions related to what they have talked about so far.

- Close the discussion by summarizing the importance of computer and internet for entrepreneurs.

Practical

- Conduct a practical session.
- Ask the participants to assemble in the computer lab.
- Give some hands-on practice exercises.

Do

- Group the participants for the activity depending on the batch size and the number of computer systems available in the lab.
- Explain the purpose and duration of the activity.
- Ensure the participants complete the practical exercises assigned.

UNIT 10.2.2: MS Office and Email: About MS Office

Unit Objective

At the end of this unit, participants will be able to:

- Discuss the main applications of MS Office
- Discuss the benefits of Microsoft Outlook

Resources to be Used

- Participant Handbook
- Computer Systems with the required applications

Ask

- What is the most frequent activity that you do on the computer?
- Do you know how to make presentations on the computer?

Say

- Give a brief introduction of MS Office as given in the Participant Handbook.
- Discuss the most popular office products. Explain in brief their application, benefits and working.
- Microsoft Word is a word processing program that allows for the creation of documents. The program is equipped with templates for quick formatting. There are also features that allow you to add graphics, tables, etc.
- Microsoft Excel is a tool for accounting and managing large sets of data. It can also simplify analysing data. It is also used to create charts based from data, and perform complex calculations. A Cell is an individual data box which will have a corresponding Column and Row heading. This gives the cell a name, referred to as the Cell Reference. There can be multiple pages in each workbook. Each page, or sheet, is called a Worksheet. When you open a new Excel file, it automatically starts you with three worksheets, but you can add more.

Explain

- Explain the working and frequently used features of Office on a real system.

Ask

- What do you know about e-mails?
- Do you have an email id?
- How often do you check your e-mails?

Say

- Communication is vital for every business. The fastest and the safest way to communicate these days are through emails. MS Outlook helps to manage your emails in a better way and also offers a host of other benefits.
- Discuss “Why Choose Microsoft Outlook?” with the participants as given in the Participant Handbook.

Do

- Ask the participants to assemble in the computer lab.
- Explain the working of Outlook on a real system.

Demonstrate

- Demonstrate how to create email id.
- Demonstrate how to write new mails, send mails.
- Demonstrate how to use MS Office application to create a letter and send it as attachment in an email.
- Demonstrate how to use other MS Office applications.

Practical

- Give some hands-on practice exercises
- Group the participants for the activity depending on the batch size and the number of computer systems available in the lab.
- Explain the purpose and duration of the activity.

Summarize

- Ask the participants what they have learnt from this exercise/ activity.
- Ask if they have

UNIT 10.2.3: E-Commerce

Unit Objective

At the end of this unit, participants will be able to:

- Identify different types of e-commerce
- List the benefits of e-commerce for retailers and customers
- Discuss Digital India campaign will help boost e-commerce in India
- Describe how you will sell a product or service on an e-commerce platform

Resources to be Used

- Computer Systems with internet connection
- Participant Handbook

Ask

- How many of you have done shopping online?
- Can you name at least five shopping websites?
- What is the product that you most frequently buy online?
- Why do you do shopping online instead of going to the market?

Say

- Give a brief introduction of “What is E-commerce”. Refer to the Participant Handbook.
- E-commerce emerged in the early 1990s, and its use has increased at a rapid rate. Today, many companies sell their products online. Everything from food, clothes, entertainment, furniture and many other items can be purchased online.

Ask

- What other types of transactions have you performed on the internet other than buying products?

Say

- Give examples of e-commerce activities from Participant Handbook.

Team Activity

E-commerce examples

- Instruct the participants to list some of the payment gateways that they have used for e-commerce activities.

- Give them 5 minutes to make this list.
- Discuss payment gateways and transaction through payment gateways.
- Conclude the discussion by mentioning how important e-commerce has become in our day to day transactions.

Say

- E-commerce activities can be classified based on the types of participants in the transaction.
- Discuss “Types of E-commerce” from the Participant Handbook.

Do

- Discuss all types of E-commerce by giving examples and names of some popular websites which use them.
- Make the discussion interactive by asking the class to share some popular e-commerce sites of each type.

Say

- E-commerce activities bring a host of benefits for both, retailers and customers.
- Discuss benefits of E-commerce from the Participant Handbook.

Explain

- The majority of the population that uses E-commerce activities lives in tier-1 and tier-2 cities. To encourage the use of digital money in tier -3 and 4 areas, PM Mr. Modi launched the “Digital India Campaign”.
- Discuss “Digital India Campaign” from the Participant Handbook.
- By Digital India project the government will deliver services via mobile connectivity and in doing so, is expected to bring the internet and broadband to remote corners of the country. This connectivity will in turn enhance e-commerce activities also. Furthermore, the Indian Government is also modernizing India Post and aims to develop it as a distribution channel for e-commerce related services.

Say

- Now let us discuss how to sell a product using E-commerce.
- Every product has to be sold on a platform on the internet. Think of it as a shop that you have to sell your product. Now this shop can be your own or shared or rented. If the shop is your own or rented there will be only your products in that shop. If the shop is shared, there will be products of multiple sellers in that shop. A common example is a departmental store which has products from multiple brands in the shop.

- Similarly, in E-commerce the shop is the website where your products are displayed. If it is your own website it will exclusively showcase your products. In this case the cost that you will incur will be:
 - Developing the website
 - Hosting the website
 - Maintenance of the website
- If you rent a website it will also showcase your own products but the development, hosting and maintenance parts goes to the owner. This saves time and the cost to manage these activities.
- Smaller companies usually go for renting a website and the bigger ones develop their own website.
- The concept of shared platforms has become very popular in recent times. In this platform, the sellers have to register and then they can sell their goods on a common platform. Among the most popular of these are Amazon, Myntra, Flipkart, etc.

Role Play

- Tell the participants to choose a product or service that they want to sell online.
- Tell them to write a brief note explaining how they will use existing e-commerce platforms or create a new e-commerce platform to sell their product or service.

Ask

- How much money are you carrying in your wallet?
- Do you have a credit/debit card?
- How do you make payments while doing online shopping?

Say

- Demonetization has made carrying cash in the wallet very difficult. People either shop through cards or some other form of digital money.
- So, what do you think is digital money?
- In this form, the money is both paid and received digitally. There is no hard cash involved. It is an instant and convenient way to make payments.
- There are various types of digital payments. Let us discuss some of them in brief here.
- The first one is the most commonly used system i.e. the cards. Debit card, credit card, prepaid card, all fall under this category.
- Then is the e-wallet or the mobile wallet. This has become the most used form of digital money after demonetization. Examples are Paytm, state bank buddy, Free charge, etc.
- Many other forms of digital money are also coming up in market like mobile apps, Aadhar card-based payment, etc.

Do 

- Demonstrate how to make and receive payments through digital models like Paytm and state bank buddy.

Ask 

- Why do you think people have started using digital money instead of hard cash? Is demonetization the only reason?

Say 

- Digital money gives a lot of advantages over the conventional hard cash. Some of them are:
 - Digital payments are easy and convenient. You do not need to take loads of cash with you, a mobile phone or a card will suffice.
 - With digital payment modes, you can pay from anywhere anytime.
 - Digital payments have less risk.

Summarize 

- Ask the participants what they have learnt from this exercise/ activity.
- Ask if they have any questions related to what they have talked about so far.
- Close the discussion by summarizing the importance of e-commerce and digital money.

UNIT 10.3: Money Matters

Key Learning Outcomes



At the end of this unit, participants will be able to:

1. Discuss the importance of saving money
2. Discuss the benefits of saving money
3. Discuss the main types of bank accounts
4. Describe the process of opening a bank account
5. Differentiate between fixed and variable costs
6. Describe the main types of investment options
7. Describe the different types of insurance products
8. Describe the different types of taxes
9. Discuss the uses of online banking
10. Discuss the main types of electronic funds transfer

UNIT 10.3.1: Personal Finance – Why to Save?

Unit Objective

At the end of this unit, participants will be able to:

- Discuss the importance of saving money
- Discuss the benefits of saving money

Resources to be Used

- Participant Handbook

Ask

- How many of you save money?
- Why do you feel the need to save it?
- Do you plan your savings?
- Where do you keep the money you save?
- How do you use the money that you have saved?

Example

- Let's look at these two examples:

Example 1:

Suhani works in a good company and earns Rs.30, 000 months. She always saves 5000 per month and keeps it aside as a personal saving. She keeps the money at home and has saved quite a lot. One day her mother has a medical emergency and has to be taken to the hospital. Her family is worried about the amount they have to spend for the treatment. It will cost them atleast 40,000.

Suhani says tells her family not to worry and that she has about 50,000, which she has saved over the months.

Example 2:

Jasmeet works in the same company and earns the same as Suhani. She is very fond of shopping and spends most of her money on buying new clothes. At the end of the month, she is always asking her father for money as her pay is finished.

Ask

- Who do you identify with –Suhani or Jasmeet?
- How do you think Suhani manages to save money which Jasmeet is unable to do?

Say 

- We should always set aside some and save some money from our monthly pay. The future is unpredictable. Saving money not only gives you a sense of financial security but it can be used in case of emergencies.
- Discuss “Importance of Saving” with the participants as given in the Participant Handbook.

Ask 

- What are the benefits of saving money?
- What does being financially independent mean to you?

Say 

- Discuss “Benefits of Saving” with the participants as given in the Participant Handbook.
- Now let us continue with Suhani's story. Suhani has told her family not to worry and that she has about 50,000, which she has saved over the months. The family is happy about Suhani's decision of saving money, which will be of great help for them now. Suhani is going to the hospital today to pay the first instalment for the treatment. Suddenly finds only 35,000 in her cash box when she counts and does not remember using it. She has not kept any record and now she is upset.

Ask 

- Was it a good decision by Suhani to save a part of her earnings every month?
- Was it a wise decision to keep all her savings as cash in a cash box?
- Could she have managed to save money in a better and more effective manner?
- Do you want to learn how to save money and use it effectively?

Say 

- Let's learn personal saving with the help of a group activity.

Team Activity

Personal Finance- Why to save

- This activity has two parts:

PART 1

WAYS TO SAVE MONEY

- You are earning 30,000/- per month. You have recently changed your job and have to move to a metropolitan city. You are now living as a paying guest paying 8,000/- per month. Your other estimated expenditures like travel, food, recreation would be around Rs. 17,000 per month.
- Make a list of different ways to save money.

PART 2

HOW WILL YOU USE THE MONEY?

- After a year how much have you been able to save?
- How will you use the money that you have saved?

Do

- Divide the class into groups of four.
- Instruct the participants to think and prepare a list of the various ways they can save money.
- Give the participants 10 minutes to prepare the list.
- Once done, instruct them to think of how they could use the money they have saved.
- Give the participants 10 minutes to prepare the list.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Activity De-brief

- What were the different ways you could save money?
- How much money were you able to save?
- How will you use the money you have saved in one year?

Say

- Discuss the importance of personal finance and why it is important to save money.

Summarize

You can summarize the session by discussing:

- The importance of saving money.
- Ways to save money.
- How the money saved can be used for different purposes.

UNIT 10.3.2: Types of Bank Accounts, Opening a Bank Account

Unit Objective

At the end of this unit, participants will be able to:

- Discuss the main types of bank accounts
- Describe the process of opening a bank account

Resources to be Used

- Account opening sample forms
- Participant Handbook

Ask

- How many of you save money?
- Where do you keep the money you save?
- How many of you have a bank account?
- What type of account do you have?

Example

- Let's look at the given example:

Reena is in the third year of college but in the evening, she gives tuitions for children living in her colony. She earns 15,000/- per month. As her students stay in different parts of the city, she has to walk a lot.

To save time, she decides to buy a second-hand scooter for herself. But she has to save money for it. Her class mate advises her to open a recurring deposit account in the bank.

She goes to the bank close to her home. The personal manager gives her some forms to fill. She is confused as she has never done this before. Her elder sister has an account in the same bank. She asks for help from her sister. She goes to the bank the next day with her sister. The personal banker gives her a list of documents that she will need to submit with the form for opening an account. The banker advises her to open a 6 months recurring deposit.

Ask

- Do you try to save money monthly but have to spend it on unforeseen expenditure?
- Have you ever thought of depositing your savings in a bank?

Say

- Before opening a bank account, you need to know the types of accounts we have in India.
- Discuss “Types of Bank Accounts” with the participants as given in the Participant Handbook.

Ask

- Can someone say what are the different types of bank accounts?

Say

- Let's learn about the different types of bank accounts through an activity.

Team Activity

- Divide the class in four groups.
- Label the groups as savings account, current account, recurring account and fixed deposit.
- On a chart paper, ask them to write the key points of their account.

Activity De-brief

- Ask each group to present the key points of their account.

Say

- Now that you know about the four different types of accounts, let's learn how to open a bank account.
- Discuss “Opening a Bank Account” with the participants as given in the Participant Handbook.
- Discuss “Tips” that the participants should keep in mind while opening a bank account as given in the Participant Handbook.

Ask

- What are the main documents required for opening a bank account?
- What are some important points to ask the bank personnel while opening an account?

Say

- Mention officially valid KYC documents (refer to the Participant Handbook)
- Now, let's understand the procedure of opening a bank account through an activity.

Team Activity

Opening a Bank Account

- This activity is done in groups.
- Divide the class in groups of four or six

PART 1

FILLING A BANK ACCOUNT OPENING FORM

- You have to fill a bank opening form.
- You can refer to the section “Opening a Bank Account” of your Handbook for reference.
- List all the steps that you will be required to fill in the form.
- List the documents that you need for filling the form.
- Now fill in the form.

Activity De-brief

How did you design the form?

- What all details did you fill in the form?
- What were your KYC documents?
- How would this activity help you in future?

Do

- Instruct the participants to read the section “Opening a Bank Account” of the Participant Handbook.
- Give each group one sample account opening form.
- Give the participants 5 minutes to read the form.
- Give them 15 minutes to fill it.
- Assist them by explaining each category and how to fill it.
- Keep a check on time.
- Tell the group to wind up quickly if they go beyond the given time limit

Summarize

Note:

- You can summarize the unit through a role play.
 - A person wanting to open an account in the bank.
 - What is the procedure that he will go through?
 - Discuss the key points of different types of bank accounts.
 - How to select the type of account
 - How to fill the account opening form.

- A sample account opening form is given in the following page for reference. Use it for the activity in the class.

Sample Bank Account Opening form.

XXX Bank

Photograph

SAVING BANK ACCOUNT OPENING FORM

Account No.: _____ Date: _____

Name of the Branch	
Village/Town	
Sub District / Block	
District	
State	
SSA Code / Ward No.	
Village Code / Town Code	Name of Village / Town

Applicant Details:

Full Name	Mr./Mrs./Ms.	First	Middle	Last Name
Marital Status				
Name of Spouse/Father				
Address				
Pin Code				
Tel No. Mobile			Date of Birth	
Aadhaar No.			Pan No.	
MNREGA Job Card No.				
Occupation/Profession				
Annual Income				
No. of Dependents				

Detail of Assets	Owning House : Y/N	Owning Farm : Y/N		
	No. of Animals :	Any other :		
Existing Bank A/c. of family members / household	Y / N	If yes, No. of A/cs. _____		
Kisan Credit Card	Whether Eligible	Y / N		
I request you to issue me a Rupay Card .				
I also understand that I am eligible for an Overdraft after satisfactory operation of my account after 6 months of opening my account for meeting my emergency/ family needs subject to the condition that only one member from the household will be eligible for overdraft facility. I shall abide by the terms and conditions stipulated by the Bank in this regard.				
Declaration:				
I hereby apply for opening of a Bank Account. I declare that the information provided by me in this application form is true and correct. The terms and conditions applicable have been read over and explained to me and have understood the same. I shall abide by all the terms and conditions as may be in force from time to time. I declare that I have not availed any Overdraft or Credit facility from any other bank.				
Place:		Signature / LTI of Applicant		
Date:				
Nomination:				
I want to nominate as under				
Name of Nominee	Relationship	Age	Date of Birth in case of minor	Person authorised in case to receive the amount of deposit on behalf of the nominee in the event of my /minor(s) death.
Place:				
Date:				
Signature / LTI of Applicant				
Witness(es)*				
1. _____				
2. _____				
*Witness is requires only for thumb impression and not for signature				

UNIT 10.3.3: Costs: Fixed vs. Variables: What are Fixed and Variable Costs?

Unit Objective

At the end of this unit, participants will be able to:

- Differentiate between fixed and variable costs

Resources to be Used

- Participant Handbook
- Blank sheets of paper
- Pens

Ask

- What is cost?
- Will a telephone bill fall under the category of a fixed or variable cost?

Say

- Discuss: Fixed and Variable cost with examples. Let us do a small activity.

Team Activity

Identify the type of cost

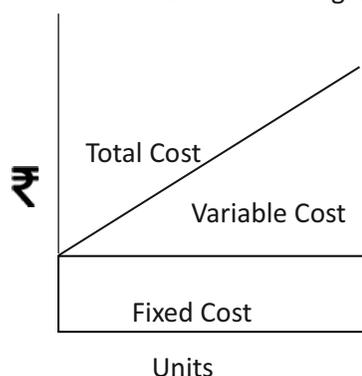
1. Rent
2. Telephone bill
3. Electricity bill
4. Machinery
5. Insurance
6. Office supplies/ Raw materials
7. Employee salaries
8. Commission percentage given to sales person for every unit sold
9. Credit card fees
10. Vendor bills

Do 

- Divide the class into two groups. Read out the list of costs given in the activity.
- Read out each item from the cost list and ask the groups in turns to identify whether it is a fixed or variable cost.

Say 

- We saw that your utility bills like rent, electricity, telephone etc. are all fixed costs because you have to pay it every month.
- Variable costs is an expense which varies with production output or volume. For example, commission, raw material etc.
- Discuss “Cost: Fixed vs. variables” with the participants as given in the Participant Handbook.
- Illustrate the relation between the costs with a graph.



- Let's learn the difference between fixed and variable cost with the help of an activity.

Team Activity **Fixed vs. Variable Costs**

- This is a group activity.
- You want to start your own entrepreneur business.
- State the type of business you want to start.
- List down all the cost or requirements for your business.
- How will you differentiate between the fixed and variable cost.

Activity De-brief

- What is the total cost of your business?
- What are the fixed costs?
- What are the variable costs?
- How did you differentiate between the fixed and variable costs?

Do

- Instruct the participants that this is group work.
- Divide the class into small groups of 4 or 6.
- Give each group a sheet of paper.
- Tell the participants that they have to start their own entrepreneur business.
- Ask them the type of business they want to start.
- Instruct them to differentiate between the fixed and the variable costs of the business they want to start.
- Give the participants 15 minutes to discuss and write.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Summarize

- Note: You can summarize the unit either by having a role play between a consultant and a budding entrepreneur explaining the differences between fixed and variable costs or by discussing the key points of the unit.

Notes for Facilitation

Answers for the activity - Identify the type of cost

1. Rent	(Fixed)
2. Telephone bill	(Fixed)
3. Electricity bill	(Fixed)
4. Machinery	(Fixed)
5. Insurance	(Fixed)
6. Office supplies/ Raw materials	(Variable)
7. Employee salaries	(Fixed)
8. Commission percentage given to sales person for every unit sold	(Variable)
9. Credit card fees	(Variable)
10. Vendor bills	(Variable)

UNIT 10.3.4: Investments, Insurance and Taxes

Unit Objective

At the end of this unit, participants will be able to:

- Describe the main types of investment options
- Describe the different types of insurance products
- Describe the different types of taxes

Resources to be Used

- Participant Handbook

Ask

- Ask the participants- “What do you see first thing in when you get your mobile bill? Apart from the amount and due date do you have a look at the taxes you are being billed for?”
- Why do you think people get their cars insured or have a medical insurance?
- You have saved money and want to invest it; how would you decide what is the best investment for your money?

Example

- Let's have a look at a few scenarios.

Ranbir has sold his house and deposited the money in his bank. His Chartered Accountant tells him that he will have to re-invest the money otherwise he will have to pay capital tax. What is capital tax and how is it different from income tax?

Jasmeet and Anup are blessed with a baby girl. They decide to have an insurance policy that will mature when their daughter is ready to higher education.

Shivani is working in a corporate office and getting good pay. She will have to pay income tax, so she decides to invest her money in tax saving schemes. She goes to the bank manager to discuss the best products in which she can invest.

Say

- Discuss the Investment, Insurance and Taxes as given in the Participant Handbook.

Ask 

- How do investments, insurances and taxes differ from each other?

Say 

- Let's learn the differences between the three by having an activity.

Say 

- We will have a quiz today.

Team Activity 

- The activity is a quiz.

Do 

- Divide the class into groups of three and give a name to each group
- Explain the rules of the quiz. For each correct answer, the group gets 1 mark. If the group is unable to answer the question is rolled over to the next group.
- Explain the purpose and duration of the activity.
- On the blackboard write the names of the groups.
- Ask the questions of the quiz.
- Keep a score for the groups.
- Set guidelines pertaining to discipline and expected tasks.

Summarize 

- Summarize the unit by discussing the key points and answering question

Notes for Facilitation **Questions for the quiz**

1. Mr. Das gets monthly return on one of his insurance policies. Name the policy?

Money Back Life Insurance

2. What are bonds?

Bonds are instruments used by public and private companies to raise large sums of money.

3. Who issues the bonds?

Private and public companies issue the bonds.

4. Why are bonds issued?
To raise large amount of money as it cannot be borrowed from the bank.
5. Who is the buyer of stocks and equities?
The general public is the buyer.
6. What types of scheme is the Sukanya Samriddhi Scheme?
Small Saving Scheme
7. What is the difference between mutual and hedge funds?
Mutual funds are professionally managed financial instruments that invest the money in different securities on behalf of investors. Hedge funds invest in both financial derivatives and/or publicly traded securities.
8. Why is a loan taken from the bank to purchase real estate?
To lease or sell to make profit on appreciated property price.
9. Name the two types of insurances?
Life Insurance and Non-life or general insurance
10. Which insurance product offers financial protection for 15-20 years?
Term Insurance
11. What is the benefit of taking an endowment policy?
It offers the dual benefit of investment and insurance.
12. What are the two benefits of a Whole Life Insurance?
It offers the dual benefit of investment and insurance
13. Which policy covers loss or damage of goods during transit?
Marine Insurance
14. After what duration is the income tax levied?
One financial year
15. What is long term capital gain tax?
It is the tax payable for investments held for more than 36 months.
16. Name the tax that is added while buying shares?
Securities Transaction Tax
17. What is the source of corporate tax?
The revenue earned by a company.
18. Name the tax whose amount is decided by the state?
VAT or Value Added Tax
19. You have bought a T.V. What tax will you pay?
Sales Tax
20. What is the difference between custom duty and OCTROI?
Custom duty is the charges payable when importing or purchasing goods from another country. OCTROI is levied on goods that cross borders within India.

UNIT 10.3.5: Online Banking, NEFT, RTGS, etc.

Unit Objective

At the end of this unit, participants will be able to:

- Discuss the uses of online banking
- Discuss the main types of electronic funds transfer

Resources to be Used

- Participant Handbook
- Computer System with internet connection
- Debit card

Ask

- When was the last time you visited a bank?
- How do you pay your bill for electricity and telephone?
- Have you ever tried to transfer money from one bank account to another bank account using the online banking facility?

Say

- Most of us lead a busy life. Time has become more important than money. In this busy schedule, no one has time to stand in bank queues. That's where Online Banking comes in. Online banking or internet banking means accessing your bank account and carrying out financial transactions through the internet.
- Discuss “What is online banking?” from the Participant Handbook.
- There are various advantages of online banking:
 - It saves time, as you need to visit the branch.
 - You can conduct your banking transactions safely and securely without leaving the comfort of your home.
 - Online Banking also gives you round the clock access.
 - Online Banking makes it possible for you to pay your bills electronically.

Do

- Show them how they can use the internet banking.
- Use the computer system and show the demo videos on how to use internet banking provided on most banking sites. the computer system.
- Tell the class the various features of online banking :
 - Through their website set-up your online account.

- Choose a secure username and password.
- Set-up your contact information.
- Once your information is verified, you are good to go.
- Once you enter the portal explore all the features and learn your way through the portal.

Say



- One of the biggest advantage that online banking offers, as discussed earlier, is transferring money from one account to another. This transaction is called electronic funds transfer. Electronic transfers are processed immediately with the transferred amount being deducted from one account and credited to the other in real time, thus saving time and effort involved in physically transferring a sum of money.
- Discuss “Electronic Funds Transfer” from the Participant Handbook.

Do



- Discuss how to transfer money from one account to another using online banking (NEFT/ RTGS, etc.).
- Illustrate with an example.

Summarize



- Close the discussion by summarizing the about online banking.
- Ask the participants if they have any questions related to what they have talked about so far.

UNIT 10.4: Preparing for Employment & Self-Employment

Key Learning Outcomes



At the end of this unit, participants will be able to:

1. Discuss the steps to follow to prepare for an interview
2. Discuss the steps to create an effective Resume
3. Discuss the most frequently asked interview questions
4. Discuss how to answer the most frequently asked interview questions
5. Identify basic workplace terminology

UNIT 10.4.1: Interview Preparation: How to Prepare for an Interview?

Unit Objective

At the end of this unit, participants will be able to:

- Discuss the steps to follow to prepare for an interview

Resources to be Used

- Participant Handbook

Ask

- Have you ever attended an interview?
- How did you prepare before going for an interview?

Say

- An interview is a conversation between two or more people (the interviewer(s) and interviewee) where questions are asked by the interviewer to obtain information from the interviewee.
- It provides the employer with an opportunity to gather sufficient information about a candidate and help them select the ideal candidate.
- It also provides the interviewee with an opportunity to present their true potential to the employer, build confidence and help make a decision about the job by asking questions regarding designation, salary, perks, benefits, promotions, transfers, etc.
- Let's do an activity to understand how to prepare for interviews better.

Activity 1

- Introducing Yourself

Do

- Select a participant and ask him/her to answer the following questions: "What can you tell me about yourself?"
- Give the participant at least one minute to speak.
- Once he/she is done, ask the rest of the participant what they gathered about the participant who was providing information.
- Now repeat the exercise with five other participants.

Ask

- What information you should include when you are describing or introducing yourself in an interview?
- What information you should not include when you are describing or introducing yourself in an interview?

Say

- Tell the participants that when an interviewer asks you to say something about yourself, he/she is not asking you to present your life history.
- Introduction should be short and crisp and should present you in a positive light. It should include the following points:
 - Any work experience that you might have
 - A brief summary of your educational qualifications
 - Your strengths and achievements
 - Any special projects that you might have been part of
- The following topics should be avoided during an introduction:
 - Detailed description of your family (unless you are specifically asked to do so)
 - Too much information about your weaknesses
 - Information that is not true

Do

- Congratulate each participant for sharing their points.
- Ask the audience to applaud for them.
- Ask de-brief questions to cull out the information from each group.
- Keep a check on time.

Activity 2

- Planning the right attire

Do

- Describe 2 individuals to the participants. One is wearing a casual t-shirt, jeans, and slippers. He has not combed his hair and neither has he trimmed or shaved his beard. The other individual is dressed formally with a shirt and pant and is well-groomed. He has also worn formal shoes and a belt. Ask the participants which person would they prefer to hire in their organization and why?

Summarize

- Close the discussion by discussing 'how to prepare for an interview' as discussed in the Participant Handbook.
- You can add the following points to it:
 - Tell the participants to create a positive and good impression in an interview. It is important for them to prepare for an interview beforehand.
 - The interviewer analyses not only your technical knowledge in relation to the job, but also whether or not you are a fit for the organization.
 - Every employer looks at the whole package and not just one or two things in isolation. Therefore, the way you dress and the way you present yourself is also important along with your skills and talents.
 - The participants will get only one chance to create a good first impression.

UNIT 10.4.2: Preparing an Effective Resume: How to Create an Effective Resume?

Unit Objective

At the end of this unit, participants will be able to:

- Discuss the steps to create an effective Resume

Resources to be Used

- Participant Handbook
- Blank Papers
- Pens

Ask

- When preparing for an interview, what are the most important things that you need to do?
- What documents do you carry with you, when you go for an interview?
- What is a resume?
- Why do you need a resume?

Say

- Resume is not just a sheet of paper with your qualifications printed on it.
- It is a selling tool that will help the employer to see how and what you can contribute for company.
- Talk about the steps involved in creating an effective/attractive resume discussed in the Participant Handbook.
- Now let's prepare a resume to understand the process in a better way.

Do

- This is an individual activity.
- Give the details of the activity.
- Instruct them to read the activity carefully.
- The participant is expected to make an attractive resume based on the information provided.
- Give the class 25-30 minutes to study the case and create a resume.
- At the end of 30 minutes, the participants should exchange the resume with the person sitting next to him or her.
- Every participant will evaluate the resume prepared with their fellow participants.

Say

- Do you think the candidate should apply for the job posting described in the advertisement?
- We have already discussed the steps involved in creating an effective/attractive resume.
- Now let's prepare a resume for the candidate details given in the activity.

Activity

Case Study Analysis

- In the first section of the activity, you are being given the information about a candidate who is applying for a particular job.
- In the second section, you are being given the detailed description of the job posting. Create a resume for the candidate to apply for the job posting.
- Use the information that has been provided about the candidate to create this resume

Candidate Details

Nipesh Singla was born on 20th April, 1988 in Chandigarh, India. He currently resides at 1XX7, Sector XX D, Chandigarh –160018. His mobile number is 988XXXXX01, and e-mail address is nxxxxxxxla@gmail.com. Nipesh attended middle and senior school at Government Boys Senior Secondary School, Sector 15, Chandigarh. He has been a very talented boy since school. He was fond of painting and watching old Hindi movies. As part of a school charity program, he volunteered at the children's hospital during his senior years.

In July 2007, he joined Westwood School of Hotel Management, Zirakpur to pursue a diploma course in Hotel Management and Catering. After completing this course, he joined XYZ Group of Hotels as a Housekeeping intern in June 2010 for six months. In this role, he was responsible for cleanliness and maintenance of one floor in the hotel. Taking advantage of his strong interpersonal skills, he also got opportunities to make housekeeping arrangements for corporate meetings. While pursuing education, he gained working knowledge of Microsoft Word, Excel, Access and PowerPoint.

Nipesh is detail-oriented, flexible and adaptable. He has successfully worked with a diverse work force. He gelled well with his peers, both in college and during his internship. After completing the internship, his objective has been to find a job opportunity where he can use his skills and experience. Backed by experience, he is confident about his skills as housekeeping assistant.

Job Posting

*Do you see yourself as a HOUSEKEEPING SUPERVISOR?

What's your passion? Whether you're into cricket, reading or hiking, at IHG we are interested in YOU. At IHG, we employ people who apply the same amount of care and passion to their jobs as they do in their hobbies people who put our guests at the heart of everything they do. And we're looking for more people like this to join our friendly and professional team.

THE LOCATION:

At the moment, we are looking for HOUSEKEEPING SUPERVISOR to join our youthful and dynamic team at Holiday Inn Amritsar, Ranjit Avenue in Amritsar, Punjab (India). Holiday Inn Amritsar is ideally located in Amritsar's commercial district on Ranjit Avenue with the world famous Golden Temple located only a short distance away. Sparkling chandeliers mark an incomparable arrival experience as you escape to the welcoming environment that is, Holiday Inn Amritsar. The fresh international brand to celebrate and explore Amritsar.

Salary: Negotiable

Industry: Travel / Hotels / Restaurants / Airlines / Railways

Functional Area: Hotels, Restaurants

Role Category: Housekeeping

Role: Housekeeping Executive/Assistant.

Desired Candidate Profile

Friendly, pleasant personality, Service - oriented.

You should ideally be Graduate/ Diploma holder in HM and at least 2 years of experience as a supervisor in good brand with good communication skills, English is a must.

In return we'll give you a competitive financial and benefits package. Hotel discounts worldwide are available as well as access to wide variety of discount schemes and the chance to work with a great team of people. Most importantly, we'll give you the room to be yourself.

*Please get in touch and tell us how you could bring your individual skills to IHG. Education-

UG: Any Graduate/ Diploma holder

PG: Post Graduation Not Required

Say 

- Now, let's share the resume with the fellow participant sitting next to you and evaluate each other's effort.

Do 

- Congratulate each participant for making their first attempt towards creating an effective resume.
- As a follow up activity, you can suggest them to prepare their own resume and show it to you the next day.

Summarize 

- Close the discussion by showing some effective resume samples to the candidates.
- Ask the participants what they have learnt from this activity.
- Ask if they have any questions related to what they have talked about so far.

Notes for Facilitation 

- Keep printed copies of the activity ready for the session.
- Put down the suggested format of the resume on the board while explaining the steps in preparing a resume.
- Do check the participants' resume and suggest necessary changes.
- Suggested example for the case presented:

Nipesh Singla
 #1XX7, Sector XX-D
 Chandigarh-160018
 Mobile No: 91-988XXXXX01
 E-mail: nxxxxxxxla@gmail.com

Objective: Seeking an opportunity to use my interpersonal skills and experience to contribute to your company's growth, profitability and objectives.

Professional strengths:

- Proficient in housekeeping
- Experienced in and capable of working with a diverse work force
- Team player and friendly in nature
- Successful working in a multi-cultural environment
- Detail oriented, flexible, and adaptable
- Knowledge of Microsoft Word, Excel, Access and PowerPoint

Educational background

- Diploma in Hotel Management and Catering, Westwood School of Hotel Management, Zirakpur
- High School, Government Boys Senior Secondary School, Sector 15, Chandigarh

Professional internships:

- Housekeeping Intern, XYZ Group of Hotels, New Delhi (June 2010–August 2010)
 - Responsible for cleanliness and maintenance of one floor in the hotel.
 - Got opportunities to make housekeeping arrangements for corporate meetings.

Volunteer Work:

- Student volunteer at children's hospital in Chandigarh.

Nipesh Singla

UNIT 10.4.3: Interview FAQs

Unit Objective

At the end of this unit, participants will be able to:

- Discuss the most frequently asked interview questions
- Discuss how to answer the most frequently asked interview questions

Resources to be Used

- Participant Handbook

Say

- Tell the participants you will provide them with interview situation and questions and they have to try to answer them.
- Tell them you will also explain the different ways to approach these questions.

Do

- Divide the class in pairs and ask the participants to perform a role play.
- One partner will play the role of the interviewer while the other will play the role of the interviewee.
- Tell them the interviewer can start the interview by asking the interviewee to introduce himself/herself.
- Call all the pairs one by one in front of the class to enact the role play.
- Follow the same pattern for all other situations.
- Time allotted for each situation is 8-10 minutes.
- Congratulate each participant for giving their input.
- Ask the class to applaud each time a team has completed their role play.
- Keep a check on time.

Role Play

Conduct a role play for the situation given.

Situation 1

- The interviewer will start by asking the interviewee a few generic questions such as:
 - What is your name?
 - Tell me something about yourself?
 - Can you tell me something about your family?

- Then, the interviewer will bluntly ask the following questions:
 - How do you explain this huge time gap in your resume?
 - What is the reason for this?
 - Weren't you looking for a job or is it that no one selected you?

Say

De-brief:

- When you put information on your resume, you should be prepared to answer any questions about it.
- Be present and focused on the questions being asked to you.
- One way of tackling the blunt questions is to tell the interviewer you did not come across an opportunity where you were sufficiently satisfied with both the remuneration offered as well as the profile. Therefore, you waited for the right opportunity to come along while looking for an ideal job.

Role Play

Conduct a role play for the situation given.

Role Play – Situation 2

- The interviewer will start by asking the interviewee a few generic questions such as:
 - What is your name?
 - Tell me something about yourself?
 - Can you tell me something about your family?
- Then, at the end of the interview, ask the interviewee:
 - There are over 200 people who have applied for this job, some with excellent work experience. Why should I hire you?

Say

De-brief:

- There is nothing wrong with stating your strengths and achievements. However, do not come across as arrogant or too boastful.
- You need show the interviewee that you have unique skills or talents to contribute to the company. The interviewer needs to know how you stand apart from the rest of the crowd.
- Tell the interviewer you are looking forward to working with the company and that you are a hard-working individual.

Role Play

Conduct a role play for the situation given.

Role Play – Situation 3

- The interviewer will start by asking the interviewee a few generic questions such as:
 - What is your name?
 - Tell me something about yourself?
 - Can you tell me something about your family?
- Then, lean forward, clasp your hands on the table and in a soft voice ask the interviewee:
 - Did you ever experience any neglect or disregard from your previous office? In other words, did you ever suffer because your office or team displayed favouritism?

Say

De-brief:

- Keep this in mind: Do not criticize anyone during an interview.
- You are free to express your opinion, however, your language, answers, body language, and the tone of your voice should remain constructive and neutral.
- Since criticism will show you in negative light, you should keep your answers honest yet diplomatic.
- You can tackle such questions by saying, “I got along well with most of my faculty and peers.”

Role Play

Conduct a role play for the situation given.

Role Play – Situation 4

- The interviewer will start by asking the interviewee a few generic questions such as:
 - What is your name?
 - Tell me something about yourself?
 - Can you tell me something about your family?
- Then very bluntly ask the interviewee:
 - How long do you plan to stay with this company if you are selected?
- After the candidate responds, ask sarcastically:
 - Do you seriously mean that?

Say

De-brief:

- Don't provide unreal and idealistic answers.
- Your answers should be honest yet diplomatic. In a situation like this, the interviewer does not expect you to provide a specific timeline.

- You can say something like, “I would like to stay with the company as long as I can contribute constructively and develop as an employee, within the organization, professionally and financially.”

Role Play

Conduct a role play for the situation given.

Role Play–Situation 5

- The interviewer will start by asking the interviewee a few generic questions such as:
 - What is your name?
 - Tell me something about yourself?
 - Can you tell me something about your family?
- Ask him/her how important he/she thinks it is to be punctual in the corporate world.
- After he/she answers, look up sternly at the interviewee and in a crisp voice, say:
 - You were late for this interview by 10 minutes. That surely does not seem to be in line with what you just said?

Say

De-brief:

- Politely apologize for being late.
- You can add something such as, “I assure you this is not a habit”. All your future actions should be in line with this statement.
- Avoid giving any excuses.
- You might feel obligated to provide a justification for your tardiness, but the interviewer is not interested in that.
- Do not over apologize. Once this response is out of the way, turn your focus back to the interview.

Role Play

Conduct a role play for the situation given.

Role Play–Situation 6

- The interviewer will start by asking the interviewee a few generic questions such as:
 - What is your name?
 - Tell me something about yourself?
 - Can you tell me something about your family?
- After asking a few academic or job-related questions, ask the interviewee:
 - If you get this job, what salary package do you expect us to give you?

Say

De-brief:

- If there is no way for you to avoid this question, respond to the interviewer by providing a reasonable and well-thought out salary range.

Role Play

Conduct a role play for the situation given.

Role Play – Situation 7

- The interviewer will start by asking the interviewee a few generic questions such as:
 - What is your name?
 - Tell me something about yourself?
 - Can you tell me something about your family?
- Then, bringing the interview to a close, ask the interviewee:
 - Do you have any questions for me?

Say

De-brief:

- Ask relevant questions.
- Don't bombard the interviewer with questions.
- If you have questions about the result of the interview, you can limit your questions to 1 or 2. Keep them short and relevant like:
 - When will I be informed about the results of the interview?
 - What are the working hours?
 - Will the job require me to travel?

Explain

- Tell the participants to be prepared for answering different types of questions in an interview.
- Stay calm and focused and take a moment to think about how you should respond. Always maintain a confident tone.
- Even if you don't intend to, your body language conveys your level of discomfort with a particular question.
- Try to keep your actions, tone, and gestures neutral.
- Maintain your composure while answering personal question.

Do

- Tell all the participants to form pairs again.
- Tell them to use the following list of frequently asked interview questions to conduct mock interviews.

- They will use all or some of these questions to conduct mock interviews with their partners.
- One partner will play the role of the interviewer while the other will play the role of the interviewee.
- After they are through asking and answering the questions, the roles will be reversed.
- The same list of questions will be used again.
- After each mock interview ask the interviewer to provide feedback and clear any doubts that may arise.
- Time allotted for each situation is 30-35 minutes.

Activity

Mock Interview Questions

Mock Interview Questions
Tell me something about your family.
What qualities would you look for in a Manager or a Supervisor?
Why did you apply for this job?
What do you know about this company?
How do you deal with criticism?
How do you plan to strike a good work-life balance?
Where do you see yourself five years from now?
Have you applied for jobs in other companies?
What kind of salary do you expect from this job?
Do you have any questions for me?

Summarize

- Close the discussion by discussing the questions in the both activities.
- Ask the participants what they have learned from this activity.
- Ask if they have any questions related to what they have talked about so far.

UNIT 10.4.4: Work Readiness – Terms and Terminology

Unit Objective

At the end of this unit, participants will be able to:

- Identify basic workplace terminology

Resources to be Used

- Participant Handbook
- Chart papers
- Blank sheets of paper
- Pens

Ask

- What do you understand by workplace terminology?
- Are offer letter and contract of employment the same?

Say

- Let's start this unit with an activity.

Team Activity

Workplace terminology

- This is a group activity conducted in three parts.

Part 1

Sheila received a call from the recruiter of MND Company. Before she is recruited by the company, think of the recruitment process she will have to go through. Start from the telephone call to signing her letter of acceptance. Write down all the words that come to your mind.

Activity De-brief

- Have the participants read out the words they have written
- Encourage all the participants to participate in the activity

Do 

- Divide the class into small groups of 4 or 6.
- Instruct the participants that they will be doing a brainstorming activity.
- Give them one chart paper each. Tell them to divide the chart in two parts.
- Instruct them that they have to use one half of the chart paper now. The other half will be used later.
- The participants have to write all the words that come to their mind related to the recruitment process.
- Give them 10 minutes to do the activity.
- Tell them that there are no right or wrong answers.
- Keep a track of the time.

Say 

- You all know quite a few words related to the terms used in the office.
- Let us talk about some new terms that have been missed out.
- Discuss “Work Readiness – Terms and Terminology” with the participants as given in the Participant Handbook.

Ask 

- Why is it important to know the workplace terms?
- How do they help?
- Can the words be categorised further?

Say 

- Let's now continue the activity.

Team Activity **Terms and Terminology**

- This is again a group activity. The members of the group remain the same as in Activity 1.

Part 2

- With the help of the new terms you have learned, make a flow chart of the hiring process of MND Company.

Activity De-brief

- Ask the groups to share the flow charts and the new terms they added while preparing the flow chart.

Do 

- Instruct the participants that they have to use the 2nd half of the same chart they had used before.
- Using the new terminology and the terms they had previously written on the chart, they have to make a flow chart of the hiring process of the MND Company.
- Give them 10 minutes for this activity.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Say 

- Let's go ahead with the activity.

Team Activity **Terms and Terminology**

- The activity continues with the same group members.

Part 3

Sheila now works for the MND Company. She is not aware of the company culture and policies. She goes to the HR Department to get her doubts clarified. Can you think of the terms for which she wants clarity? Make a list of those words.

Activity De-brief

- Ask the groups to share their list of words. Some of the words are benefits, comp. time, deduction, employee training, holidays, lay-off, leave, maternity leave, mentor, notice, paternity leave, and time sheet.

Do 

- Instruct the participants to identify the key terms an employee of a company should know. They can use the same chart paper for this activity.
- Give them 5 minutes for this activity.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Summarize 

- Note: You can either summarize the key points of the unit or have a role play where an employee has just joined a company and the HR Manager explains the terms of employment.

UNIT 10.5: Understanding Entrepreneurship

Key Learning Outcomes

At the end of this unit, participants will be able to:

1. Discuss the concept of entrepreneurship
2. Discuss the importance of entrepreneurship
3. Describe the characteristics of an entrepreneur
4. Describe the different types of enterprises
5. List the qualities of an effective leader
6. Discuss the benefits of effective leadership
7. List the traits of an effective team
8. Discuss the importance of listening effectively
9. Discuss how to listen effectively
10. Discuss the importance of speaking effectively
11. Discuss how to speak effectively
12. Discuss how to solve problems
13. List important problem-solving traits
14. Discuss ways to assess problem solving skills
15. Discuss the importance of negotiation
16. Discuss how to negotiate
17. Discuss how to identify new business opportunities
18. Discuss how to identify business opportunities within your business
19. Explain the meaning of entrepreneur
20. Describe the different types of entrepreneurs
21. List the characteristics of entrepreneurs
22. Recall entrepreneur success stories
23. Discuss the entrepreneurial process
24. Describe the entrepreneurship ecosystem
25. Discuss the purpose of the Make in India campaign
26. Discuss key schemes to promote entrepreneurs
27. Discuss the relationship between entrepreneurship and risk appetite
28. Discuss the relationship between entrepreneurship and resilience
29. Describe the characteristics of a resilient entrepreneur
30. Discuss how to deal with failure

UNIT 10.5.1: Concept Introduction (Characteristic of an Entrepreneur, types of firms/ types of enterprises)

Unit Objectives

At the end of this unit, the participants will be able to:

- Discuss the concept of entrepreneurship
- Discuss the importance of entrepreneurship
- Discuss the characteristics of an entrepreneur
- Describe the different types of enterprises

Resources to be Used

- Participant Handbook

Say

- Let's start this session with some interesting questions about Indian entrepreneurs.

Team Activity

Quiz Questions

1. Who is the founder of Reliance Industries?
Dhirubhai Ambani
2. Who is the Chairman of Wipro Limited?
Azim Premji
3. Who launched e-commerce website Flipkart?
Sachin Bansal and Binny Bansal
4. Who is the founder of Paytm?
Vijay Shekhar Sharma
5. Who is CEO of OLA Cabs?
Bhavish Aggarwal
6. Who is the founder of Jugnoo?
Samar Singla (autorickshaw aggregator)
7. Who is the founder of OYO Rooms?
Bhavish Aggarwal

Do

- Tell them that you will ask them few questions about a few entrepreneurs.

- Divide the class in to two groups.
- In turns ask the quiz questions to the groups.
- If the answer is incorrect pass the question to the other group.
- Share the answer if the groups are not able to answer.
- Congratulate the participants who answered correctly.

Ask

- What do you understand by entrepreneurs?
- What is the importance of entrepreneurship in today's scenario?
- What do you think are the characteristics of successful entrepreneurs?
- What are different types of enterprises that an entrepreneur in India can own and run?

Say

- Talk about entrepreneurs, importance of entrepreneurship, characteristics of successful entrepreneurs, and different types of enterprises in India as discussed in the Participant Handbook.
- Tell the participants, stories of successful Indian entrepreneurs - their struggles, the moments of heartbreak, the perseverance and triumph.
- Ask them if they know of any such entrepreneur.

Summarize

- Close the discussion by summarizing about the opportunities for entrepreneurs in India.

Notes for Facilitation

- Check out different Government schemes for small entrepreneurs. Share the information with the participants.
- You can tell them about the government websites like Start Up India, mudra.org.in etc.
- Discuss about various schemes and policies by the Government of India for entrepreneurs.

UNIT 10.5.2: Leadership and Teamwork

Unit Objectives

At the end of this unit, participants will be able to:

- List the qualities of an effective leader
- Discuss the benefits of effective leadership
- List the traits of an effective team

Resources to be Used

- Participant Handbook
- Blank sheets of paper
- Pens

Do

- Show the picture given below to the class.
- Ask them to quickly write on a piece of paper what comes to their mind after seeing the picture.
- Now ask them, “What do you understand from this picture?”
- Encourage participants to share their thoughts.



Fig 7.5.1: Encouraging participants

Say

- This picture depicts the qualities of a leader and the difference between a leader and a boss.
- A boss focuses on structure and inspires fear whereas a leader follows vision and generates enthusiasm.
- A boss blames employee for the breakdown whereas a leader fixes breakdown.
- A boss depends on authority whereas a leader depends on goodwill.
- A boss says “I” and a leader says “We.”
- A boss drives employee whereas a leader coaches them.
- A boss takes credit whereas a leader gives credit.

Say 

- Talk about leadership and leadership qualities for an entrepreneur as discussed in the Participant Handbook.

Ask 

- Why is it important for a leader to be effective? How does it help the organization?

Say 

- Let us discuss benefits of effective leadership as discussed in the Participant Handbook.
- “Out-of-the-box thinking” is one of the new leadership styles. It means thinking differently and from a new perspective.

Ask 

- Do you consider yourself a team player?

Team Activity 

Long Chain

- This is a group activity.

Do 

- Divide the class into 2 teams.
- Ask each team to create a chain using materials they have in class such as shoe laces, belts, paper, handkerchief, ribbons, etc.
- The team that creates the longest chain wins the game.
- Observe if the participants are interacting with their team or working in isolation.
- Share your observations with the class.

Say 

De-brief:

- What did the winning team do differently?
- Who was responsible for the winning team's success?
- How does this activity explain the role of teamwork in entrepreneurial success?

Say 

- Tell the class that both the teams performed well.

- Discuss that the objective of this activity was to open communication channels and how this has been achieved.
- The participants should aim to keep the communication channels open when interacting with their peers and team members.
- It will set the pace and enthusiasm required for all the ensuing teamwork activities.
- Talk about teamwork and importance of teamwork in entrepreneurial success as discussed in the Participant Handbook.

Summarize



- Close the discussion by summarizing about the importance of teamwork for employees.
 - Teamwork helps in reducing stress for the employees.
 - Teamwork helps employers in generating more number of solutions to a problem and developing improved communication amongst employees.
- Ask the participants what they have learned from these exercises.
- Ask if they have any questions related to what they have talked about so far.

UNIT 10.5.3: Communication Skills: Listening & Speaking: The Importance of Listening Effectively

Unit Objectives

At the end of this unit, the participants will be able to:

- Discuss the importance of listening effectively
- Discuss how to listen effectively
- Discuss the importance of speaking effectively
- Discuss how to speak effectively

Resources to be Used

- Participant Handbook

Activity

Activity – Chinese Whisper

Step 1: Form a circle.

Step 2: Start a whisper chain. Any one participant will whisper a message into his/her neighbor's ear. No one else must hear the message. The message can be serious or downright silly.

Step 3: The next person who first heard the message should whisper the message very quickly to the person sitting next to them.

Step 4: The game goes on until the last person says whatever they heard out loud and the first person reveals the real message.

Compare them and have a great laugh!

Ask

De-brief questions:

- Was the original message the same as the message that is communicated at the end of the game?
- Why do you think there was a difference in the messages?

Say

- No, the original message was not same at the end of game.
- The barriers to communication like language, disturbance and noise, poor listening skills, boredom, poor speaking skills, etc. are the potential reasons this happens.

- There are various aspects to communication. Speaking skills and listening skills are two major components to any communication. There is always some room for improvement in the way we communicate.
- It is important to accept the reality of miscommunication and work to minimise its negative impacts.

Say

- Communication is a two-way process where people exchange information or express their thoughts and feelings
- It involves effective speaking and effective listening.
- If I go to the store to get bread, I exchange money for the bread. I give something and get something in return.
- Communication takes place in the same manner. You have to provide and receive information for communication to take place.

Ask

- How often do you hear these statements?
 - “You're not listening to me!”
 - “Why don't you let me finish what I'm saying?”
 - “You just don't understand!”
- What do you think the other person is trying to convey to you through these sentences?
- We will not talk about the importance of listening effectively as discussed in the Participant Handbook.

Say

- Let's play a game to understand effective listening process better.

Do

- This is a class activity.
- The participants need to answer the questions they hear.
- Instruct them to listen carefully.
- You will read it at a stretch and if need be repeat it once more.
- Tell the participants to raise their hand if they know the answer to the question asked.
- Keep a check on time.

Activity

Riddles:

Is there any law against a man marrying his widow's sister?

If you went to bed at eight o'clock at night and set the clock's alarm to ring at nine o'clock, how many hours of sleep would you get?

Do they have a 26th of January in England?

If you had only one match and entered a dark room that had a kerosene lamp, oil heater, and a wood stove, what would you light first?

The Delhi Daredevils and the Chennai Super Kings play five IPL matches. Each wins three matches. No match was a tie or dispute. How is this possible?

There was an airplane crash. Every single person died, but two people survived. How is this possible?

If an airplane crashes on the border of two countries, would unidentified survivors be buried in the country they were travelling to or the country they were travelling from?

A man builds an ordinary house with four sides except that each side has a southern exposure. A bear comes to the door and rings the doorbell. What is the colour of the bear?

Answers:

There's no law against a man marrying his widow's sister, but it would be the neatest trick in the book since to have a widow, the man would have to be dead.

You'd get one hour's sleep since alarm clocks do not know the difference between morning and night.

Oh, yes. They have a 26th of January in England. They also have a 27th, a 28th, and so on.

First of all, you would light the match.

Who said the Delhi Daredevils and the Chennai Super Kings were playing against each other in those games?

Every SINGLE person died, but those two were married.

You can't bury survivors under any law especially if they still have enough strength to object.

The bear that rang the doorbell would have to be a white bear. The only place you could build a house with four southern exposures is at the North Pole where every direction is in South.

Ask

De-brief question:

- What were the barriers that came into your way of listening?
- How can you overcome barriers to listening?

Say

- There is a difference between hearing and listening.
- If you don't listen properly, the message may be misunderstood.
- Be open-minded while listening to someone.
- It is important to listen effectively and carefully without making assumptions.

Activity

Elevator Pitch:

You are in the lift of a hotel and you bumped into your former client who is a famous businessman. He has financed a lot of small business ventures and can finance your new start-up too. After exchanging pleasantries, he asks you what your new company does. You open your mouth, and then pause. Where do you even begin?

Then, as you try to organize your thoughts, his meeting is called, and he is on his way. If you would be better prepared, you're sure that he would have stayed long enough to schedule a meeting with you too.

If you were given another chance, what would you have said to this person?

Do

- Start off the task by providing a beginning sentence to get the story started, and then go around the classroom getting each one to add a new sentence to keep the story going.
- This task should be done spontaneously allowing only a little time to think (30 seconds).
- For example: There was once a student who was looking for a job after graduation.

Notes for Facilitation

- Tell the participants to follow these steps to create a great pitch, but bear in mind that you'll need to vary your approach depending on what your pitch is about.
 1. **Identify Your Goal:** Start by thinking about the objective of your pitch. For instance, do you want to tell the potential clients about your organization? Do you have a great new product idea that you want to pitch to an executive or do you want a simple and engaging speech to explain what you do for a living?
 2. **Explain What You Do:** Start your pitch by describing what your organization does. Focus on the problems that you solve and how you help people. Ask yourself this question as you start writing: what do you want your audience to remember most about you? Keep in mind that your pitch should excite you first. After all, if you don't get excited about what you're saying neither will your audience. People may not remember everything that you say, but they will likely remember your enthusiasm.
 3. **Communicate Your USP:** Your elevator pitch also needs to communicate your unique selling proposition or USP. Identify what makes you, your organization or

your idea unique. You'll want to communicate your USP after you've talked about what you do.

4. **Engage with a Question:** After you communicate your USP, you need to engage your audience. To do this, prepare open-ended questions (questions that can't be answered with a "yes" or "no" answer) to involve them in the conversation. Make sure that you're able to answer any questions that he or she may have.
5. **Put it all Together:** When you've completed each section of your pitch, put it all together. Then, read it aloud and use a stopwatch to time how long it takes. It should be no longer than 20-30 seconds. Remember, the shorter it is, the better!

Example:

Here's how your pitch could come together:

"My company deals with cloth retail online business and we use various e-commerce platforms to sell our products. This means that you can do shopping with ease and spend time on other important tasks. Unlike other similar companies, we have a strong feedback mechanism to find out exactly what people need. This means that, on average, 95 percent of our clients are happy with our products. So, how can you help us in creating our own web portal?"

6. **Practice:** Like anything else, practice makes perfect. Remember, how you say it is just as important as what you say. If you don't practice, it's likely that you'll talk too fast, sound unnatural or forget important elements of your pitch. Set a goal to practice your pitch regularly. The more you practice, the more natural your pitch will become. Practice in front of a mirror or in front of colleagues until the pitch feels natural.

Summarize

- Close the discussion by summarizing how to speak effectively as discussed in the Participant Handbook.

UNIT 10.5.4: Problem Solving & Negotiation Skills

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss how to solve problems
- List the important problem-solving traits
- Discuss ways to assess problem solving skills
- Discuss the importance of negotiation
- Discuss how to negotiate

Resources to be Used

- Participant Handbook

Ask

- What is a 'problem'?
- What do you think are the problems you may face in the process of becoming a successful entrepreneur?

Say

- Discuss the definition of problem as given in the Participant Handbook.
- In a hurdle race the hurdles are the obstacles on the way to reach your goal.
- Similarly, obstacles are the hurdles you may face while reaching your goal i.e. to set-up your own business.
- Your goal will be to reach the finishing line after crossing these hurdles.

Ask

- What do you do when you face a problem?
- How do you resolve it? You can pick examples from the question asked previously 'the problems they are likely to face in the process of becoming a successful entrepreneur'.

Say

- Discuss how to solve problems as given in the Participant Handbook.

Team Activity

- This is a group activity.
- The groups will solve the problem and come up with the best solution in each case.

1. Unable to arrange for some extra finance for setting up a beauty parlour. The loan sanctioned and disbursed is not enough. You have tried all your contacts, friends and relatives. But unable to manage the extra amount. Bank will not sanction more amount as you have used up the complete sanction limit.
2. You have rented a space for your business and all arrangements are done. You will be operating from the office space rented in two days. Now the owner comes up to you and says he wants to sell the place and wants you to vacate in 15 days.
3. You have just set up your business and need extra human resource. You have tried inviting a few also tied up with an agency for getting the right candidate. But you are unable to get the right candidate. If the candidate is good, you cannot offer the salary demanded. If the candidate agrees to the salary, he/she has other demands like working hours to be reduced, leaves etc. which may not work for your set up.

Do

- Divide the class into three groups. Give one scenario to each group.
- Explain the purpose and duration of the activity.
- Ask the groups to build on the scenario and present their solution as a role play.

Say

De-brief questions:

1. What was the problem?
2. Is there any other alternative solution?
3. Is this the best solution presented?

Ask

- Try to think of some people around you who are able to solve problems very easily. Even you or your friends might be approaching them when there is a problem. What qualities do they have? What personality traits do such people possess?

Say

- Discuss the important traits for problem-solving as given in the Participant Handbook.

Ask

- In order to build a successful organization, you need to hire people who possess good problem-solving skills.
- How would you assess the level of problem solving skills of potential candidates before hiring them?

Say

- Discuss how to assess for problem-solving skills as given in the Participant Handbook.

Summarize

- Ask the participants the things that they have learnt so far.
- Ask if they have any questions related to what they have talked about so far.
- Summarize the discussion on problem solving.

Activity

- The activity is to organise an election event. Select three volunteers from the group. They have to give a speech on their election manifesto to the class. They have to negotiate with the fellow participants and convince them to vote for them. The best negotiator will win the election.

Do

- Ask three participants to volunteer for the activity.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.

Ask

- Out of the three contestants, whom would you support? Why? What did they say or do which convinced you to make your decision?
- Have you ever tried to negotiate in your personal or professional life?
- Ask the class to share some of their experiences where they have been able to strike a deal by negotiating.

Say

- Discuss “What is Negotiation?” as given in the Participant Handbook.

Ask

- Why is it important to negotiate? As an entrepreneur, where do you think that negotiation skills will be needed?

Say

- Discuss the importance of negotiation while starting a business as given in the Participant Handbook.

Say

- Discuss the important steps to negotiate as given in the Participant Handbook.

Role Play

- Conduct a role play activity.
- Ask the participants to assemble together.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.

Do

- Divide them into groups of four (4) (depending on the batch size).
- Give them the hand-outs for role play scenarios.
- Two groups to be given scenarios on problem solving.
- Other two groups to be given scenarios on negotiation.
- The groups will build on the scenarios and prepare for the role play.
- Give the groups atleast 5 mins to discuss and be ready with the role play.
- Invite each group one by one to come and present their role play.

Problem solving Scenario 1

Avinash has a Mobile Repair Store in Allahabad. His outlet is one of the most popular one in the vicinity and he has great rapport with his customers. He is always well-dressed, jovial and full of energy.

It's around 11 AM, when a customer barges in to the shop and starts shouting at Avinash for giving her back the instrument which is still not working. The screen of her mobile is also cracked from one side. Avinash remembered thoroughly checking the handset before handing it over to the customer. The customer threatens to sue the company and to go to Consumer Court for cheating her.

Problem solving Scenario 2

You are running a successful small scale business, Shreeji Aggarbattis,. Your staff members do door to door selling and organise marketing campaigns in local markets. Your brand has established it's name in last few years.

Recently, lot of customers have been coming to you and lodging complaints that your staff members indulge in malpractices. Few of them informed you that a staff member engaged them in a friendly conversation. In the meanwhile, the other gave them lesser packets of aggarbattis than they paid for.

Another set of customers lodged complaint about the misconduct and rude behaviour of a particular staff member. You often hear from your customers that the orders don't get delivered on time or wrong products get delivered. You have already been struggling with shortage of staff and such complaints are a serious concern as it is hampering your brand image. What strategies will you adopt to solve this problem?

Negotiation Scenario 1

You have interviewed a prospective new employee who could be a key member of your new entrepreneurial venture. The new person is demanding a salary that is 20% higher than you thought based on your business plan. Finances are tight, yet you believe this person could make a significant impact on future profits. If you paid the required salary for the new person, then you would have to restructure your entire business plan. You've been searching for an individual with this skill level for three months. The candidate is waiting for your response. Now you have to call him in to make the final negotiations.

Negotiation Scenario 2

You are a young entrepreneur who has just registered his start up project and applied for a bank loan accordingly. You receive a letter saying that your loan application has been rejected as your start up idea did not appeal to the bank and they think that it is not a revenue generating model. You have taken an appointment to meet the manager and show your negotiation skills to get your loan approved.

Notes for Facilitation

Facilitating Role Plays**Preparing for the activity**

1. Carefully review the details of the scenario and the character descriptions.
2. Become familiar with the key issues being addressed in the scenario.
3. Study the provided material so that you are ready to address issues related to the situations depicted in the role-plays.
4. Anticipate and know how to address issues participants might raise during the activity.

Conducting the activity

1. Introduce the activity. Emphasize that role-playing provides participants with an opportunity to apply their new knowledge, skills, and tools in situations that simulate actual interactions with customers.
2. Ask participants to form pairs. Direct the members of each group to choose who will play the roles. Remind the groups that each participant should be given the opportunity to play/practice the different roles.
3. Conduct a demonstration so that participants become familiar with the expectations related to the roles and support materials.
4. Give the pairs/ groups 10 to 15 minutes to conduct the role-play (depending on the duration of the session).
5. After all the groups have finished with the role-play, conduct a debriefing session on each role-play.
6. Ask the groups to take five minutes to talk about what happened during the role-play. The groups should discuss the questions given in the debriefing for each role-play.

Encourage participants to provide constructive criticism during their discussions.

Summarize

- Wrap the unit up after summarizing the key points and answering questions.

UNIT 10.5.5: Business Opportunity Identification: Entrepreneurs and Opportunities

Unit Objectives

At the end of this unit, the participants will be able to:

- Discuss how to identify new business opportunities
- Discuss how to identify business opportunities within their business

Resources to be Used

- Participant Handbook
- Blank sheets of paper
- Pens

Ask

- How does an entrepreneur identify an opportunity?
- What do you think are the common queries or concerns faced by entrepreneurs?
- How can you identify new business opportunity?

Say

- Let's talk about opportunity, common queries or concerns faced by entrepreneurs, idea as an opportunity, factors to consider when looking for opportunities, ways to identify new business, and opportunity analysis as discussed in Participant Handbook.
- Let's do an activity to understand ways to identify business opportunities within your business.

Do

- Tell the class that this is an individual activity.
- Tell the participants to create a matrix on their notebooks.
- There will be four boxes in your matrix.
- Strength, Weakness, Opportunity and Threats will be the four headings of the matrix. This is called the SWOT matrix.
- Read out the questions to them and tell the participants they need to answer the questions asked in each matrix.
- Tell them they can also use their own understanding of themselves to fill the SWOT matrix.

Activity

Do your SWOT analysis

<p>Strength</p> <p>What are your strengths?</p> <p>What unique capabilities do you possess?</p> <p>What do you do better than others?</p> <p>What do others perceive as your strengths?</p>	<p>Weakness</p> <p>What are your weaknesses?</p> <p>What do your competitors do better than you?</p>
<p>Opportunity</p> <p>What trends may positively impact you?</p> <p>What opportunities are available to you?</p>	<p>Threat</p> <p>Do you have solid financial support?</p> <p>What trends may negatively impact you?</p>

Do

- Congratulate everyone for the class activity.
- Ask the audience to applaud for themselves.
- Allot the participants sufficient time to complete this activity but do keep a check on time.
- Ask de-brief questions to cull out information from the participants.

Ask

De-brief questions:

- What are your weaknesses according to your SWOT analysis?
- Do you think you can change your weakness into strength? How?
- Do you think you can work on your threats? How?

Summarize

- Close the discussion by summarizing ways to identify business opportunities within your business.
- Ask the participants what they have learned from this exercise.
- Ask if they have any questions related to what they have talked about so far.

UNIT 10.5.6: Entrepreneurship Support Eco-System

Unit Objectives

At the end of this unit, participants will be able to:

- Explain the meaning of entrepreneur
- Describe the different types of entrepreneurs
- List the characteristics of entrepreneurs
- Recall entrepreneur success stories
- Discuss the entrepreneurial process
- Describe the entrepreneurship ecosystem
- Discuss the purpose of the 'Make in India' campaign
- Discuss the key schemes to promote entrepreneurs

Resources to be Used

- Participant Handbook
- Chart papers
- Marker pens
- Pencils
- Colour pencils
- Scale
- Eraser
- Other requisite stationery material

Ask

- Do you think that entrepreneurs need support?
- What do you think is an eco-system?
- What do you think 'entrepreneurship support eco-system' means?

Say

- Let's learn what entrepreneurship support eco-system means.
- Discuss 'Entrepreneurship Support Eco-System' as given in the Participant Handbook

Ask

- Can you define entrepreneurship support eco-system?
- What are the key domains of the support eco-system?

Say 

- Let's learn more about these domains by conducting an activity.
- You have to make a poster showing the components of the six main domains of entrepreneurship support eco-system.

Team Activity 

- Making a poster showing the entrepreneurship support eco-system.

Do 

- Divide the class into groups of four or six.
- Hand out chart paper and coloured pens.
- Explain the purpose and duration of the activity.
- Go around checking the progress of each group.
- Set guidelines pertaining to discipline and expected tasks.

Activity De-brief

Ask each group to display their poster and explain the key domains of entrepreneurship support eco-system.



Fig 7.5.2: Key domains of entrepreneurship

Ask 

- What kind of government support eco-system is available for entrepreneurs in India?

Say 

- Discuss 'Make in India' campaign as given in the Participant Handbook.

Team Activity

- Presentation on key schemes to promote entrepreneurs

Do

- Divide the class into pairs.
- Number each pair from 1-15.
- Assign a scheme, same as their group number, to each group.
- Ask them to read the scheme carefully and present it to the class.
- Explain the purpose and duration of the activity.
- Go around checking the progress of each group.
- Set guidelines pertaining to discipline and expected tasks.

Activity De-brief

- Ask each group to explain the scheme offered by government to promote entrepreneurs.

Summarize

- Summarize the unit by discussing the key points and answering questions the participants may have.

UNIT 10.5.7: Risk Appetite & Resilience

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss the relationship between entrepreneurship and risk appetite
- Discuss the relationship between entrepreneurship and resilience
- Describe the characteristics of a resilient entrepreneur

Resources to be Used

- Participant Handbook
- Chart papers
- Blank sheets of paper
- Pens
- Marker pens

Ask

- Can you define risk or explain what constitutes a risk?
- What do you people mean when they say, “This may be a risky proposition”?
- What risks are they talking about?

Example

- Let's have a look at these two examples:

Rohit and his family were travelling by car from Delhi to Nainital. It was their second trip there. Rohit was familiar with the road. His friends told him that the highway after Rampur was in a bad condition. They advised him to take a shortcut and turn left from Moradabad and take the Kaladhungi road. This road is in a better condition.

Since he was going with his family, and did not want to take the risk of getting lost, he left early. He took the Kaladhungi road and reached Nainital well in time.

Suresh and his family too were travelling by car from Delhi to Nainital. It was their second trip there. His friends too advised him to take a shortcut and turn left from Moradabad and take the Kaladhungi road as this road was in a better condition.

Suresh too decided to take the Kaladhungi road but he left Delhi in the afternoon. It was dark by the time he reached Kaladhungi, and he was sure that he was taking the correct turn. As it was late, he could not find anyone to give him directions. He ended up being in an unknown place that was scarcely inhabited.

Say

- Let's see what type of risks Rohit and Suresh took.
- Discuss 'Risk Appetite and Resilience' with the participants as given in the Participant Handbook.

Say

- Let's learn more about risk appetite and resilience with the help of an activity.

Team Activity

Risk Appetite

- This is a group activity.
- In the previous unit, you read success stories of Mr Dhirubhai Ambani and Dr Karsanbhai Patel.
- Mr Ambani left his job and started his company Reliance with just Rs. 50,000/-.
- Dr Patel kept his job, went door-to-door to sell Nirma, and only when the brand started gaining popularity did he start his own company.
- What types of risk did both of them take?
- What risk factors, do you think, did they keep in mind before launching their company?
- Write the Risk Appetite Statement of both the companies.

Activity De-brief

- Who took a greater risk?
- What are the differences between the Risk Appetite Statement of both the companies?

Do

- Instruct the participants that this is group work.
- Divide the class into small groups of 4.
- Give each group a chart paper.
- Tell the participants that they have to evaluate the risks taken by Mr Dhirubhai Ambani and Dr Karsanbhai Patel.
- Give the participants 15 minutes to discuss and write.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Ask

- Do you think all entrepreneurial ventures are successful?
- What happens if the first venture is not successful?

- Should the entrepreneur stop when faced with challenges or face them?

Example

- Let's have a look at the following example:

Vijay Shekhar Sharma is the founder of Paytm, which is a giant Indian e-commerce. He was born in a middle-class family in Uttar Pradesh. He started his first job at an MNC. He quit after six months and built a company One97 with his friends. As One97 grew bigger, it needed more money because it was running more servers, bigger teams, and had to pay royalty. At that time, the tech bubble popped and technology companies were running in losses. Finally, money ran out. So One97 took loans and then more loans at higher rates of interest, as high as 24 per cent, and became caught in a vicious cycle.

In 2014, Paytm was launched with online wallet services after which, the company enabled online payment transactions. The company got licenses from RBI in 2016 to launch India's first ever payment bank. Moreover, the main motive of Paytm was to transform India into a cashless economy.

After demonetization came into effect, Vijay Shekhar Sharma started promoting online and digital transactions to deal with the cash crunch. In fact, the service of the company's mobile wallet is accepted across India. The logo of Paytm is now popular almost everywhere from tea stalls to major companies.

Say

- Let's see what qualities made Vijay Shekhar Sharma a resilient entrepreneur.
- Discuss Entrepreneurship and Resilience with the participants as given in the Participant Handbook.

Say

- Let's learn more about entrepreneurship and resilience with the help of an activity.

Team Activity

Entrepreneurship and Resilience

- This is a group activity.
- Think of some entrepreneurship ventures that faced challenging times, but later resulted in success stories.
- Who is the founder of that company?
- What challenging times did it face?
- How did it overcome those challenges?
- List the resilient characteristics of the entrepreneur.

Activity De-brief

- Each group to give their presentation.
- Why did you choose this company?
- What is the success story of the company?

Do

- Instruct the participants that this is group work.
- Divide the class into small groups of 4.
- Give each group a chart paper.
- Tell the participants that they have to think of an entrepreneur who faced challenging times, but eventually succeeded.
- Give the participants 15 minutes to discuss and write.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Summarize

- You can summarize the key points of the unit.
- Ask the participants what they learned from the activities.
- Clarify any questions or doubts they might have.

UNIT 10.5.8: Success and Failures

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss how to deal with failure

Resources to be Used

- Participant Handbook

Ask

- Have you heard the quote 'nothing is impossible'?
- What do you think it means?
- Do you think that all successful entrepreneurs became famous overnight or did they have to struggle or face failure before succeeding?

Example

- Let's have a look at this example.

Shah Rukh Khan, also known as, SRK or King Khan is a force to reckon with. Did he achieve stardom overnight?

Shah Rukh Khan, who has seen many struggles in his life – he has slept on streets, struggled to support himself and his sister at a very young age, and lost his parents very early in life, which led to his sister seeking mental health support. Amidst all the chaos and challenges, he kept pushing himself, and today he stands tall as the 'Badshah of Bollywood'. Certainly, those years were not easy for him.

When he was young, he stood at Marine Drive and said, “I will rule this city one day”. Failure was not just his companion during or before his stardom, it is still a substantial part of his life. Success does not come easy. What made him a star was his acceptance of failure and the urge to improve.

Say

- How do you define success and failure?
- What is fear?
- Discuss “success and failure” with the participants as given in the Participant Handbook.

Ask 

- Have you felt or experienced fear?
- What led you to feel that emotion?
- How did you handle it?

Say 

- Let's learn the about success and failure with the help of an activity.

Team Activity 

- Divide the class into groups of four.
- Instruct them to think of one scenario where they have to interview a successful entrepreneur.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- They have to choose one person from the group as the interviewee and one as the interviewer.
- Go around and make sure they have understood what is to be done and are discussing the roles properly.
- Check that everyone understands their role. Give clarifications if needed. Give the participants about 5 minutes to discuss and decide their roles.
- Ask the groups to stop the discussion as soon as the time is over.
- Invite each group one by one to come and present their interview as a role play.

Notes for Facilitation **Facilitating Role Plays****Preparing for the activity**

1. Carefully review the details of the scenario and the character descriptions.
2. Become familiar with the key issues being addressed in the scenario.
3. Study the provided material so that you are ready to address issues related to the situations depicted in the role plays.
4. Anticipate potential questions that might be raised by the participants and be ready to address them.

Conducting the activity

1. Introduce the activity. Emphasize that role playing provides participants with an opportunity to apply their new knowledge, skills, and tools in situations that simulate actual interactions with customers.
2. Ask participants to form pairs. Direct the members of each group to choose who will play the roles. Remind the groups that each participant should be given the opportunity to play/practice the different roles.

3. Conduct a demonstration so that participants become familiar with the expectations related to the roles and support materials.
4. To maintain spontaneity of the interactions during the role play, ask the participants not to discuss the details of their roles prior to the role play.
5. Give the pairs 15-20 minutes to conduct the role play.
6. Circulate among the groups to answer any questions that may arise and provide guidance as needed.
7. After all the pairs have finished with the role play, conduct a de-briefing session on each role play.
8. Ask the groups to take five minutes to talk about what happened during the role play. The groups should discuss the questions given in the de-briefing for each role play. Encourage participants to provide constructive criticism during their discussions.
9. Conclude the activity by asking participants to think about whether and how they might use scripted role plays in their real life.

Summarize

- Wrap the unit up after summarizing the key points and answering questions.

UNIT 10.6: Preparing to be an Entrepreneur

Key Learning Outcomes



At the end of this unit, participants will be able to:

1. Discuss how market research is carried out
2. Describe the 4 Ps of marketing
3. Discuss the importance of idea generation
4. Recall basic business terminology
5. Discuss the need for CRM
6. Discuss the benefits of CRM
7. Discuss the need for networking
8. Discuss the benefits of networking
9. Discuss the importance of setting goals
10. Differentiate between short-term, medium-term and long-term goals
11. Discuss how to write a business plan
12. Explain the financial planning process
13. Discuss ways to manage your risk
14. Describe the procedure and formalities for applying for bank finance
15. Discuss how to manage their own enterprise
16. List the important questions that every entrepreneur should ask before starting an enterprise

UNIT 10.6.1: Market Study/ The 4Ps of Marketing/ Importance of an IDEA: Understanding Market Research

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss how market research is carried out
- Describe the 4 Ps of marketing
- Discuss the importance of idea generation

Resources to be Used

- Participant Handbook
- Chart papers
- Markers pens
- Blank sheets of paper

Ask

- Suppose, you want to open a restaurant, what are the factors you will consider?
- How will you promote your restaurant?

Example

- Let's have a look at this example.
Arjun was an MBA working in a company. But he wanted to start a low-cost budget hostel for foreign tourists coming to India. He did a lot of market research before starting the project. Based on the information he gathered, he made his business plan. His hostel is now flourishing, and he is thinking of expanding to other tourist destinations.

Say

- Discuss "Market Study" with the participants. Refer to the Participant Handbook.
- Let's learn about market study and research with the help of an activity.

Team Activity

Market Study

- This is a group activity.
- You want to start your own tuition centre.
- What type of research will you do?

Activity De-brief

- Ask each group to come forward and give a brief presentation.
- Encourage other groups to be interactive and ask questions.
- What factors did you keep in mind while doing your research?
- Based on our research would you go ahead and open a tuition centre?

Do

- Instruct the participants that this is group work.
- Divide the class into small groups of 4 or 6.
- Give each group a chart paper.
- Tell the participants that they have to start their own tuition centre.
- Give the participants 10 minutes to discuss and write the research work they need to do.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Say

- By opening a tuition centre you are offering a service.

Ask

- What factors will you keep in mind before opening it?

Say

- Discuss “The 4Ps of Marketing” with the participants as given in the Participant Handbook.

Say

- Let's learn about the 4Ps of Marketing with the help of an activity.

Team Activity**4 Ps of Marketing**

- This is a group activity.
- You have to sell a pen to four different segments:
 1. Rural villagers
 2. Rural middle class
 3. Urban middle class
 4. Upper end rich people (Niche market)

Keeping the 4Ps of Marketing in mind, what marketing strategy will you design to sell the pen?

Activity De-brief

- Ask each group to present their strategy.
- Encourage other groups to be interactive and ask questions.

Do



- Instruct the participants that this is group work.
- Divide the class into four groups.
- Give each group a chart paper.
- Assign each group a target audience for selling the pens:
 1. Rural villagers
 2. Rural middle class
 3. Urban middle class
 4. Upper end rich people
- Tell the participants that they have to design a marketing strategy keeping the 4Ps of Marketing in mind.
- Give the participants 20 minutes to discuss and come up with their strategy.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit

Activity De-brief

- Ask each group to come forward and give a brief presentation.
- Ask each group what they kept in mind while designing their marketing strategy.
- Encourage other groups to be interactive and ask questions.

Say



- Each entrepreneur has an idea of what he wants to sell. It may be a service or a product.
- Discuss “Importance of an IDEA” as given in the Participant Handbook.

Summarize



- Summarize the key points of the unit.
- Ask the participants what they learnt from the activities.
- Encourage them to ask if they have any doubts.

UNIT 10.6.2: Business Entity Concepts

Unit Objectives

At the end of this unit, participants will be able to:

- Recall basic business terminology

Resources to be Used

- Participant Handbook

Say

- Let's recall some basic business terminology.
- Discuss the Business Entity Concepts as given in the Participant Handbook.
- Let's learn some basic business terminology by having an activity.
- We will have a quiz today.

Activity

- The activity is a quiz.

Do

- Divide the class in two groups and give a name to each group.
- Explain the rules of the quiz. For each correct answer the group gets 1 mark.
- If the group is unable to answer the question is passed to the next group.
- Explain the purpose and duration of the activity.
- Ask the questions of the quiz.
- Keep a score of the groups.
- Set guidelines pertaining to discipline and expected tasks.

Summarize

- Summarize the unit by discussing the key points.

Notes for Facilitation

QUESTIONS FOR THE QUIZ

1. What does B2B mean?

Business to business

2. What is a financial report?
A comprehensive account of a business' transactions and expenses
3. Who is a sales prospect?
A potential customer
4. How is working capital calculated?
Current assets minus current liabilities
5. What is an estimation of the overall worth of a business called?
Valuation
6. You are buying a house. What type of transaction is it?
Complex transaction
7. How will you calculate the net income?
Revenue minus expenses
8. How is Return on Investment expressed?
As percentage
9. How will you calculate the cost of goods sold?
Cost of materials minus cost of outputs
10. 10. What is revenue?
Total amount of income before expenses are subtracted.
11. What is a Break-Even Point?
This is the point at which the company will not make a profit or a loss. The total cost and total revenues are equal.
12. What is the formula used to calculate simple interest?
 *$A = P(1 + rt)$; $R = r * 100$*
13. What are the three types of business transactions?
Simple, Complex and Ongoing Transactions
14. The degrading value of an asset over time is known as
Depreciation
15. What are the two main types of capital?
Debt and Equity

UNIT 10.6.3: CRM & Networking

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss the need for CRM
- Discuss the benefits of CRM
- Discuss the need for networking
- Discuss the benefits of networking

Resources to be Used

- Participant Handbook

Ask

- Can your business run without customers/buyers?
- Who is the most important entity in any business?

Say

- The key to every success business lies on understanding the customer's expectations and providing excellent customer service.
- Discuss about CRM and its benefits. Refer to the Participant Handbook.
- Providing excellent customer service entails:
 - Treating your customers with respect.
 - Be available as per their need/ schedule.
 - Handling complaints effectively.
 - Building long lasting relationships.
 - Collecting regular feedback.
- Handle customer complaints proactively. Ask “what happened”, “why it happened”, “how can it be avoided next time”, etc.
- Collecting feedback from the customers regularly will enable you to improve your good/service.
- “Let's understand it better with the help of some case scenarios. You will be given some cases within your groups. You have to analyse the case scenario that has been given to you and then find an appropriate solution to the problem.”

Do

- Divide the class into four groups of maximum six participants depending on the batch size.
- Give one case study to each group.

- Instruct them to read the case carefully.
- The group is expected to analyse and discuss the case amongst them and find a solution to the given problem.
- Put down the discussion points (de-brief questions) on the board. Give the class 5-10 minutes to discuss the case and note down their solutions.
- At the end of 10 minutes, the team should present their case solution to the class.

Team Activity



Case Study Analysis

Raju runs a business of wooden furniture. He has a huge list of customers on Facebook and WhatsApp who give him orders regularly. Ankita is one of his old and regular customers. She placed an order for a new chester and TV cabinet via WhatsApp and requested Raju to send them as soon as possible. When the parcel reached Ankita through courier she found that chester was broken and the TV unit was chipped from the bottom. Ankita was heartbroken. It was a complete waste of money. She sent a message to Raju on WhatsApp, expressing her anger and disappointment. Raju might lose an old customer forever if he doesn't satisfy the customer. What should Raju do to retain his customer?

Scenario 2

Rajni runs a boutique shop. She sells suits and sarees. She is one of the most successful designer in her city. Rajni swears that all the clothes in her boutique have unique designs. Smita has to attend her cousin's wedding; she goes to Rajni's boutique to buy a saree. Smita wanted a unique designer saree. Rajni customized a saree for her and sent it over the courier. When Smita had a look at the saree she realised her two friends had the same design sarees. She sent a message to Rajni on WhatsApp, expressing her anger and disappointment. Did Rajni make a false promise? Were her designs copied? What could happen to Rajni's image after this incident? What would you do if you were in Rajni's place?

Scenario 3

Shama is a beautician who offers parlour services to ladies by making home visits. Recently, Shama got her name registered on an e-commerce website. Two days earlier, she got a message from Mrs Sushma. The appointment was fixed for next day, 11:00 am and the remuneration for the services was decided beforehand. When Shama reached there at 10:50 am, Mrs Sushma was not at home. When Shama called her, she asked her to wait for a while. Mrs Sushma reached home at 11:45 am. Meanwhile, Shama had to reschedule her next appointment. After availing Shama's services, Mrs Sushma refused to pay the requisite amount and started finding faults in the services provided by her. Who was at fault in this scenario? What should you do in case the customer behaves unreasonably? What would you do if you were in Shama's place?

Scenario 4

Shailender is the manager of a car showroom. He proactively takes part in all the transactions that happen in his showroom. Vinita wants to buy a new car. She has chosen a car from Shailender's showroom. The salesperson has given her a very good discount and has also promised free service for one year. Vinita goes to the showroom and asks to complete all the formalities to purchase the car. When she sees the final bill she realize that she has not received the promised discount neither was there any mention of the free services. She immediately demands to see the Shailender. When Shailender's head asks how much discount Vinita was promised, he realised the discount will make the sale in loss. The car showroom owner might lose a customer and deal due to false commitments made by his manager. Besides, the customer might tell this to other people, creating a bad name and image for the showroom. If you owned that showroom, how would you have convinced your customer?

Say 

- Now, let's discuss the problem and solution with the class.
- The group will first briefly describe the case to the class.
- Then discuss the issue identified and the proposed solution.
- Present the solution as a role play.
- Post presentation, the other groups may ask questions from the group that has presented.

Do 

- Congratulate each group for the presentation/ role play.
- Ask the audience to applaud for them.
- Keep a check on time. Tell the group to wind up the discussion quickly if they go beyond the given time limit.

Say 

- If your customers are happy with you they will give referrals which will help to grow your business.
- One more way of growing business is 'Networking'.
- Discuss Networking and its benefits. Refer to the Participant Handbook.

Activity **Group Discussion**

- Conduct a group discussion in the class on how they can do networking for their business.

Summarize



- Ask the participants what they have learnt from this exercise/ activity.
- Ask if they have any questions related to what they have talked about so far.
- Close the discussion by summarizing the importance of CRM and Networking for entrepreneurs.
- Close the discussion by summarizing the importance of CRM and Networking for entrepreneurs.

UNIT 10.6.4: Business Plan: Why Set Goals?

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss the importance of setting goals
- Differentiate between short-term, medium-term and long-term goals
- Discuss how to write a business plan
- Explain the financial planning process
- Discuss ways to manage your risk

Resources to be Used

- Participant Handbook
- Chart papers
- Blank papers
- Marker pens
- Ruler

Ask

- Remember we had written SMART Goals in a previous session? Let's try and recall why it is important to set goals?
- While framing SMART goals, we talked about 'T' in SMART, which was 'Time Bound'? What do we mean by time bound goals?
- What time limit did you set for your goal - 3 weeks, 3 years, 10 years?

Say

- Talk about short term, long term and medium-term goals, as discussed in the Participant Handbook.

Ask

- As you are planning to become an entrepreneur, you must have thought of an idea for a start-up. What is your business idea?

Do

- Ask few participants to share their business ideas.

Ask

- Have you created a business plan for your business idea?
- Do you think it is important to have a business plan in place? Why/ why not?

Say

- Talk about 'Why Create a Business Plan' as discussed in the Participant Handbook.
- Let's understand it better with the help of an activity.

Team Activity

Writing a business Plan

- This is a group activity.
- Give the groups the required resources such as chart paper and markers.
- This activity is divided into two parts:
 1. Create a business idea
 2. Develop a business plan
- The group will discuss and come up with a new business idea and present their idea to the class.
- In the second part of the activity the group will develop a business plan for the business idea.
- The business plan prepared will be presented by the groups to the class.

MY BUSINESS PLAN
Executive Summary: What is your Mission Statement?
Business Description: What is the nature of your business?
Market Analysis: What is your target market?
Organization and Management: What is your company's organizational structure?
Service or Product Line: What is the lifecycle of your product/ service?
Marketing and Sales: How will you advertise and sell your products?
Funding Request: How much fund is required and from where?

Say

- Teams will need to brainstorm for this part of the activity.
- Use the blank papers for the second part of this activity
- Make your business plan on a chart paper based on the following parameters:
 1. Executive Summary
 2. Business Description
 3. Market Analysis
 4. Organization and Management
 5. Service or Product Line
 6. Marketing and Sales
- Explain each parameter in detail as done in the Participant Handbook.
- Discuss each parameter with the business idea examples of the groups.
- Groups will discuss and develop the business plan for their business idea.

Say

- Now, let's share our plan with the class.
- Each group will briefly describe the plan to the class.
- Post presentation, the other groups may ask questions to the group who have presented their plan.

Do

- Congratulate each group for sharing their points.
- Ask the audience to applaud for them.
- Keep a check on time. Tell group to wind up the discussion quickly if they go beyond the given time limit.

Say

- Along with a business plan, you need to create a financial plan and evaluate the risk involved with your start up.
- Discuss 'Financial Planning' and 'Risk Management' in detail as given in the Participant Handbook.

Summarize

- Ask the participants what they have learnt from this exercise/ activity.
- Ask if they have any questions related to what they have talked about so far.

Notes for Facilitation

- Keep the business plan format ready in a flipchart to display it during the activity.

UNIT 10.6.5: Procedures and Formalities for Bank Finance

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss the importance of setting goals
- Differentiate between short-term, medium-term and long-term goals
- Discuss how to write a business plan
- Explain the financial planning process
- Discuss ways to manage your risk

Resources to be Used

- Participant Handbook
- Bank loan/finance form sample

Ask

- While preparing a business plan in the last session, we discussed financial planning to arrange financial resources for your start-up. Therefore, how will you collect funds to start your business?

Say

- While most entrepreneurs think 'product' is the most difficult thing to decide for a business, start-up capital poses an even a bigger obstacle. Though there are various ways of funding the business, to convince investors to invest money is the most challenging.
- Some of the funding options available in India are:
 - **Bootstrapping:** Also called self-financing is the easiest way of financing
 - **Crowd funding:** Funds are collected by consumers pre-ordering or donating for starting the business.
 - **Angel investors:** Individual or group of investors investing in the company
 - **Venture capitalists:** Venture capitals are professionally managed funds who invest in companies that have huge potential. They usually invest in a business against equity.
 - **Bank loans:** The most popular method in India.
 - Microfinance Providers or NBFCs
 - **Government programmes**
- Let us know discuss the most popular method i.e. bank finance in detail here.

Do

- Discuss the list of documents that are required to apply for a loan like letter of introduction, business brochure, references of other banks, and financial statements.
- Explain the details to be filled in a loan application form.
- Divide the class into groups. Give each group a loan application form.
- Ask the groups to discuss and fill the form.

Summarize

- Close the discussion by summarizing the important documents needed for bank loan.
- Ask the participants if they have any questions related to what they have talked about so far.

Notes for Facilitation

- Checklist of documents is provided as resources for the session.
- You can make some copies and distribute it during the group activity.
- Download sample loan application forms from any nationalised bank's website. Print sufficient copies to circulate it amongst the groups.

CHECKLIST OF DOCUMENTS TO BE SUBMITTED ALONG WITH LOAN APPLICATION (Common for all banks)

1. Audited financial statements of the business concern for the last three years
2. Provisional financial statements for the half – year ended on _____
3. Audited financial statements of associate concern/s for the last three years
4. Copy of QIS II for the previous quarter ended on _____
5. Operational details in Annexure I
6. CMA data for the last three years, estimates for current year and projection for the next year
7. Term loan/DPG requirements in Annexure II
8. List of machinery in respect of machinery offered as security in Annexure III
9. Additional details for export advances furnished in Annexure IV
10. Property statements of all directors/partners/proprietor/guarantors
11. Copies of ITAO of the company for the last three years
12. Copies of ITAOs/WTAOs of the directors/partners/proprietor and guarantors
13. Copies of certificate from banks and financial institutions certifying the latest liability with
14. Copy of board resolution authorizing the company to apply to your bank for the credit facilities mentioned in application

15. Copy of memorandum and article of association (in case of limited company)/partnership deed (in case of partnership firm)
16. Cash budget for the current year and next year in case of contractors and seasonal industries.

UNIT 10.6.6: Enterprise Management – An Overview: How to Manage Your Enterprise?

Unit Objectives

At the end of this unit, participants will be able to:

- Discuss how to manage their own enterprise

Resources to be Used

- Participant Handbook

Ask

- Having set up a business, do you think it is possible to do everything on your own?
- Does one require trained persons for help?
- What does management mean?

Say

- Let's have a look at this example:
Kapil had a small business that was beginning to pick up pace. He wanted to expand his business, and therefore employed few more people. One day, as he was walking past Ramesh, one of his new employees, he overheard Ramesh talking rudely to a customer on the phone. This set him thinking. Kapil realised that he should have regular team meetings to motivate his employees and speak with them about any problems they might be facing during work. He should also conduct training sessions on new practices, soft skills, and technology, and develop work ethics manual for managing his enterprise.

Say

- Was Kapil correct in his approach or he should have scolded Ramesh instantly in front of his other employees?
- Discuss “Enterprise Management – An Overview” with the participants as given in the Participant Handbook.

Say

- Let's learn how to effectively manage an enterprise or business through an activity.

Team Activity

Enterprise Management

- This is a group activity.
- Design a matrix listing the topics and key words that are needed to run an enterprise effectively and smoothly.

Activity De-brief

- Have each group present their matrix.
- Encourage participants of the other groups to ask question about each other's presentation.

Do

- Instruct the participants that this is group work.
- Divide the class into small groups of 4.
- Give each group a chart paper and coloured pen.
- Tell the participants that they have make a matrix they need to fill.
- They have to write the main topics and key words that will them effectively manage their enterprise.
- Give the participants 15 minutes to discuss and write.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Summarize

- Ask the participants what they have learned from this exercise/activity.
- Ask if they have any questions related to what they have talked about so far.
- Close the discussion by summarizing the importance of effective management to run an enterprise as given in the Participant Handbook.

UNIT 10.6.7: 20 Questions to Ask Yourself before Considering Entrepreneurship

Unit Objectives

At the end of this unit, participants will be able to:

- List the important questions that every entrepreneur should ask before starting an enterprise

Resources to be Used

- Participant Handbook
- Blank sheets of paper
- Pens

Ask

- Why do you want to become an entrepreneur?

Say

- It is very important to know why you want to become an entrepreneur. Your personal goals for becoming an entrepreneur play a key role in the success of your business. Your goals should be clear well before you start your business.
- Apart from the goals, the other aspects of business that you need to bear in mind are the potential problems that you may face to set-up, your areas of interest, and all the other dimensions of the business.
- Let's understand it better with the help of some questions that every entrepreneur should ask before starting their own business.
- Open the Participant Handbook section named '20 Questions to Ask Yourself Before Considering Entrepreneurship'. You have to answer the questions individually.
- Then, we will have a class discussion on all the questions.

Do

- Read out the questions one by one in front of all the participants.
- Participants have to answer all the one by one questions.
- Give the class 10-15 minutes to note down their answers.
- At the end of 15 minutes, open the discussion for all the questions.
- Moderate the discussion by focusing on the relevant points.

- Keep a check on time and don't let the discussion get sabotaged or lose track of time. Ensure all the questions are covered and discussed.
- Give the participants 15 minutes to discuss and write.
- Keep a check on time. Tell the group to wind up quickly if they go beyond the given time limit.

Summarize

- Ask the participants what they have learned from this exercise/activity.
- Ask if they have any questions related to what they have talked about so far.



Skill India
कौशल भारत - कुशल भारत



सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP



N S D C
National
Skill Development
Corporation

Transforming the skill landscape



11. Annexures

Annexure 1 – Training Delivery Plan

Annexure 2 – Assessment Criteria

Annexure 1

Training Delivery Plan

Training Delivery Plan			
Program Name:	Certificate Course in Field Technician (Networking and Storage)		
Qualification Pack Name & Ref. ID	Field Technician (Networking and Storage) (ELE/Q4606)		
Version No.	V1.0	Version Update Date	14-03-2015
Pre-requisites to Training	Diploma Graduate		
Training Outcomes	<p>By the end of this program, the participants will be able to:</p> <ol style="list-style-type: none"> 1. Ability to build interpersonal relationships, and have a customer centric approach 2. Develop critical thinking and conduct root cause analysis – Problem solving 3. Business Communication, email etiquette 4. Working with office package for reporting and documentation – MS-Word, Excel, PowerPoint 5. Installing and configuring the networking, servers and storage systems 6. Attending to field calls from client and Handle Complaints for system troubleshooting and repairs 7. Knowing the importance of SLAs and Company Processes 		

Sl. No	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools/Ads	Duration HH:MM
1	Hardware Essentials	Hardware components	<ul style="list-style-type: none"> Understanding the different component of computer, Assembly of system Troubleshooting of the system To understand layout, Components and from factors of mother board. To understand the form factors, slot types and different memory types To identify the types of Storage. To recognize the methods of storage and different hardware components used storage. To identify the types of hardware components in the computer and differentiate it. Installation of Operating System, Drivers Required, Software Recognize of the component of computer, troubleshooting Recognize of the installing and configuring of operating system and it 	ELE/N4601 ELE/N0009 ELE/N4602	Facilitator-led – Discussion	Computer Laptop Laser Printer Ink Jet Printer Dot Matrix Printer Scanner Soldering iron Multimeter Repairing Tool	Theory: 12:00 Practical: 18:00

			<p>drives.</p> <ul style="list-style-type: none"> To understand importance of work Etiquette and understand the methods safety measure to be used. 				
2	Network Essentials	Concepts of networking	<ul style="list-style-type: none"> To understand the networking, OSI Concepts Recognize the Network technologies. To understand the types of application functionality To understand the colour coding for the Ethernet cable to be crimping. Recognize network adaptor configuration Cisco Router Internal Hardware Basics, Router Boot Sequence, Configuring IP address on Serial and Fast Ethernet Interfaces, Configuring Console, VTY lines Passwords Recognize the network designed structure. To understand the different configuration methods of device To understands method of self-motivation. 	ELE/N4601 ELE/ N0009 ELE/N4612 ELE/N4613	Facilitator-led – Discussion Demonstration	Post cards Cables Network switch Router Server LAN Tester Crimping Tool	Theory: 14:00 Practical: 14:00

3	Windows 7	Installation and configuration of windows 7	<ul style="list-style-type: none"> To understand features of windows client , performance information, tools configuration To understand the methods installation, Upgrading and its features To understand the method Configuring . maintaining, backup and recovery Recognize the methods of installation, configuration, system security. Recognize the methods of maintaining of backup, recovery and backup. To understand the method basic functions to be done, service to be provided, communicate effectively in formal situations. 	ELE/N4612 ELE/N4613	Facilitator-led – Discussion Demonstration	Videos, PPT's, Laptop, Projector, Projector Screen, White Board,	Theory: 10:00 Practical: 18:00
4	Windows Server	Directory services	<ul style="list-style-type: none"> To understand Directory services and different functional levels To understand methods of installing , configuring Directory services. To understand the methods of creation of 	ELE/N4612 ELE/N4613	Facilitator-led – Discussion Demonstration	Videos, PPT's, Laptop, Projector, Projector Screen, White Board,	Theory: 12:00 Practical: 20:00

			<p>User Accounts, Groups Accounts, Computer Accounts, Delegating Administration</p> <ul style="list-style-type: none"> • To understand the methods of disaster recovery and backup. • Recognize the method of implementing secure domain • Recognize the method of administrating and creation of user, maintaining group policies • To understand the goals set, improving the reading skills 				
5	Linux Server	Basic commands and features of Linux	<ul style="list-style-type: none"> • Recognize the Linux features, basic commands • To understand the methods of installing , configuring server and services • To understand the method of fault analysis, file system corruption • To understand method of installing, configuring network adaptor. • To understand method of basic services, managing of storage. 	ELE/N4612 ELE/N4613	Facilitator-led – Discussion Demonstration	Videos, PPT's, Laptop, Projector, Projector Screen, White Board,	Theory: 10:00 Practical: 18:00

			<ul style="list-style-type: none"> To understand the impact, body language, verbal communication and comprehension 				
6	IT Security	Installation of anti-virus	<ul style="list-style-type: none"> To understand the method of installing, configuring, outlook and concepts of anti-virus. To understand the methods of identifying types and indication of virus, worms, Trojan To understand the compatibility issues and common errors. Recognize basic security risks To understand methods of system vulnerability and fixing them. To understand methods of measure to prevent them. To understand methods of having positive attitude, awareness, prioritize 	ELE/N4612 ELE/N4613	Demonstration	Videos, PPT's, Laptop, Projector, Projector Screen, White Board,	Theory: 10:00 Practical: 14:00
7	Concepts of ITIL	Problem management and reporting	<ul style="list-style-type: none"> To understand the method monitoring, measuring and reporting To understand the Method of CSF, KPIs and Activity. 	ELE/N4612 ELE/N4613 ELE/N0009	Facilitator-led – Discussion Demonstration	Videos, PPT's, Laptop, Projector, Projector Screen, White Board	Theory: 10:00 Practical: 14:00

			<ul style="list-style-type: none"> To understand the methods of SLA, timeliness, response and resolution data To understand the problem management process flow, Determination resolution To Understand the methods Problem management. To Understand the methods tracking report and control measures To understand the methods for learning new things at your work. 				
8	Final Assessment		<ul style="list-style-type: none"> This will be Multiple question type Final Assessment (Theory & Practical's) Scenario based 	ELE/N4612 ELE/N4613 ELE/N0009	Facilitator-led – Discussion Demonstration		Theory: 02:00 Practical: 02:00
Total duration	Unique Equipment Required: <ol style="list-style-type: none"> Computer Laptop Laser Printer Ink Jet Pritner Dot Matrix Printer Scanner Soldering iron Multimeter Post cards Cabels Network switch Router Server LAN Tester Crimping Tool Screw Driver 						Theory: 180:00 Practical: 180:00

Annexure II

Assessment Criteria

CRITERIA FOR ASSESSMENT OF TRAINEES

Assessment Criteria for “Field Technician Networking and Storage”	
Job Role	Field Technician Networking and Storage
Qualification Pack	ELE/ Q 4606
Sector Skill Council	Electronics Sector Skills Council of India
Sr. No.	Guidelines for Assessment
1	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2	Each NOS will have assessed both for theoretical knowledge and practical
3	The assessment will be based on knowledge bank of questions created by the SSC.
4	Individual assessment agencies will create unique question papers for theory and skill practical part for each candidate at each examination/training center
5	To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

S.No.	NOS No.	NOS Name	Total Marks	Marks Allocation: Skills	Marks Allocation: Knowledge	Marks Allocation: Behaviour
1.	ELE/N4601	Engage with customers	100	60	40	
2.	ELE/N4612	Install, configure and setup the networking and storage system	100	60	40	
3.	ELE/N4613	Troubleshoot and fix equipment	100	60	40	
4.	ELE/N9909	Coordinate with colleagues and co-workers	100	60	40	
	Total:		400	240	160	
	Percentage Weightage:			60%	40%	
	Minimum Pass% to qualify:			70%	70%	

Do



- Explain each Guideline for Assessment in detail
- Explain the score that each trainee needs to obtain
- Recapitulate each NOS one-by-one and take participants through the allocation of marks for Theory and Skills Practical.
- Explain the Allocation of Marks. Explain that they will be assessed on Theory and Skills Practical.

Notes



A large rectangular area with an orange border containing 20 horizontal lines for taking notes.



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