



Participant Handbook

Sector
**Apparel, Made-ups and Home
Furnishing**

Sub-Sector
**Apparel, Made-ups and Home
Furnishing**

Occupation
Inventory Management

Reference ID: **AMH/Q0501, Version 2.0**
NSQF level: **3**



Store Keeper



<https://youtu.be/bEmlrfqwIVs>
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Second Edition

ISBN: 978-93-86620-59-0

Printed in India

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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. ”



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COMPLIANCE TO
QUALIFICATION PACK - NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

APPAREL, MADE-UPS & HOME FURNISHING SECTOR SKILL COUNCIL

for the

SKILLING CONTENT : PARTICIPANT HANDBOOK

Complying to National Occupational Standards of

Job Role/Qualification Pack: Store Keeper QP. No. AMH/Q0501 NSQL LEVEL 3

Date of Issuance: 30 September 2021

Valid up to: 30 September 2024

*Valid up to the next review date of the Qualification pack
Valid up to date mentioned above (whichever is earlier)

Chief Executive Officer
APPAREL MADE-UPS & HOME FURNISHING
SECTOR SKILL COUNCIL

Acknowledgements

We are thankful to Methods Apparel Consultancy India Pvt Ltd and to all organisations and individuals who have helped us prepare this Participant Manual.

We are especially thankful to Shahi Exports Pvt Ltd, Orient Fashions Exports (India) Pvt Ltd, Matrix Clothing Pvt Ltd, Richa Global Exports Pvt Ltd, Modelama Exports Pvt Ltd, Numero Uno Clothing Ltd, FCR Kiran Modes and M/S Khorania Brothers for their kind support in the development of this manual.

About this Book

This Participant Handbook 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.

- AMH/N0501: Establish and implement procedure defined for issuing and receipt of materials in and out of the store
- AMH/N0502: Manage housekeeping of store premises and store items
- AMH/N0503: Maintain records related to accounting, storage and preservation of store items
- AMH/N0504: Maintain health, safety and security in the store and Gender & PwD Sensitization
- AMH/N0104: Comply with industry, regulatory and organizational requirements and Greening of Job Roles

The symbols used in this book are described below:

Symbols Used



Learning Outcomes



Exercise



Steps



Activity



Tips



Notes



Objectives

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1. Introduction and Orientation

Unit 1.1 - Introduction to Apparel Industry

Unit 1.2 - Roles and Responsibilities of Store Keeper



Key Learning Outcomes

At the end of the module, participants will be able to:

1. Familiarize with apparel industry.
2. Describe the size and scope of the apparel industry.
3. Explain the roles and responsibilities of store keeper.

UNIT 1.1: Introduction Apparel Sector

Unit Objectives

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

1. Familiarise with apparel industry.
2. Describe the home furnishing and made-ups sub sectors.

1.1.2 Apparel Sector – Industry Overview

The apparel and textile industry is one of the most booming industries. Apart from providing one of the basic necessities of life, it also plays an important role through its contribution to industrial output, employment generation, and the export earnings of the country. With Indian apparel and textile being among the world's largest producers, the country is also the 5th largest exporter of apparel and textile across the globe with US\$ 36.4 billion. (source: Annual T&A industry report 2021 by Wazir Advisors)

The textile industry is one of the oldest business options in India since the ancient age. Different types of textile fibers are produced in India, among which cotton, jute, silk, and wool are the major ones. Both skilled laborers and unskilled officials are needed to run this business smoothly. Thus, the textile and apparel industry serves as the platform offering a huge number of employment opportunities to eligible people in India. A brief on complete supply chain for apparel industry is shown as below.



Fig.1.1.1: Apparel production process

The apparel and textile industry contributes 5 percent to the country's GDP from the domestic sector, whereas 7 percent is contributed from the industrial output in value terms and the export earnings of the country acquire a contribution of 12 percent from the apparel and textile industry.

Exports of AMH products stood at US\$ 21.5 billion in the year 2019-20 and have grown at a CAGR of 3 per cent since 2009-10. Top exported Apparel and Home Textiles commodities include T-shirts, kitchen & toilet linen, bed linen, men's shirt, women's top. India's domestic AMH market is also expanding rapidly, and domestic consumption stood at US\$ 81 billion growing at a CAGR of 10 percent, between 2005-06 to 2018-19.

The Indian textile sub-sector has traditionally been contributing significantly to the economy and manpower as well as to the structural changes in the manufacturing sector. Several factors that would contribute to the growth would include:

- Rising income levels are expected to increase the demand for home textiles and garments from domestic Consumers.
- Free trade agreements provide India a comparative advantage in the export segment as compared to its competitors – China, Bangladesh and Pakistan – as they create opportunities for manufacturers to supply to potential markets in East Asia.
- Low production cost continues to be an advantage for the sector and, consequently, demand from existing foreign markets continues to increase.
- Structural changes in the sector, with a shift from vertically disintegrated to integrated large firms, with automated machines for yarn and fabric production.
- Increased spending on research and development to enter the specialized fabrics and technical textiles sector.
- Favorable policy environment to support domestic and foreign investments and the implementation of schemes to enhance the production capacity and improve technology.

Ready Made Garments

The ready-made garments segment comprises men's, women's and kid's clothing, which may be used for either private (home/office wear) or commercial (uniforms for school, waiters and flight crew) purposes. The ready-made garments section has grown rapidly in the last few years. Both exports and domestic demands shall drive sector growth in future.

- Men's wear is the biggest segment in the ready-made garment segment, comprising about 43 percent of its share in the total revenue generated. This is followed by women's wear, with a share of 38 percent; 10 percent share of boys wear and 9 percent for girls wear in the total revenue generated by the ready-made garment segment.
- Changing lifestyles and consumption patterns are expected to drive the sector's supply of casual wear with an 11 percent growth, which would drive demand for workforce with specialized skills in western formals design, blended fabrics and increased application work on clothes.



Fig.1.1.2: Apparel production department

1.1.3 Made-ups and Home Furnishings

The made-ups sub-sector is growing at a steadily increasing pace in the country. The wide variety of products that come under this sub-sector are not only include necessities but also functional and luxury products. Made-ups sub-sector is divided into three (3) broad categories:

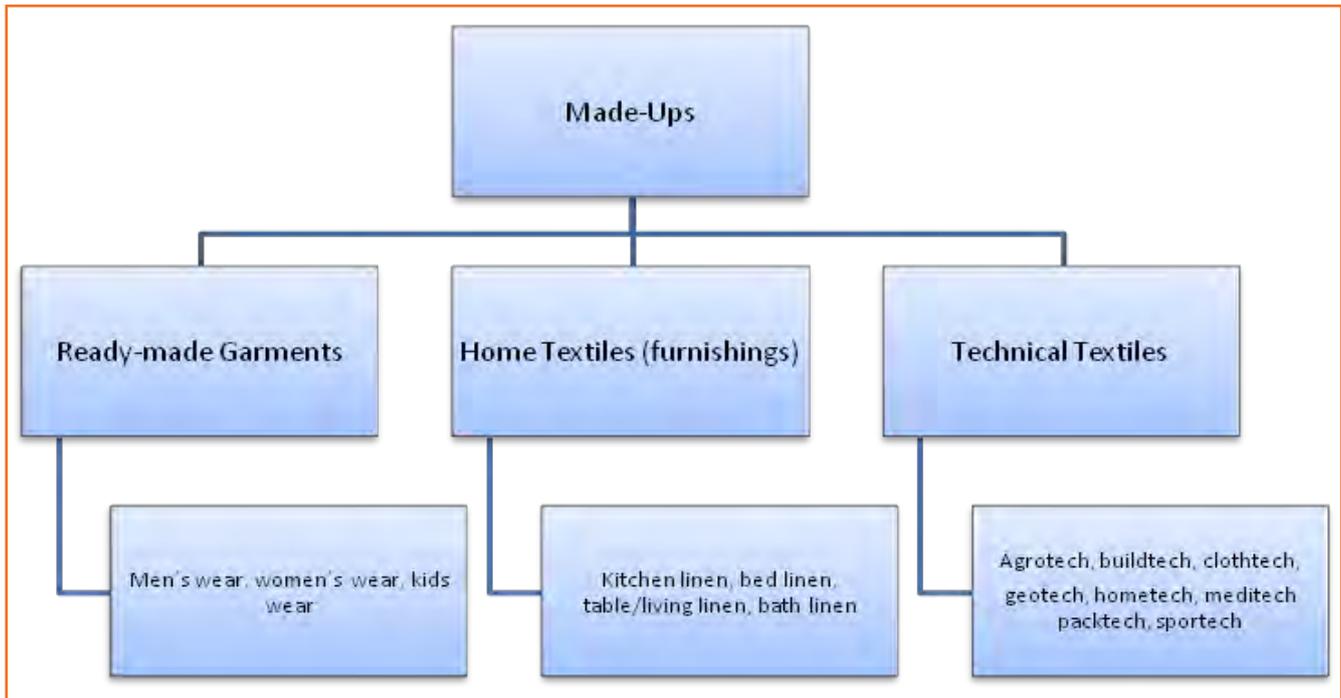


Fig.1.1.3: Made-ups and Home Furnishing Sub-sector

Indian is among one of the biggest exporters in Apparel and Made-ups industry. In Home Textiles India is second only to China in global exports, whereas in apparels, India is among the top 10. , India is fast becoming one of the leading global players in the Home Furnishings/ Textile. Home Furnishings industry offers wide varieties of products like bedspreads, furnishing fabrics, curtains, rugs, cushion covers etc.

The Indian Home Furnishing industry provides a unique blend of modern technology and ethnic techniques to bring out products that are one of the best in the world. The increase in the spending power of the Indian working class is also expected to contribute in the growth of domestic consumption of made-ups and home furnishings industry.



Fig.1.1.4: Home Furnishing

With increased demand and competition from countries like China, the demand of skilled workforce/kaarigars in the Home Furnishings industry is bound to increase in coming years

Size of Indian Textile and Apparel Industry

In India, the Apparel industry is spread across the country. However, the distribution of the clusters depends on the availability of raw material as well as the manufacturing. Cotton based units can be seen in all parts of the country, while the synthetic and woolen based industries are mainly concentrated in Maharashtra, Gujarat, Punjab, Jammu & Kashmir, Haryana, Madhya Pradesh and Uttar Pradesh. The silk-based industry finds concentration in Andhra Pradesh, Karnataka and Tamil Nadu while, jute clusters are largely located in Bihar and West Bengal.

Most of the apparel exporters (approx. 95%) are based out of Delhi NCR, Tamil Nadu Punjab, Rajasthan, Maharashtra and West Bengal. Rest of the India accounts for remaining 5% of the apparel exporters.

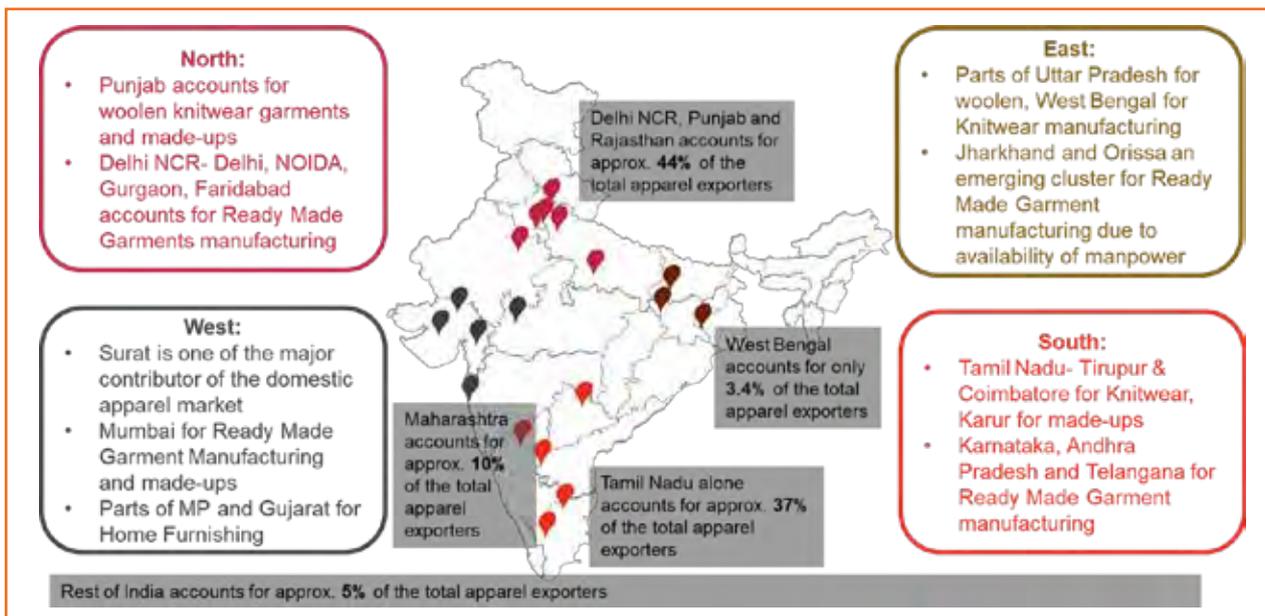


Fig.1.1.5: Major Apparel, Made-ups and Home Furnishing Clusters in India

1.1.4 Skill Development Policy

Indian government runs more than seventy skill development schemes at central, state and district level. The government has launched the Skill India flagship program to empower youth of the country by imparting employable skills to them. Under this initiative, the government has set up Ministry of Skill Development and Entrepreneurship (MSDE) to bring all the skill initiatives of the government under one umbrella and lead skill development ecosystem in the country. The ministry also launched a comprehensive Skill Development Policy in 2015 in which, detailed skill set requirement, courses offered, and roles and responsibilities of different stakeholders were defined. Further, sector wise skill gap analysis was also undertaken to understand sector specific skill requirement.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) are the flagship schemes which offer a variety of courses in the AMH sector. Among other skill development programmes, Integrated Skill Development Scheme (ISDS) was the main program run by the Ministry of Textiles, Government of India, introduced in XIIth Five Year Plan (FY 12-17).

The scheme had a target to train 1.5 million people for the T&A industry. As continuation of the scheme, the ministry has launched Scheme for Capacity Building in Textile Sector (SCBTS) also known as SAMARTH in 2018 with a target to train 1 million people in the sector.

ISDS has helped the industry by supplying skilled workforce, which, in turn, has helped the manufacturers in improving productivity and quality. Overall, it has helped in reducing cost, wastage and improving competitiveness that resulted in better business performances.

1.1.5 Employment Scenario in the Sector

Indian Garment Industry is closely connected to the fashion industry and grows hand in hand. Apparel Made-up & Home furnishing (AMH) is one of the largest employments generating sector in India, constituting about 60 per cent share of the total Textile and Apparel (T&A) exports. The Indian textile sub-sector has traditionally been contributing significantly to the economy and manpower as well as to the structural changes in the manufacturing sector. As per the latest round of Periodic Labor Force Survey (2018-19), the total workforce in India is estimated to be about 479 million. The share of labor working in the manufacturing sector was around

8.2 per cent (about 59 Million). Direct employment in the AMH sector primarily comes under manufacturing and the service sectors. The AMH sector employs about 35.8 million labour out of which 47% are engaged directly through the core manufacturing and trade of AMH product and 53% are engaged indirectly through the ancillary sector activities.

India is among the very few countries which have presence across the entire supply chain, from natural and synthetic fibers right up to finished goods manufacturing. It has presence in organised mill sector as well as decentralised sectors like handloom, power loom, silk, etc.

Incremental human resource requirement in core AMH sector, including manufacturing and trade is estimated to be about 35 Lakh for upcoming five years period between 2021-22 and 2025-26. Of the total incremental human resource demand, 89 per cent demand is projected to be in manufacturing of AMH products and 11 per cent demand is projected to be in trade related activity. Incremental labour demand in ancillary sector is estimated to be about 52 Lakh. Thus, the total incremental labour demand in AMH sector is about 87 Lakh.

Total incremental supply at all skill level, during the 2021-25 period, is projected to be of 18.4 Lakh. With the incremental demand of 31 Lakh, the skill gap in AMH - manufacturing is projected to be of 12.6 Lakh.

UNIT 1.2: Roles and Responsibilities of Store Keeper

Unit Objectives

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

1. Analyse the duties of a store keeper.
2. Explain roles and responsibilities of a store keeper.

1.2.1 Roles and Responsibilities of a Store Keeper

Store keeper is the important person for the store. He is the in charge of the store department and also responsible for store control. The primary duties of the store keeper are multiple and varies according to the organization structure. A store keeper is being the head of a store dept. He is entrusted the following duties.

- Receiving material
- Arranging materials
- Preservation of the material
- Recording
- Issue of material
- Issuing purchasing requisition
- Supervision

The responsibilities of a good storekeeper are below:

- To receive the materials ordered by the purchase department (in case of decentralised system) and supplied by the vendors in a proper maintains as per the laid down procedure.
- To ensure the correctness in the quality, quantity, specifications, condition of the materials received from vendors.
- To stock the materials received from vendors properly as to ensure easy access identification, verification, handling, maintenance etc.
- To ensure proper stocking of materials by using appropriate method of care and preservation to avoid any damage and loss.
- To ensure a smooth issue of materials to the issue department.
- To ensure accurate accounting of the materials receiver and issued.
- To ensure a favorable working atmosphere is maintained for the personnel working in the store.
- To ensure proper safety measures are taken for the safety of the store building, materials in the store and the men working in the store.
- To ensure that the store is always maintained up to date in all respects in a presentable condition.
- Receive and forward all goods and deliveries in and out of the hotel to the correct point of contact/storage area.

- Able to follow standards for issuing and receiving stock within the store's area of operation.
- Monitor and take inventory on regular basis to compile orders based on par levels or needs.
- Maintain clear and organized records to ensure all reports and invoices are filed and stored properly.
- Monitor PAR levels for all food items to ensure proper levels.
- Responsible for storage of both food & beverage and operational stock.
- Responsible for the day-to-day check on the storage facilities for upkeep and hygiene.
- Responsible to verify all goods arrived as per the agreed purchase, delivery note and agreed quantity has been received.
- Refuse acceptance of damaged, unacceptable, or incorrect items.
- Ensure cleanliness of all areas, keeping storage areas clean & tidy and in strict compliance with hygiene regulations.
- Ensure all store requisitions are signed by concerned Department Heads (HOD's) and approved by FC/GM depending upon the hotel's operations procedure.
- Ensure the quantity requested and the quantity issued always matches.
- Ensure store requisition form is signed by the person collecting the goods and enter into the Inventory/ Materials Management System.
- Post all invoices using the MMS - Material Management System
- Conduct physical stock audits on a regular basis as advised by the Financial Controller (FC) and the physical count to be tallied with the inventory count.
- Assist the Accounts Payable Clerk / payable assistant in finding out any cost discrepancies.
- Complete requisition forms for inventory and supplies.
- Extend all requisitions on a daily basis and update the inventory management software/system.
- Work closely with Purchasing to order and receive items and equipment.
- Troubleshoot any vendor delivery issues and oversee/follow up on the return process.
- Follow up on documentation of after-hours issues ensuring it is in accordance with established internal controls and procedures.
- Adhere to all Health and Safety procedures particularly relating to food and beverage items.
- Ensure uniform and personal appearance are clean and professional.
- Speak with others using clear and professional language.
- Keep accurate recordings of all incoming and outgoing goods.
- Notify the store manager/supervisor of any low stock levels.
- Identify and report any slow-moving items to avoid over purchasing.
- Verify and track received inventory and complete inventory reports and logs.
- Perform any other duties as assigned by the management or supervisors.

Resources



Scan the QR code or click the link to access the videos or e-book.

Description	QR Code
Apparel industry in India	 https://youtu.be/tN5oLGSjepQ
Storekeeper Job Discription	 https://youtu.be/bEmlrfqwIVs

Exercise



- India is _____ largest exporter of Apparel and Textile
 - 2nd
 - 3rd
 - 4th
 - 5th
- The apparel and textile industry contributes _____ percent to the country's GDP from domestic sector
 - 5
 - 6
 - 7
 - 10
- Biggest segment in the ready-made garment is
 - Children's Wear
 - Women's Wear
 - Men's Wear
 - Sport's Wear
- Which state accounts for alone 37 % of total apparel exporters?
 - Delhi NCR
 - Punjab

- c) Rajasthan
 - d) Tamil Nadu
5. Which of these items comes under category of Home Furnishing and Made-ups?
- a) Bedspreads
 - b) Curtains
 - c) Cushion covers
 - d) All of the above
6. What is the full form of PMKVY?
- a) Pradhan Mantri Kushal Vikas Yogna
 - b) Pradhan Mantri Kaushal Vikas Yogna
 - c) Pradhan Mantri Krishi Vikas Yogna
 - d) None of the above
7. In which year SAMARTH Scheme launched?
- a) 2015
 - b) 2016
 - c) 2018
 - d) 2021
8. India is _____ largest exporter of Apparel and Textile
- a) 2nd
 - b) 3rd
 - c) 4th
 - d) 5th
9. What is the key role of a store keeper?
- a) Receiving material and Recording
 - b) Preservation of the material,
 - c) Issue of material
 - d) All of the above
10. When can a store keeper will return to goods received from vendor?
- a) When goods are not as per agreed purchase agreement.
 - b) When delivery note not matches with actual quantity.
 - c) When defective material is received.
 - d) All of the above

2. Procedure for Issuing and Receipt of Materials in and out of the Store



Unit 2.1 - Procedure for Issuing and Receipt of Materials in and out of the Store



Key Learning Outcomes

At the end of the module, participants will be able to:

1. Inspect and check materials.
2. Explain Record and Discrepancy.
3. Interpret store layout and its management.
4. Explain about maintenance of stock level

UNIT 2.1: Procedure for Issuing and Receipt of Materials in and out of the Store

Unit Objectives

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

1. Analyse the impact of inspection and testing on relevant process performance like consumption, quality, etc.
2. Explain fixation of stock.
3. Evaluate the Inventory system.
4. Describe various packaging symbols and interpretations.
5. Interpret about Store Management.

2.1.1 Classification of Apparels and Home Apparel

In order to achieve the objectives of effective inventory control, well planned layout of stores should be required. A planned stores layout will facilitate easy movement of materials, good housekeeping, sufficient space for materials handling. It ensures effective utilization of storage space and judicious use of storage equipment. The stores department should be equipped with shelves, racks, pallets and proper preservation from rain. light and other such elements. An ideal location of stores should facilitate the volume and variety of goods to be handled. In order to bring down the transport cost it should be close to roads or railway stations. And also as far as possible, the stores department should be near to the receiving department. In the case of large organizations usually stores attached to each consuming department, whereas receiving is done centrally.

2.1.1.1 Types of Stores

The types of stores depend on the size, types and policy of the organization. Organization of stores varies from concern to concern. As per the requirement of the firm the stores organization may be classified into:

1. Centralized Stores
2. Decentralized Stores
3. Combination of both, i.e., Centralized Stores with Sub Stores

Centralized Stores

This system is suitable to small-scale industries where it is desirable to centralize the materials in one department. Under this system, the store room will be most conveniently situated where it is near to all the departments.

Advantages of Centralized Stores:

- Well planned layout of stores
- Effective utilization of floor space
- Better supervision of stores is possible
- Effective material handling is possible
- Lot of manual work may be eliminated

- Better control is possible
- Less investment is required
- Ensures minimum wastages
- Facilitates prompt flow of materials
- Better forecasting is possible

Disadvantages:

- Increases transportation costs
- Delay and inconvenience because of over-crowding of materials
- Greater risk of loss in case of fire
- Break down in transport will affect continuous flow of production
- Increases cost of materials handling

Decentralized Stores

Under this system each department has its own stores. It is suitable to large concern where there are several departments each using a different type of material from its own stores. In this system all the disadvantages of centralized stores can be eliminated.

Combination of Both

This system is also termed as Imprest System or stores control. Centralized Stores with Sub Stores is usually adopted in large factories where departments are situated at a distance from the central stores. In order to minimize the cost of transportation and materials handling, this type of organization would be located nearer to the receiving department. Under this system material receipts are stored in the central stores and issues are made to the sub-stores. Under imprest system of stores control sub stores which are located nearer to the central stores for the purpose of draw supplies from central stores and issue the required quantity to production. To maintain the stocks at the predetermined level, the sub-stores make requisition from the central stores.

2.1.2 Fixation of Stock

Level Material control involves physical control of materials, preservation of stores, minimization of obsolescence and damages through timely disposal and efficient handling. Effective stock control system should ensure the minimization of inventory carrying cost and materials holding cost. Level of stock is the important aspect of inventory control. Stock level may be overstocking or understocking. Overstocking requires large capital with high cost of holding. In the case of understocking, production and overall performance of the concern as a whole will affect. Thus, fixation of stock level is essential to maintain sufficient stock for the smooth flow of production and sales. The following are the important techniques usually adopted in different industries:

- Maximum Stock Level
- Minimum Stock Level
- Danger Level
- Re-Order Level
- Economic Ordering Quantity (EOQ)
- Average of Stock Level

Maximum Stock Level

The maximum stock level indicates the maximum quantity of an item should not be allowed to increase. The maximum quantity of an item can be held in stock at any time. The following factors can be considered while fixing the maximum stock levels:

1. Availability of capital
2. Availability of floor space
3. Cost of storage
4. Possibility of fluctuation of prices in raw materials
5. Cost of insurance
6. Economic order of quantity
7. Average rate of consumption
8. Re-order level and lead time
9. Seasonal nature of supply
10. Risk of obsolescence, depletion, evaporation etc.

The maximum stock level can be calculated by the following formula:

$$\text{Maximum Stock Level} = \text{Re-Order Level} + \text{Re-Ordering Quantity (Minimum Consumption} \times \text{Minimum Re-Ordering Period)}$$

Minimum Stock Level

Minimum stock level indicates the minimum quantity of material to be maintained in stock. Accordingly, the minimum quantity of an item should not be allowed to fall. The minimum stock is also known as Safety Stock or Buffer Stock. The following formula is adopted for calculation of minimum stock level:

$$\text{Minimum Stock Level} = \text{Re-Order Level} - (\text{Normal Consumption} \times \text{Normal Re-Order Period})$$

Danger Level

It is the stock level below the Minimum Level. This level indicates the danger point to affect the normal production. When materials reach danger level, necessary steps should be taken to restock the materials. If there is any emergency, special arrangements should be made for fresh issue. Generally, this level is fixed above the minimum level but below the reordering level. The formula for determination of danger level is:

$$\text{Danger Level} = \text{Average Rate of Consumption} \times \text{Emergency Supply Time}$$

Re-order Level

Re-order level is also termed as Ordering Level. It indicates when to order, i.e., orders for its fresh supplies. This is the stock level between maximum and the minimum stock levels. The re-order stock level is fixed on the basis of economic order quantity, lead time and average rate of consumption. Calculation of re-order level is adopted by the following formula:

$$\text{Re-order Level} = \text{Minimum Level} + \text{Consumption during the time to get fresh delivery (or)}$$

$$\text{Re-order Level} = \text{Maximum Consumption} \times \text{Maximum Re-ordering Period}$$

Economic Order Quantity (EOQ)

The economic order quantity (EOQ) is the size of the purchase order which gives maximum economy in purchasing material. It is also termed as standard order quantity. It is fixed after taking into consideration the following points:

- **Ordering cost** Cost of placing a order refers to the cost incurred for acquiring materials. It depends upon number of orders placed and the number of items ordered. If the order size is larger in quantity, orders placing cost per unit is lower and if order size is smaller in quantity, order placing cost per unit is higher: It includes cost of preparing and placing an order, cost of transportation, cost of receiving and inspecting the materials.
- **Carrying cost** It is the cost that is incurred in maintaining a given level of stock. It includes cost of handling materials, insurance premium, cost of storage space, obsolescence losses etc., larger size of stock, higher the stock carrying cost per unit per annum and vice versa. EOQ is calculated as follows:

$$EOQ = \sqrt{\frac{2AB}{CS}}$$

Where:

EOQ = Economic Ordering Quantity

A = Annual Consumption

B = Buying Cost per Order

C = Cost Per Unit

S = Storage and Carrying Cost per Annum

Illustration: Satyam, a machine manufacturer, purchases 3600 units of a certain component for his annual usage. The order placing cost is Rs.200 and cost of carrying one unit for a year is Rs. 4. Calculate the economic order quantity

Solution:

Where:

A = 3600 units

B = Rs 200

C = Rs 4

Average Stock Level

Average stock level is determined on the basis of minimum stock level and re-order quantity. This is calculated with the help of the following formula:

$$\begin{aligned} \text{Average Stock Level} &= \text{Minimum Stock Level} + \frac{1}{2} \text{ of Re-order Quantity} \\ &= \frac{\text{Minimum Level} + \text{Maximum Level}}{2} \end{aligned}$$

The ABC Analysis

ABC Analysis is one of the important techniques which is based on grading the items according to the importance of materials. This method is popularly known as Always Better Control. This is also termed as Proportional Value Analysis -In inventory control, this technique helps to analyze the distribution of any characteristic by money value of importance in order to determine its importance. Accordingly, materials are grouped into three categories on the basis of the money value of importance of materials.

1. High Value Materials -A
2. Medium Value Materials -B

3. Low Value Materials -C

The items, which are of high value and less than 10 per cent of the total consumption or inventory can be called as 'A' grouped materials. It is required to exercise selective control and focus more attention because of high value items. Similarly, 70 per cent of materials in total consumption or inventory which lies 10 per cent of the inventory value can be grouped under 'C' categories. The materials which have moderate value that lies between the high value materials and low value materials are grouped under 'B' category. The following table shows more explanation about ABC Analysis:

Category	Percentage to total inventory	Percentage to a total inventory cost
A	Less than 10	70-80
B	10-20	15-25
C	70-80	Less than 10

fig.2.1.1: Low value material

Advantages of ABC Analysis:

- Exercise selective control is possible.
- Focus high attention on high value items is possible.
- It helps to reduce the clerical efforts and costs.
- It facilitates better planning and improved inventory turnover.
- It facilitates goods storekeeping and effective materials handling.

2.1.3 Classification and Codification

In order to ensure the effective inventory control, it should be carried out with the classification and codification of materials. Codification is the process of representing each item by a number, the digits of which indicate the group, the sub group, the type and the size and shape of the items. The codification process could be obtained by the nature of materials in grouping all items of the same metal content say ferrous and non-ferrous etc. The system of codification could be built by the end use of items, that is, items grouped according to maintenance, spinning, weaving, packing, foundry, machine shop etc.

Advantages of Codification:

- Codes ensure the secrecy of materials.
- It is essential for mechanical accounting.
- Easy identification of material is possible.
- It ensures effective material control.
- It minimizes length in description of materials.
- Effective materials handling is possible.
- It helps in avoiding duplication of materials.
- Codification facilitates less clerical work.
- Cost reduction is possible.

Methods of Coding

The following are the three important Methods of Codification:

1. **Numerical Method:** Under this method, each number or numerical digit is allotted to each item or material. Accordingly, each code should uniquely indicate one item. For example, in printing press following codes may be assigned:

Paper:	145
Ink:	155
Gum:	165

There are various universal decimal classification of codification used in libraries may be indicated for identification of items.
2. **Alphabetical Method:** In this method alphabets or letters are used for codification of each category of materials. Accordingly, each letter or alphabet is allotted for each item or material. For example, 'C' for copper, 'S' for steel and so on.
3. **Numerical Cum Alphabetical Method:** This method is done by a combination of numerical and alphabetical method. Under this method both numerical along with alphabet is allotted for each item. For example, IR 5 may indicate Ink Red of Grade 5, Steel wire 6 may be denoted by SW 6 etc.

2.1.4 Inventory System

The chief aims of inventory control is as follows:

- To maintain a balanced inventory.
- To ensure the smooth flow of production.
- To keep the investment in inventory as low as possible.

Accordingly, stock verification is an important aspect to ensure and maintain a balanced inventory. The following are the three systems of stock verification adopted in different industries:

1. **Periodic Inventory System:** Under this system, quantity and value of materials are checked and verified at the end of the accounting period after having a physical verification of the units in hand.
2. **Perpetual Inventory System:** The Perpetual Inventory System is also known as Automatic Inventory System. This is one of the important methods adopted for verification inventories to know the physical balances. According to I C M A London defines Perpetual Inventory System as a method of recording stores balances after every receipt and issue to facilitate regular checking and to obviate closing down for stock taking.

Advantages of Perpetual Inventory System:

- It facilitates rigid control over stock of materials.
- It gives upto date details about materials in stock.
- Not necessary to stop production for stock taking.
- It assists to minimize pilferage and fraudulent practices.
- It enables to reconcile the stock records and document for accuracy.
- It helps to take the important decisions for corrective actions.

Perpetual Inventory represents a system of records maintained by the organization. The records are of two types, viz.:

- Bin Cards
- Stores Ledger

A constant comparison of the quantity balances of these two set of records is made and the balances are reconciled.

- **Bin Cards:** Bin Card is only quantitative record of stores receipt, issue and balance and is kept by the Storekeeper for each item of stores.
- **Stores Ledger:** Stores ledger is both quantitative and monetary value record of stores receipt, issue and balance and is prepared by the Cost Accounting Department.

Bin Card Vs Stores Ledger: The Difference between Bin Card and the Stores Ledger can be summarized as follows:

Bin Card	Stores Ledger
Bin Cards are maintained at the stores	Stores Ledger is maintained in the Accounts Department
It is posted by Issue Clerk	It is posted by Ledger Clerk
Bin Cards meant for recording record of quantity only	It is as a record of quantity and value.
Transactions posted individuality	Transactions can be posted periodically
Posting can be made at the time of issue.	In stores ledger posting can be made after issue

Fig.2.1.2: Bin Card Vs Stores Ledger

- 3. Continuous Stock Verification:** Since Verification of physical inventory is an essential feature of a sound system of material control, a system of continuous stock taking is introduced. Continuous stock taking ensures that the balances of all items of stocks are checked at least three to four times in a year by physical verification. It avoids long and costly procedure of closing down the stores for stock taking on periodical basis. Stock discrepancies are detected on timely basis and preventive measures can be taken. The correctness of the physical stocks as reflected in the books is ensured and thus the monthly accounts represent a true and fair view of the business. Continuous Stock Verification not only serves as an essential tool of material control but also will help in proper presentation of accounting information to the manage me

Continuous Stock Taking Vs Periodic Stock Taking: The differences between Continuous Stock Taking and Periodic Stock Taking can be summarized as follows:

Continuous Stock Taking	Periodic Stock Taking
Continuous stock taking is held throughout the year.	It is held once in a year.
Stock discrepancies are detected and prevented without delay.	Under this system preventive measures is the delay process.
Under this system normal work will not be disrupted.	Under this system there is closing down the stores for stock taking.
Permanent personnels are required.	Temporary personnel are required.
Long and costly procedure on continuous stock verification.	It is cheaper and shorter period is required.

Physical verification of materials are on random basis.	All materials are thoroughly checked.
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Fig.2.1.3: Continuous Stock Taking Vs Periodic Stock Taking

2.1.5 Material Storage Losses

The investment in materials constitute a major portion of current assets, so it is essential to exercise effective stores control. Stores control helps to avoid losses from misappropriation, damage, deterioration etc. Generally material storage losses arising during storage may be classified as:

- 1. Normal Loss:** Normal Losses arise during the storage of materials due to the avoidable reasons of pilferage, theft, careless of materials handling, clerical errors, improper storage, wrong entries etc.
- 2. Abnormal Loss:** Abnormal Losses arise during the storage of materials due to unavoidable causes of evaporation, shrinkage, bulk losses due to accident, fire, etc.

Accounting Treatment of Normal Loss and Abnormal Loss

The following are the accounting treatment of normal and abnormal loss of materials arising during storage:

- **Normal Loss:**
 - » Inflate the issue price.
 - » Charge to stores overheads.
 - » Treat it as a separate item of overheads to be recovered as a percentage of materials consumed.
- **Abnormal Loss:** Abnormal losses are directly charged to Costing Profit and Loss Account.

2.1.6 Methods of Pricing of the Issue of Material

Different methods are in use concerning the pricing of materials issued from the store. They are as follows:

1. First-in, First-out [FIFO]
2. Last-in, First out [LIFO]

First-in, First-out [FIFO]

It is based on the assumption that the materials purchased and received first are issued first to the job. After the first lot of material is used for production, the next lot is taken for the supply. This assumption is made for the purpose of assigning cost of material to a job/process/product. The price of first purchase for all the issues is same until the material of first purchase is entirely issued to various jobs, cost of materials issued represents the cost of earlier purchases. Cost of closing stock shows the cost of latest purchases.

It is not necessary that the physical movement of the stock be in the order of first in and first out.

Advantages of FIFO Method: A good system of stock management requires that the oldest units are issued first and stock consists of the latest purchases. This system is found in the FIFO method of pricing the issues. No profit or loss occurs merely on the use of this method. The stock of material represents the recent purchases; hence its value is based on present price.

Disadvantages of FIFO Method: Under this method, the objective of matching of cost with revenues is not achieved. If the prices of materials are rising fast, the current production cost may be understated. If the sales price is fixed, then sales revenue is not generating enough income to cover the cost of purchases of raw material.

It involves difficult calculation and hence increasing the possibility of clerical mistake. Comparison between similar jobs is very difficult if material issued to the jobs is of different prices.

The FIFO method is suitable, where the size and cost of raw material units are large, materials are identified and belonging to a particular lot and not more than two or three different prices of material are on hand at one time.

Illustration 3: A firm maintains its stores ledger on the basis of FIFO method. Following is the summary of the receipts and issues of raw materials during the month of April 2006:

April	01	Opening balance 300 units @ Rs.22 per unit
"	03	Issue vide Material requisition No. 14, 150 units.
"	08	Purchase order No.07, 200 units @ 25 per unit.
"	12	Purchase order No.09, 400 units @ 23 per unit
"	17	Issue vide Material requisition No. 16, 500 units.
"	20	Issue vide Material requisition No. 18, 100 units.
"	23	Purchase order No. 11, 600 units @ 20 per unit.
"	25	Issue vide Material requisition No.26, 600 units.
"	28	Purchase order No.12, 200 units @ 26 per unit.
"	29	Issue vide Material requisition No.32, 300 units.
"	30	Shortage 10 units

Fig.2.1.4: Receipts and issues of raw materials by FIFO method

Solution:

Stores Ledger Sheet [FIFO Method]

Date	Particulars	Receipts			Issues			Balance	
		Qty	Rate Rs	Amount Rs	Qty	Rate Rs	Amount Rs	Qty Rs	Amount Rs
2006									
April 01	Balance	300	22	6600	—	—	—	300	6600
03	M.R. No. 14	—	—	—	150	22	3300	150	3300
08	P.O. No.07	200	25	5000	—	—	—	350	8300
12	P.O.No.09	400	23	9200	—	—	—	750	17500
17	M. R. No. 16	—	—	—	150	22	3300		
					200	25	5000		
					150	23	3450	250	5750
20	M. R. No. 18	—	—	—	100	23	2300	150	3450
23	P.O. No. 11	600	20	12000	—	—	—	750	15450
25	M.R. No.26	—	—	—	150	23	3450		
					450	20	9000	150	3000
28	P.O.No.12	200	26	5200	—	—	350	8200	
29	M.R. No.32	—	—	—	150	20	3000		
					150	26	3900	50	1300
30	Shortage	—	—	—	10	26	260	40	*1040
	Total	1700		38000	1660		36960	40	1040

Fig.2.1.5: Stores Ledger Sheet [FIFO Method]

* 40 units @ Rs.26 = Rs.1040

Value of closing stock = Rs. 1040 (40 units @ Rs 26)

Last-in, First out [LIFO]

It is based on the assumption that the material purchased and received last are issued first to the job. The cost of last lot of materials received is used to price the materials issued until the stock of that lot is exhausted. Thereafter the next lot for pricing is used, and so on through successive lots. The stock is priced at the oldest cost.

Advantages of LIFO Method: This method takes current market prices while issuing materials to different jobs. Actual cost of materials is charged to production, therefore no profit or loss results on account of this method. This method helps in reducing the burden of income tax during the period of price rise. It provides a better matching of current cost with current revenues.

Disadvantages of LIFO Method: The profit of a firm is manipulated with this method in operation. This method involves considerable amount of clerical work because of complications in calculating prices. The stock in hand is valued at a price which might have become out of date when compared with the current stock prices. Thus the financial position of the business until is wrongly stated.

Illustration 4: A firm maintains its stores ledger on LIFO method basis. Following is the summary of the receipts and issues of raw materials during the month of June 2006:

01	Opening balance 200 units @ Rs.18 per unit
03	Purchase order No.09, 300 units @ 20 per unit.
07	Issued vide Material requisition No. 14, 250 units.
11	Purchase order No.15, 400 units @ 22 per unit
16	Issued vide Material requisition No. 16, 550 units.
19	Purchase order No.21, 600 units @ 20 per unit.
22	Issued vide Material requisition No. 18, 300 units
24	Issued vide Purchase order No.24, 300 units @ 25
26	Material requisition No.26, 500 units.
28	Purchase order No.27, 200 units @ 27 per unit.
29	Issued vide Material requisition No.32, 300 units.
30	Purchase order No.30, 150 Units @ 30 per unit

Fig.2.1.6: Receipts and issues of raw materials by LIFO Method

Solution:

Stores Ledger Sheet [LIFO Method]

Date	Particulars	Receipts			Qty	Issues		Balance	
		Qty	Rate (rs)	Amount (rs)		Rate (rs)	Amount (rs)	Qty	Amount (rs)
June 1 st , 16	Balance	200	18	3600	--	--	--	200	3600
	PO No. 09	300	20	6000	--	--	--	500	9600
	MR No. 14	--	--	--	250	20	5000	250	4600
	PO No. 10	400	22	8800	--	--	--	650	13400
	MR No. 16	--	--	--	400	22	8800	250	4600
	MR No. 17	--	--	--	50	20	1000	200	3600
	MR No. 18	--	--	--	100	18	1800	100	1800
	PO No. 21	600	20	12000	--	--	--	700	13800
	MR No. 20	--	--	--	300	20	6000	400	7800
	PO No. 24	300	25	7500	--	--	--	700	15300
	MR No. 26	--	--	--	300	25	7500	400	7800
	MR No. 27	--	--	--	200	20	4000	200	3800
	PO No. 25	200	27	5400	--	--	--	400	9200
	Total	2000		37300	1550		34100	400	6300

Fig.2.1.7: Stores Ledger Sheet [LIFO Method]

Closing stock consists of 100 Units @ Rs.18 = Rs. 1800
 150 Units @ Rs.30 = Rs. 4500
Rs. 6300

2.1.7 What is Store Management?

It is the practice of managing and controlling everything around and within your store - nothing more, nothing less. That said, dig a little deeper and you'll soon realise that, while it's easy to understand, having competent control over all the moving parts that make up your store is a complex task. You only need to consider the multitude of roles and responsibilities of your average store manager to see that. They include looking after the wellbeing of your staff and motivating them to meet their sales targets; overseeing the ordering and receiving of goods if buying is not centralised and dealing with any necessary price changes. They also need to understand customer service and how to handle customers queries and returns. And that's just the beginning.

2.1.7.1 Objectives of Store Management

In our article on retail vendor management, we delved into the four steps you can take to build an effective and efficient vendor management process. You could also just as easily apply a similar method to maintain proper control of everything around your store. That said, while process is crucial, it's first worth looking at the objectives of store management and then finding ways to meet them. That's what you'll find below. As a side note, the upcoming objectives are not all-encompassing but rather a cross-section of the key ones to consider.

- 1. Establish and maintain your supply chain:** The first objective is to ensure an uninterrupted supply of stock. In short, establish a supply chain that is both secure and delivers stock on time, every time. That should be a given though. If you don't have stock to sell, everything else falls apart. One of the best actions to take to ensure your store has proper control of its stock would be to implement a robust ordering system, which allows you to monitor your inventory whenever you want, be that daily, weekly, or monthly. Also known as an inventory replenishment system.
- 2. Ensure the safe handling of stock to prevent damage:** Once you have stock coming into your store, it's crucial that you put a process in place to ensure the safe handling of it. Again, that should be obvious. However, that doesn't mean that you can't overlook it. That's especially true if your store manager is overwhelmed by other issues. Fortunately, there are a few measures you can take to prevent damage due to poor handling. The obvious action to take is to train all of your staff, no matter their primary role. You can even bring in product handling officers to train them. That includes arranging safety training and informing them of the standards that must be met when handling your stock. On the other hand, you can implement stock handling measures at the receiving bay for those of your staff who work exclusively in the storeroom. Since many mistakes happen at this point, it's crucial that signs are in place and anyone who handles the stock at this point understands the rules around storing merchandise in the stockroom. For example, they must know how high each product should be stacked, how to store products on pallets, how to store cartons and shrink wrapped products and so on. An open and demarcated warehouse or stockroom with wide aisles can also help to improve the handling of merchandise. That said, ensuring the safe handling of stock isn't only about protecting your merchandise from avoidable breakages. It's also about ensuring that there is no deliberate causing of damage. Like theft, or fire. The obvious solution, in this case, is to install a security system, which should include either a guard, cameras and sensors, or both for theft. In most cases, a camera system would be best since it's easy enough to evade a guard. For fires, a hydrant is an obvious solution. However, you also need to think when placing highly flammable or hazardous products in-store and obey approved safety standards.
- 3. Minimise the cost of storage where possible:** It costs money to store stock. That much is true and it's accepted. However, you shouldn't accept it to the point that you forget to monitor your storage space. That will cost you dearly. While stock is crucial to your business, it isn't the only thing that drives it. One way of minimising your cost is to implement an inventory system that regulates your stock. It's the same inventory replenishment system that you'd use to bring stock in, and it will help you to guard against obsolete inventory. More importantly, it will allow you to allocate more storage space to your best selling merchandise. Another consideration is to keep your in-store stock room to a minimum size. That's for two reasons. Firstly, it will force you to not over order on items. Before ordering anything, an analysis would need to be done across the company and factor in all the relevant retail data to determine how much stock to send. This is where a centralised buying method works in your favour. Secondly, and perhaps more importantly, a smaller stockroom means you'll have more room in your store to display your stock.
- 4. Keep a systematic record of stock that arrives and leaves your store:** If you want to know what sells and what doesn't, one of the most straightforward actions to take is to set up a way to monitor it. A robust POS system can help you here. In this case, there should be a combination of both hardware and software resources. That said, be careful about the system you choose. It must meet all of your requirements. A modern computer and cash registers with the latest operating system is an excellent choice since it should have enough capacity

to process the raw data you collect into meaningful output. It's this retail data which is the lifeblood of your business. Let's use an example to illustrate why we say that. Imagine you're a retailer who doesn't have a process when it comes to maintaining stock levels. It essentially means there is no recording system for you to determine how much stock to order and when to order it. Instead, you rely on your gut instinct to decide when to order. While that might work for a short period, it can ultimately sink your business. You'd only need to consider the consequences. They are same as the consequences for not meeting the other objectives of store management: out of stocks, inventory shrinkage, and dead stock. On top of that, there is the real possibility of reduced profits.

Resources



Scan the QR code or click the link to access the videos or e-book.

Description	QR Code
Material Storage	 https://youtu.be/Dn6cJYkL0ws
Inventory System	 https://youtu.be/u73dXAovxRk
Store Management	 https://youtu.be/Xgforc5uKEM

Exercise

1. Type of Store depends upon _____
 - a) Size of Organisation
 - b) Type of items
 - c) Requirement and Policy of company
 - d) All of the above
2. EOQ stands for _____
 - a) Equal Order Quantity
 - b) Estimated Order Quantity
 - c) Economic Order Quantity
 - d) None of the above
3. In ABC analysis of Stock, "High Value Material is categorized as _____
 - a) A
 - b) B
 - c) C
 - d) None of the above
4. Classification and Coding of Item can be done by _____
 - a) Numeric System
 - b) Alphabetic System
 - c) Alpha-Numeric System
 - d) All of the above
5. _____ method of issuance is based on the assumption that the materials purchased and received first are issued first to the job
 - a) FIFO
 - b) LIFO
 - c) Both of the above
 - d) None of the above
6. _____ method of issuance is based on the assumption that the materials purchased and received last are issued first to the job
 - a) FIFO
 - b) LIFO
 - c) Both of the above
 - d) None of the above



3. Housekeeping of Store Premises and Store Items



Unit 3.1 - Housekeeping of Store Premises and Store Items



AMH/N0502

Key Learning Outcomes

At the end of the module, participants will be able to:

1. Explain arrangement of materials on shelves and racks.
2. Explain arrangements of fabric rolls and fabric dyes.
3. Explain periodic checking of stock in store.
4. Demonstrate stock handling structures.

UNIT 3.1: Housekeeping of Store Premises and Store Items

Unit Objectives

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

1. Explain the functioning of organization's laid down system of housekeeping.
2. Analyse arrangement of materials on racks or shelves as per lot, material nature, package size, etc.
3. Analyse arrangement of fabric rolls on racks in lot/shade wise.
4. Identify approved preservatives for stores and their impact on materials and quality.
5. Explain the technical approach of estimating and minimizing different types of wastes originated from and related to material receiving, handling and storage.
6. Explain periodic stock taking of materials lying in store.

3.1.1 A Safe Work System

Employers must take all reasonable steps to ensure that all goods, materials, substances and equipment in workplaces are so stacked, stored, secured, and kept that they do not constitute a danger to persons in their vicinity during the course of daily operations and in an earthquake.

Such steps should ensure these items cannot, whether of their own accord, or by virtue of any external force (intentionally applied or otherwise), so flow, move, roll, or collapse, as to constitute a danger to persons in their vicinity.

All workers who are or may be responsible for stacking, storing, securing, or keeping any goods, materials, substances, or equipment require full training in safe methods of doing so.

Given the great diversity of goods and materials to be stored, and the wide range of storage methods and handling equipment in use, how can these obligations best be met? The answer lies in developing a safe system of work that will integrate the three main components of people, materials and machinery within a safe and healthy working environment. We shall look at each of these in turn.

People

People, of course, are the critical factor. In safety and health we are looking mainly at injury and damage to people (concepts of loss control and risk management are not forgotten). Also, it is largely people who perpetrate such injury and damage. A safe work system relies on:

- Adequate training and instruction for all the workforce
- Comprehensive planning, incorporating the views and opinions of those who will operate the systems whenever possible
- Adequate supervision and control
- Adequate information to enable the workforce to carry out their tasks in a safe and healthy manner

One way of covering the above is to determine the important criteria for safety and to set specific parameters which may be used, such as planning, the provision of information, training and instruction, and to set the framework for supervision and control.

Material

The basic materials handling and storage systems common to a wide range of stores and warehouses are pallets and racking systems. Accidents associated directly with pallets occur for five main reasons:

- Poor pallet design
- Poor pallet construction
- Use of an unsuitable pallet for the load or storage method
- Continued use of damaged pallet
- Bad handling

There are basically six reasons for a racking system failure, either acting singly or in combination:

- Design fault i.e. rack is inherently unsafe
- Installation fault
- Materials handling equipment fault
- Materials handling equipment operator fault
- Supervision and control fault
- Store or warehouse structural fault

Equipment

Because of the bewildering range of equipment available in an increasingly competitive market, it is better to simplify the reasons for failure. Basically, accidents occur because of the wrong equipment being used in the wrong place by the wrong people.

Environment

The essential need is to incorporate environmental considerations such as heating, lighting and ventilation into the overall work system.

Code of Practice

It is recommended that companies prepare their own in-house code of practice for stacking and storage, taking into account the particular materials handling and storage systems in use.

3.1.2 Floors and Supporting Surfaces

The safe load for every floor should be known and strict supervision should be exercised to prevent this limit being exceeded. As a general rule, a level floor is essential. However, where large stacks are regularly built, it is an advantage if the floor on the site for each stack is given a fall to the centre from all sides. Timber, concrete or other surfacing may be required to support stored materials off the ground. Floors or surfaces required to support stacks, shelving, racks or other means of storage should be capable of sustaining the intended load together with shock loads.

If there is a possibility of the stored material becoming waterlogged through rain or after extinguishing a fire, due allowance should be made for this extra weight. The supporting surface should also be sufficiently strong to withstand the effects of any damage to or deterioration of stored materials.

3.1.3 Stock Holding Structures

- Racks, shelving, bins, hoppers and other structures for the storage of materials should be adequately designed to support and contain the materials for which they are used. Allowance should be made for the possibility of stored materials becoming waterlogged, and for shock loads from placing materials or from accidental contact by handling equipment.
- When partitions are used to increase storage capacity, or to separate stored materials, they should be adequately designed and be of sufficient strength to contain the stored material safely.
- Fire-protective partitions should be used between stored items of differing vulnerability to fire.
- The corners or ends of shelving and racks should be protected from damage by forklift trucks or mechanised equipment by steel posts, angle irons or other means.



Fig.3.1.1: Stock Holding Structures

3.1.4 Pallet Construction and Loading

Pallets should be of sound construction, and be of adequate strength for the loads and conditions under which they are used. Where pallet loads are stacked tier on tier, the lower pallets should be of suitable strength and in good condition and the unit loads must be able to support the weight above.



Fig.3.1.2: Pallet Construction and Loading

The stability of stacked pallets or unit loads should be maintained by suitable bonding, avoiding excessive stack heights, to ensure that the contents of any pallet or unit load cannot collapse. The stability and structural strength of each pallet or unit load should be assured by bonding, taping, shrink wrapping or other means.

When pallet or unit loads of cartons or sacks are stacked, care should be taken that they are not damaged by equipment. Pallets or other supports used for forming unit loads should be regularly inspected for damage and wear. Items which could cause damage to materials should be taken out of use until repaired, or be destroyed.

3.1.5 Positioning of Stacks

- Stacks should not be built within 450 mm of a wall. Most building and party walls are not retaining walls and may not withstand the pressure set up by stacks laid against them. A 450 mm gap between the stack and the wall also enables the construction and the condition of stacks to be checked.
- Stacks should not be created where any part will be within 1.5 m of a rail track. This clearance should be continued all the way along the stack.
- Extra care should be taken if the storage area is subject to vibration from rail or road traffic, outside or inside the premises.
- Care should also be taken in stacking material in the vicinity of machinery or operations which cause vibrations. Some objects are liable to creep and lose stability under the influence of vibration. Sacks or bales made of synthetic materials are particularly susceptible, especially when first used (Impregnation with wax can help to overcome this problem).

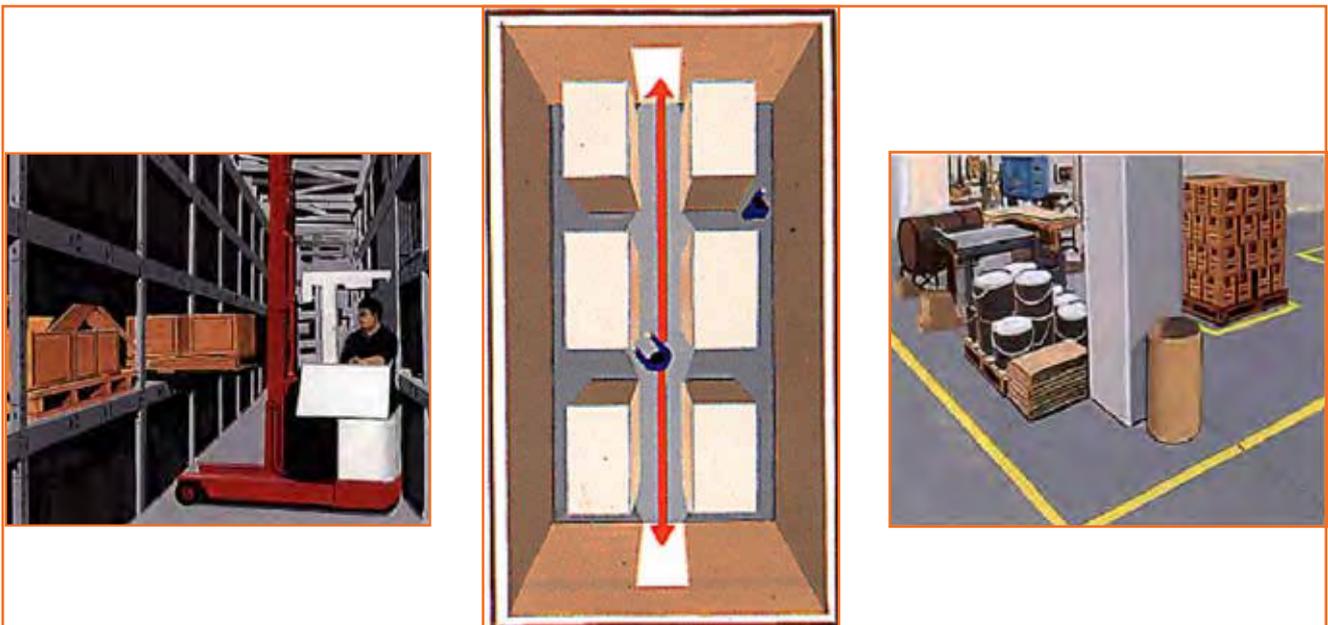


Fig.3.1.3: Positioning of Stacks

- Stacks, shelving and other fixtures for holding or storing materials should be so laid out and designed that there is sufficient access for safe loading and unloading by either manual or mechanical means.
- Storage areas should be specifically designated, be clearly marked, and be in the charge of a responsible employee. Aisles should be clearly marked, be of ample width for the type of storage, and be kept free from obstacles and waste materials. Stacks should not be created which will block gangways, aisles, walkways, thoroughfares, and particularly doors and exits.

- Stacks should have clear spaces of at least 1 m on all sides, apart from walls, where a 450 mm space should be allowed. Goods must not be stacked within 1 m of the ceiling, roof or sprinkler heads.
- Base areas and heights of stacks should be kept as small as circumstances permit. Goods should be kept well clear of light fittings, heating pipes and appliances, firefighting and alarm equipment, and doors.
- No stack, shelving, fixture or other means of storage should be placed in a position, or extended in height, so that a person climbing on to it or removing stored goods, either manually or mechanically, can come into contact with live electrical wiring or unfenced machinery.
- No material should be loaded or unloaded from stacks, shelving or fixtures if there is a risk of workers directly or indirectly contacting unfenced machinery, or touching live electrical wiring, until that machinery or wiring is isolated or made safe.
- Storage racks and shelves should preferably be noncombustible and not prone to retain water.
- Where unpalletised material, which is otherwise secure, is handled by a crane or forklift truck, it should be placed on battens or other devices to aid the use of slings or forks.
- Suitable means should be used to protect workers from injury due to sharp corners, projections or edges on structures and/or stored material. Corners of stored material should be clearly marked.
- Safe access, by means of ladders, platforms or walkways, must be provided for workers required to climb or remove goods from stacks, shelves and fixtures. On occasions, it may be necessary to erect scaffolding.
- Safety belts are useful aids when dealing with high stacks and awkward shapes.
- Markings on labels and signs for the identification and selection of materials and goods should be clear and easy to read.

3.1.6 Size and Shape of Stacks

The size and shape of a stack depends on the storage space available and on the size, shape, bulk, weight, rigidity or fragility of the articles to be stored.

The following are the commonest forms of stack:

Column: Single articles placed one above the other.

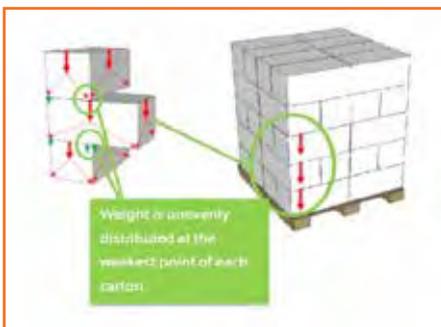


Fig.3.1.5: Square Stack



Fig.3.1.4: Column Stack

Square: Any stack, other than a column, with all sides vertical. (Note the stack does not have to be 'square' in the ordinary sense of the word.)

Pyramid: A stack in which the plan area is reduced in every succeeding tier.



Fig.3.1.7: Stepped Stack



Fig.3.1.6: Pyramid Stack

Stepped: Stacks with two or more adjacent tiers of the same area and each succeeding group of tiers of a smaller area than the group on which it is set.

Triangular: Stacks in pyramid or stepped form on two opposite sides, the other two sides being vertical.

Lean-to: Pyramid or stepped on one side and vertical on the other three sides. (Note the term does not mean that the stack actually leans against a support.)

It is important to remember that the aggregate weight of the stack is borne by the lowest tier, which, of course should be strong enough to bear the superimposed load. Untidy stacks offend the eye and are rarely safe by construction, since it is usually bad methods of construction that cause the untidiness. If a stack appears to be unstable, it should be immediately broken down and rebuilt properly.

3.1.7 Stability and Bonding of Stacks

Stable construction of the stack is entirely dependent upon the following factors:

- Safe relation of height to dimension of base.
- Sound interlocking of the goods.
- Contents of the sacks or cartons.
- Compact construction and avoidance of transfer stress in any dunnage used for artificial bonding.
- Shape of articles e.g. meat carcasses.
- Determination of the aggregate weight to be borne by the components in the lowest tier of the stack.
- Good placing of every component forming part of the stack, with special care taken to avoid overhang on any side or end of a stack intended to be vertical.

Stability and Bonding of Stacks

Resistance to collapse, strength and the stability of stacks should be maintained by bonding, stepping, tying or other means. The ratio of height to base dimensions of large stacks should be correctly proportioned so that failure of part or whole of the stack does not occur.

Experience has shown that the height to base ratio of an unsupported stack should not exceed 3:1. As most stacks are erected by visual alignment, a slight error in calculation near the base can easily result in a barely noticeable

overhang, with a resultant loss of stability. However, where effective bonding can be achieved, and where there is a good frictional grip between the contacting surfaces, the ratio of height to base can be safely increased to 4:1.

The shape of goods or packages to be stacked will have a great bearing on the type of bonding used. When one dimension is appreciably greater than the other two, it will be possible to use natural bonding, i.e. to secure stability by interlocking the articles themselves. In other circumstances it will be necessary to introduce other materials (e.g. canvas sheets, battens, piling sticks, etc.) to prevent movement of the articles stacked: this is known as artificial bonding. **Stacking Different Types of Goods**

Outdoor stacks are affected by weather conditions such as rain, wind, frost and sun. These conditions can greatly influence the stability of stacks over time and should be taken into consideration.

Materials which could be dislodged or blown off the top of a stack under windy conditions should be tied down or otherwise restrained. If tarpaulins are used to secure or protect the stacks, they should be fastened to independent anchorage, not to the stack itself.

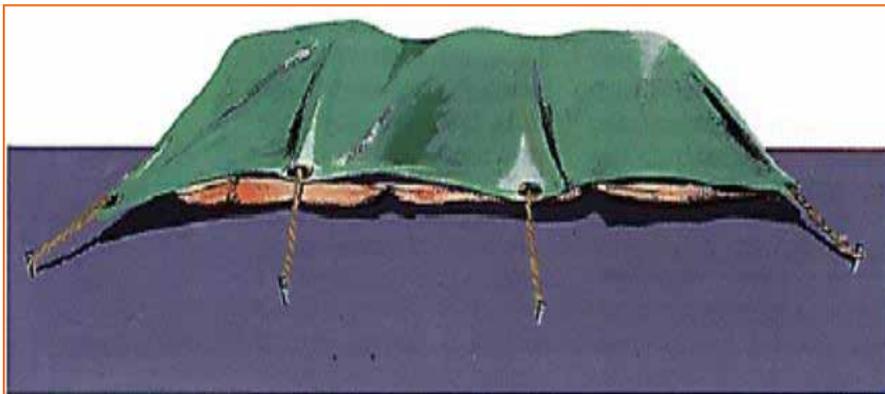


Fig.3.1.8: Tarpaulin

3.1.8 Stacking Different Types of Goods

Bagged Goods

- The first tier should be so arranged that the bags can be spread flat, and the same should be done in succeeding tiers. Interlocking should be used if possible. Where possible, the mouths of the bags should be on the inside of the stack.
- Bagged material of differing sizes and shapes (e.g. seeds, granules, pellets etc.) should not be stacked on top of each other unless proper precautions are taken to prevent movement by settling or vibration.
- Pallets with spacers or some form of horizontal bonding should be used if there is a risk of such movement or if it is intended or necessary to stack high.
- Special precautions should be taken with synthetic bags or sacks, which have a tendency to slip when new.



Fig.3.1.9: Stacking Bagged Goods

Cartons

Careful consideration should be given to the weight of stacks of cartons. Dampness will reduce the strength of cartons, and a damp flow may well lead to damage of the lowest tier and ultimate collapse of the stack. Interlocking (e.g. the bricklaying method) can be used in stacking cartons.



Fig.3.1.10: Frozen Carcasses

Cases (Boxes)

As most boxes are reinforced with external battens, care should be taken to see that the battens bear the weight, not the box.

Bales

Bales should be stacked with care to ensure their stability. Attention should be paid to possible vibration, and if possible stacks should lean into their centre. Extra care should be taken with synthetic bales, which have a tendency to slip when new.

Frozen Carcasses

Because of their shape, carcasses lend themselves to a form of interlocking and this method should be used if possible, together with pallets with spacers or some form of horizontal bonding. A suitable type of mesh netting can be used to retain carcasses on pallets if necessary, provided it meets hygiene requirements.



Fig.3.1.11: Frozen Carcasses

Coiled Wire

Coiled wire may be stacked horizontally or vertically. Wedges or other supports must be used to prevent the stack from spreading.

Glass Bottles and Jars

Care should be taken stacking bottles and jars, whether full or empty. Small quantities can be laid on their sides on top of each other, using wedges as necessary. Otherwise they should be stacked in cases, boxes, cartons or racks designed to hold them. If pallets are used, spacers or some form of horizontal bonding should be incorporated. The overall weight of stacks should not be borne by the glass itself.

Drums, casks and cylinders

Drums, casks and cylinders may be stacked on their sides or ends unless specifically required to stand upright on instructions from their manufacturer or supplier, e.g. acetylene cylinders. If stacked on their sides, wedges should be fixed at the ends of each row to prevent movement. If gas cylinders are stored on end, restraining chains should be fitted to prevent them toppling. The valves of gas cylinders under pressure must always be protected. Power-operated clamps on forklift trucks enable cylindrical objects such as cable drums or pipes to be stacked on end, allowing greater economy of space and greater stability.

Sheet materials

Sheet materials, including glass, may be stacked flat or on edge. Sharp edges should be protected to prevent injury to workers and passers-by. The supports used in edge-on stacking must be of adequate strength to bear the side thrust of the vertical sheets. Extra care should be taken when stacking and handling glass. Owing to the weight of metal and glass sheet in bulk, care should be taken not to overload racks and the floor.



Fig. 3.1.12: Steel Drum Stacks

Steel Tube Bars and Joist Sections

Suitable racks should be provided for steel tubes, bars, joist sections and similar materials. Large-diameter tubes or pipes can be stacked on their sides, as for drums. Wedges, chocks, stakes or other means should be used to restrain the bottom tier of round objects which are stacked or tiered and which could cause the stack to collapse by rolling or moving. Where successive tiers are not nested but rest on battens, planks or other flat surfaces, they

should be restrained from moving by wedges secured to the battens or planks. Where the collapse of a stack or tiers of round objects could cause damage or injury, material to be removed should always be taken from the top of the stack or from the top tier first.



Fig.3.1.13: Steel Tube Bars and Joist Sections

3.1.9 Rules for Destacking

Destacking is largely the reverse process of stacking. Most accidents involving the collapse of stacked materials occur during destacking. The prime cause of this is haphazard removal. Basic rules for breaking down stacks are:

- One person only should be responsible for the manner in which the stack is reduced. This is particularly important where gangs are employed.
- If the person in charge of destacking had no part in erecting the stack, he or she should ascertain its construction before work begins.
- The stack should be taken down tier by tier, so that no part is in danger, as would happen if the stack were bitten into locally.
- When a large stack has been given a natural fence by building the periphery higher than the centre, this fence should be maintained during destacking. The work should be done outward from the centre, reducing the periphery last so that there is a barricade to prevent people falling off.
- If tubular or other fencing has been built in or around the stack, it should be dismantled and adjusted as the height is decreased.
- As there is a high tripping hazard in the working area of a stack, tidiness and systematic work methods are essential.
- Care should be taken to ensure that people working on stacks are at all times clear of overhead travelling cranes. Proper signalling arrangements should be made and a lookout should be posted.
- All stacking and destacking should be carried out under competent supervision.

3.1.10 Segregation of Stock

- Flammable liquids, gas cylinders, aerosols, materials liable to spontaneous combustion and hazardous chemicals should not be stored in the same area as other goods. Chemicals liable to react with each other or other materials should not be stored together unless adequately protected from contacting each other, either directly or by spillage.
- Acids should not be stored in plastic containers for long periods or in direct sunlight.
- Flammable liquids in drums, cans or similar containers should be stored separately in a separate area or building constructed for the purpose. Similar provision is recommended when storing toxic or poisonous chemicals or substances.
- The storage area or building should be signposted to indicate that it contains flammable or hazardous chemical materials and that smoking and naked flames are prohibited.
- Electrical equipment used in or around the storage area or building should be suitably explosion-protected, and protective equipment should be provided nearby for use in emergencies.
- Workers handling corrosive or hazardous chemicals should be provided with suitable protective clothing, or other necessary safeguards.
- Liquefied and compressed gas cylinders should be stored in well ventilated areas, out of direct sunlight and well away from possible sources of ignition, especially electrical fittings or fuse boxes.
- All containers, drums and cans should be clearly labelled with their contents.
- Earthing or bonding should be used to eliminate the possible build-up of static electricity.



Fig.3.1.14: Flammable liquid storage



Fig.3.1.15: Earthed containers to store flammable solvents

3.1.11 Storage Inspections

- All materials held in storage should be inspected to determine whether they are susceptible to damage, heating, deterioration, swelling, shrinking, corrosion or attack by insects or rodents. The frequency of inspection will depend on the type and method of storage. Where these conditions are evident and could cause loss of stability, collapse, fire or any other harmful effect, action should be taken to eliminate the hazard.
- Incoming goods should be carefully inspected for damage of any kind before being placed in store.

- Racks, shelving, fixtures and other equipment used for storing, loading and unloading materials should be regularly inspected for damage and other defects which might cause loss of strength or result in damage or injury.
- Any damaged or defective Storage Inspections equipment should be taken out of service until repaired. Fencing off or isolation of such equipment may be necessary to prevent its use. Electrical equipment and fittings should also be inspected and tested regularly.
- All fire protection equipment, including fire doors and partitions, should be inspected, tested regularly and be maintained in good working order. Fire doors should be kept closed at all times unless required to be opened for the movement of goods.
- Any repair, maintenance or alteration work carried out in storage areas should be closely supervised to ensure the safety of workers and other people on the premises.
- Use of equipment likely to give rise to a fire hazard should be closely monitored, and the use of a hot work permit system is recommended.

3.1.12 Materials Handling Equipment

- Equipment such as trolleys, hand trucks, pallet trucks, chainblocks and slings used for moving and handling materials should be kept in a safe and serviceable condition. It should be free of cracks or other defects which could cause failure of the equipment or injury to employees using it. Such equipment should be used only for the purpose for which it was designed.



Fig.3.1.16: Different material handling equipment

- Mechanical equipment such as cranes, hoists, scoops, stackers, forklift trucks and ladders used in stacking, moving or loading materials should be kept in a safe and serviceable condition, and should be regularly inspected and maintained.
- Materials handling equipment should be used only for the purposes for which it was designed and should not be operated on steep or rough surfaces which could result in an accident.
- No worker should ride on equipment used for the moving, handling or storage of material unless it has been designed for the purpose.
- All equipment should be operated in a safe and efficient manner and should not be loaded beyond the capacity for which it was designed.
- Materials handling equipment is susceptible to fire from friction heat generated by accumulations of grease and dirt. Fires involving forklift trucks can be caused by equipment failure due to lack of maintenance.

All such equipment should be inspected regularly and maintained in good working order. A system of regularly scheduled maintenance based on engine-hour or motor-hour use is recommended.

3.1.13 Safe Stock Movement

- Goods must be stacked to prevent movement during transportation and be secured so that they will not fall off when corners or inclines are being negotiated.
- Precautions must be taken to protect workers in the storage area from moving vehicles. If necessary, a responsible employee should be designated to direct traffic in the storage yard or area.
- Good lighting is essential, and the wearing of reflective clothing will increase safety.
- Forklift trucks should be fitted with horns and lights and these should be used, especially when reversing.
- Special care must be taken in handling and transporting flammable liquids. These should not be stored at an unsafe height.

Automated Storage

- Where automated, computer or remote controls are used for racking, selection of materials or other stores functions, care should be taken that workers or other people in the area are not exposed to risk of injury through the operation of equipment.
- Automated storage equipment is designed for machine access, which can create hazardous areas between moving equipment and fixed installations. Non-essential people should therefore be kept away from operating areas.
- Automated equipment should be isolated, or manual control applied, before attempting to rectify faults, particularly if parts of the equipment are extended.
- A means of access or egress from extended equipment must be provided to eliminate the need to escape through any racking system installed.
- Controls should be such that, when switched from the disconnected "off" mode back to automatic, the previous cycle is unable to continue until a reset control has been operated.
- Access to racks from other than the operating side should be prevented unless complete safety is assured.
- Conveyors and elevators should be properly guarded and be capable of being isolated from automatic control.

3.1.14 Housekeeping

Waste should not be allowed to accumulate. A regular and frequent waste removal and cleaning procedure should be adopted. Storage areas should be kept clean and free from all refuse and incorrectly stored materials.

Lighting

Sufficient and suitable lighting, whether natural or artificial, must be provided in every part of an undertaking where workers are employed or pass. This includes outside yards and storage areas. Lighting in these areas should be such that dark shadows or glare is avoided on the working area of stacks and storage fixtures. Lighting can be supplemented by painting appropriate surfaces white or off-white.



Fig.3.1.17: Housekeeping

Noise

- Employers are required to take all practicable steps to protect workers from harmful noise, either by controlling the noise at source or by isolating or insulating the noisy activity or process. Where such controls are impossible or impracticable, or in the interim period while controls are being developed, the employer must provide, for each worker exposed, individual hearing protection of a type approved by OSH.
- Protective clothing and equipment such as overalls, aprons, gloves, gauntlets, leggings, safety helmets, ear protection, eye protection (face shields and safety glasses), safety footwear, face masks, respirators, safety harnesses, belts or other equipment must be provided by the employer as and Protective Clothing and Equipment when necessary.
- Employees must wear the protective clothing and equipment as and when necessary.
- If hazardous chemicals or substances are stored, e.g. corrosive acids, an emergency shower and eye wash should be installed in each storage area

Training of Employees

- Employees involved in the storage, stacking, loading and unloading of materials must be trained to carry out their tasks safely and efficiently. They should be made aware of the nature of the goods stored, the hazards involved and the precautions to be taken, protective clothing and equipment to be worn, and action to be taken in emergencies. Employees operating mechanical equipment need special training for the particular types of equipment used.
- The correct method of dealing with breakages or spillages and neutralising hazardous chemicals and substances should also be explained.
- Fire safety, including the use of fire-fighting equipment, should be part of all training.

Resources



Scan the QR code or click the link to access the videos or e-book.

Description	QR Code
Safe system of work (SSW)	 https://youtu.be/RQ09Y1znczY
Material handling equipment	 https://youtu.be/N733x0iLIHY

Exercise

1. Stacks should not be built within _____ mm of a wall
 - a) 300
 - b) 350
 - c) 400
 - d) 450
2. Stacks should have clear spaces of at least _____ m on all sides, apart from walls
 - a) 2
 - b) 3
 - c) 1
 - d) 4
3. The size and shape of a stack depends on storage space available based on
 - a) Size
 - b) Shape
 - c) Bulk
 - d) All of the above
4. _____ is largely the reverse process of stacking.
 - a) Stocking
 - b) Destacking
 - c) Lifting
 - d) None of the above
5. What precaution should be taken while segregating “Chemicals”?
 - a) Should not be stored in the same area as other goods to avoid combustion
 - b) Should not be stored together to avoid reaction
 - c) Both (a) and (b)
 - d) None of the above
6. All materials held in storage should be inspected to determine_____
 - a) Susceptible to damage
 - b) Deterioration
 - c) Corrosion or attack by insects or rodents
 - d) All of the above



4. Records Maintenance Related to Accounting, Storage and Preservation of Store Items



Unit 4.1 - Records Maintenance Related to Accounting,
Storage and Preservation of Store Items



AMH/N0503

Key Learning Outcomes

At the end of the module, participants will be able to:

1. Practice naming conventions or unique identification numbers for records.
2. Collect, comprehend and compile data as per organization standards identify ways to report supervisor.
3. Determine importance of disposing old records identify needs for recoding various data determine modes of collecting data.
4. Define record keeping methods and principles.
5. Define sampling in data collection and related practices of data collection define quality management system for record keeping and related processes.

UNIT 4.1: Records Maintenance Related to Accounting, Storage and Preservation of Store Items

Unit Objectives

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

1. State the importance of record analysis to identify nature, degree and sensitivity of impact on overall organizational performance.
2. Analyse the record lifeline.
3. Explain Apparel Manufacturing process.
4. Identify the mode of data collection and its importance.
5. Interpret the record-keeping methods used in the organization.
6. Explain sampling methods related to data collection.
7. Describe the flow-chart of the organization's manufacturing processes.
8. Explain the procedure of vendor analysis and vendor rating.
9. Maintain records for approved vendors.

4.1.1 Introduction

What is a record-keeping system?

A record-keeping system is a system which captures, manages and provides access to records through time. Record-keeping systems can be either electronic or paper-based. Managers and Heads of business units are required to establish and set up appropriate record-keeping systems for their business unit to facilitate the collation and registration of organization records.

Purpose of Record Keeping

The term "record" means information in any form or medium that includes notes, images, audiovisual recordings, x-rays, books, documents, maps, drawings, photographs, letters, vouchers and papers and any other information that is written, photographed, recorded or stored in any manner.

Record keeping involves activities related to the creation, maintenance and disposition of records and is an important aspect of the practice of all Registered Dietitians and Registered Nutritionists. Clear, comprehensive and accurate records are essential to communicate the delivery of professional services and to support professionals in responding to accountability issues. Record keeping is best approached in an organized and systematic manner that will support the creation of efficient records, maintain their confidentiality and prevent unauthorized disclosure.

4.1.2 Document and Records Management – Records Lifecycle

Document management and records management obviously have a common part (as each record is a document) but records management has additional functions.

Document management: It involves the day-to-day capture, storage, modification and sharing of paper, digital files etc. within an organization. Document management focuses on:

- Reducing lost and misfiled documents
- Providing faster search and retrieval of documents
- Helping to better organize existing documents
- Improving general work processes and organizational efficiency
- Reducing the amount of physical space used to store documents, such as filing cabinets.

Records management: It is the practice of maintaining records including the functions of document management described above and also the following:

- Identifying what records exist with a records inventory
- Classifying and storing existing records
- Applying required retention periods to stored records
- Identifying the owner of each record (series)
- Managing disposition (disposal of records)
- Developing and administering defined records policy and procedures
- Preserving records throughout their life cycle (e.g. permanent records are accessible and readable for years into the future)

Document and records management differ in three main aspects, in terms of:

- Goal (the purpose of each practice)
- Information (the content involved in each practice)
- Methodology (the way each practice is performed)

4.1.2.1 Records Lifecycle

At this point we need to introduce the term records lifecycle. This refers to the stages that every record must go through.

Think of the records lifecycle as a life span that begins with creation and ends with disposal or preservation. Different programs, software, and educational materials may use different names for the phases, but they are basically fixed and operate concurrently and in continuum. Creation is the first phase in a record's lifecycle. It involves the receipt of a record and classification of it as a record in an organization's records management system. Ensure that you create records correctly, which means including the right information and using the proper format. As people use and modify a record, it continues as a record, and you must maintain and protect it from several things, including unauthorized access and damage.



Fig.4.1.1: Records lifecycle

Those who need records on a regular basis must have easy access to them. Different organizations follow different policies about how long they must keep a record.

Active records are those that are in current use and often within close physical proximity to the people using them. An inactive record is one that a company no longer uses for current business but that you still must maintain until it reaches the end of its retention period. Even if someone is not regularly accessing an inactive record, you must maintain and protect it. At the end of a record's lifecycle, the records management team must decide whether to destroy or preserve the record. Within records management, systems exist to determine what happens to each record and when. The length of time that you must maintain a record differs based on several factors, including company policy and government rules and regulations. You need to keep some records forever and, therefore, institute an archival process at some point.

Throughout the records management lifecycle, it's essential to maintain security and privacy.

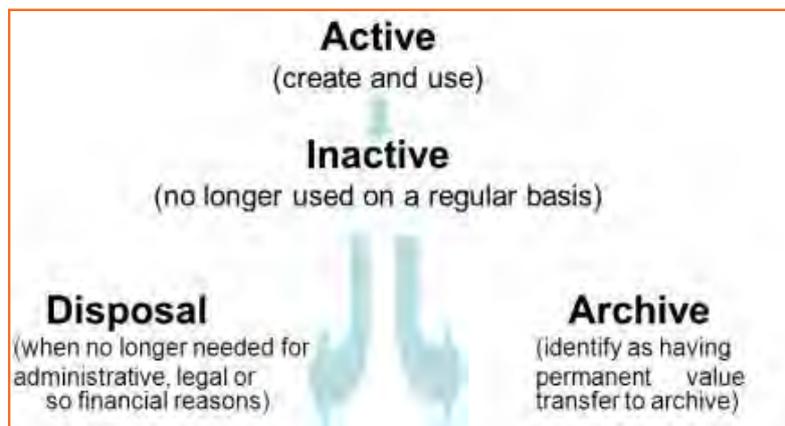


Fig.4.1.2: Active and inactive phases of the records lifecycle

When a record is created, some additional descriptive data are generated on the record itself, e.g. type of the record, owner's name of the record. These data are called metadata.

4.1.2.2 Benefits of Good Record Keeping

Records:

- Help you work more efficiently.
- Enable you to meet legal obligations applicable to your work.
- Protect the interests of the government and of your agency.
- Protect your rights as an employee and citizen.
- Demonstrate the cost and impact of your business.
- Enable review of processes and decisions.
- Retain the corporate memory of your agency and its narrative history.
- Help research and development activities.
- Enable consistency and continuity in your business.

4.1.3 Data Collection

Whether it is business, marketing, humanities, physical sciences, social sciences, or other fields of study or discipline, data plays a very important role, serving as their respective starting points. That is why, in all of these processes that involve the usage of information and knowledge, one of the very first steps is data collection.

Data collection is described as the “process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer queries, stated research questions, test hypotheses, and evaluate outcomes.”

Depending on the discipline or field, the nature of the information being sought, and the objective or goal of users, the methods of data collection will vary. The approach to applying the methods may also vary, customized to suit the purpose and prevailing circumstances, without compromising the integrity, accuracy and reliability of the data. There are two main types of data that users find themselves working with – and having to collect.

1. **Quantitative Data:** These are data that deal with quantities, values or numbers, making them measurable. Thus, they are usually expressed in numerical form, such as length, size, amount, price, and even duration. The use of statistics to generate and subsequently analyze this type of data add credence or credibility to it, so that quantitative data is overall seen as more reliable and objective.
2. **Qualitative Data:** These data, on the other hand, deals with quality, so that they are descriptive rather than numerical in nature. Unlike quantitative data, they are generally not measurable, and are only gained mostly through observation. Narratives often make use of adjectives and other descriptive words to refer to data on appearance, color, texture, and other qualities.

In most cases, these two data types are used as preferences in choosing the method or tool to be used in data collection. As a matter of fact, data collection methods are classified into two, and they are based on these types of data. Thus, we can safely say that there are two major classifications or categories of data collection methods: the quantitative data collection methods and the qualitative data collection methods.

4.1.3.1 Importance of Data Collection

From the definition of “data collection” alone, it is already apparent why gathering data is important: to come up with answers, which come in the form of useful information, converted from data.

But for many, that still does not mean much. Depending on the perspective of the user and the purpose of the information, there are many concrete benefits that can be gained from data gathering. In general terms, here are some of the reasons why data collection is very important. The first question that we will address is: “why should you collect data?”

- **Data collection aids in the search for answers and resolutions:** Learning and building knowledge is a natural inclination for human beings. Even at a very young age, we are in search for answers to a lot of things. Take a look at toddlers and small children, and they are the ones with so many questions, their curious spirit driving them to repeatedly ask whatever piques their interest.

A toddler curious about a white flower in the backyard will start collecting data. He will approach the flower in question and look at it closely, taking in the color, the soft feel of the petals against his skin, and even the mild scent that emanates from it. He will then run to his mother and pull her along until they got to where the flower is. In baby speak, he will ask what the flower’s name is, and the mother will reply, “It’s a flower, and it is called rose.”

It’s white. It’s soft. It smells good. And now the little boy even has a name for it. It’s called a rose. When his mother wasn’t looking, he reached for the rose by its stem and tried to pluck it. Suddenly, he felt a prickle in his fingers, followed by a sharp pain that made him yelp. When he looked down at his palm, he saw two puncture marks, and they are bleeding.

The little boy starts to cry, thinking how roses, no matter how pretty and good-smelling, are dangerous and can hurt you. This information will now be embedded in his mind, sure to become one of the most enduring pieces of information or tidbit of knowledge that he will know about the flower called “rose”.

The same goes in case of a marketing research, for example. A company wants to learn a few things about the market in order to come up with a marketing plan, or tweak an already existing marketing program. There's no way that they will be able to do these things without collecting the relevant data.

- **Data collection facilitates and improves decision-making processes, and the quality of the decisions made:** Leaders cannot make decisive strategies without facts to support them. Planners cannot draw up plans and designs without a basis. Entrepreneurs could not possibly come up with a business idea – much less a viable business plan – out of nothing at all. Similarly, businesses won't be able to formulate marketing plans, and implement strategies to increase profitability and growth, if they have no data to start from.

Without data, there won't be anything to convert into useful information that will provide the basis for decisions. All that decision-makers are left with is their intuition and gut feeling, but even gut feeling and instinct have some basis on facts.

In business, one of the most important decisions that must be made is on resource allocation and usage. If they collect the relevant data, they will be able to make informed decisions on how to use business resources efficiently.

- **Data collection improves quality of expected results or output:** Just as having data will improve decision-making and the quality of the decisions, it will also improve the quality of the results or output expected from any endeavor or activity. For example, a manufacturer will be able to produce high quality products after designing them using reliable data gathered. Consumers will also find the claims of the company about the product to be more reliable because they know it has been developed after conducting significant amount of research.

Through collecting data, monitoring and tracking progress will also be facilitated. This gives a lot of room for flexibility, so response can be made accordingly and promptly. Adjustments can be made and improvements effected.

Now we move to the next question, and that is on the manner of collecting data. Why is there a need to be particular about how data is collected? Why does it have to be systematic, and not just done on the fly, using whatever makes the data gatherer comfortable? Why do you have to pick certain methodologies of data collection when you can simply be random with it?

Collecting data is expensive and resource-intensive. It will cost you money, time, and other resources. Thus, you have to make sure you make the most of it. You cannot afford to be random and haphazard about how you gather data when there are large amounts of investment at stake.

Data collection methods will help ensure the accuracy and integrity of data collected. It's common sense, really. Using the right data collection method – and using it properly – will allow only high quality data to be gathered. In this context, high quality data refers to data that is free from errors and bias arising from subjectivity, thereby increasing their reliability. High quality and reliable data will then be processed, resulting to high quality information.

4.1.3.2 Methods of Data Collection

We'll now take a look at the different methods or tools used to collect data, and some of their pros (+) and cons (-). You may notice some methods falling under both categories, which means that they can be used in gathering both types of data.

Qualitative Data Collection Methods

Exploratory in nature, these methods are mainly concerned at gaining insights and understanding on underlying reasons and motivations, so they tend to dig deeper. Since they cannot be quantified, measurability becomes an issue. This lack of measurability leads to the preference for methods or tools that are largely unstructured or, in some cases, maybe structured but only to a very small, limited extent.

Generally, qualitative methods are time-consuming and expensive to conduct, and so researchers try to lower the costs incurred by decreasing the sample size or number of respondents.

Face-to-Face Personal Interviews: This is considered to be the most common data collection instrument for qualitative research, primarily because of its personal approach. The interviewer will collect data directly from the subject (the interviewee), on a one-on-one and face-to-face interaction. This is ideal for when data to be obtained must be highly personalized.

The interview may be informal and unstructured – conversational, even – as if taking place between two casual to close friends. The questions asked are mostly unplanned and spontaneous, with the interviewer letting the flow of the interview dictate the next questions to be asked.

However, if the interviewer still wants the data to be standardized to a certain extent for easier analysis, he could conduct a semi-structured interview where he asks the same series of open-ended questions to all the respondents. But if they let the subject choose her answer from a set of options, what just took place is a closed, structured and fixed-response interview.

- (+) This allows the interviewer to probe further, by asking follow-up questions and getting more information in the process.
- (+) The data will be highly personalized (particularly when using the informal approach).
- (-) This method is subject to certain limitations, such as language barriers, cultural differences, and geographical distances.
- (-) The person conducting the interview must have very good interviewing skills in order to elicit responses.

Qualitative Surveys:

- **Paper surveys or questionnaires:** Questionnaires often utilize a structure comprised of short questions and, in the case of qualitative questionnaires, they are usually open-ended, with the respondents asked to provide detailed answers, in their own words. It's almost like answering essay questions.
 - » (+) Since questionnaires are designed to collect standardized data, they are ideal for use in large populations or sample sizes of respondents.
 - » (+) The high amount of detail provided will aid analysis of data.
 - » (-) On the other hand, the large number of respondents (and data), combined with the high level and amount of detail provided in the answers, will make data analysis quite tedious and time-consuming.
- **Web-based questionnaires:** This is basically a web-based or internet-based survey, involving a questionnaire uploaded to a site, where the respondents will log into and accomplish electronically. Instead of a paper and a pen, they will be using a computer screen and the mouse.
 - » (+) Data collection is definitely quicker. This is often due to the questions being shorter, requiring less detail than in, say, a personal interview or a paper questionnaire.
 - » (+) It is also uncomplicated, since the respondents can be invited to answer the questionnaire by simply sending them an email containing the URL of the site where the online questionnaire is available for answering.

- » (-) There is a limitation on the respondents, since the only ones to be able to answer are those who own a computer, have internet connection, and know their way around answering online surveys.
- » (-) The lesser amount of detail provided means the researcher may end up with mostly surface data, and no depth or meaning, especially when the data is processed.

Focus Groups: Focus groups method is basically an interview method, but done in a group discussion setting. When the object of the data is behaviors and attitudes, particularly in social situations, and resources for one-on-one interviews are limited, using the focus group approach is highly recommended. Ideally, the focus group should have at least 3 people and a moderator to around 10 to 13 people maximum, plus a moderator.

Depending on the data being sought, the members of the group should have something in common. For example, a researcher conducting a study on the recovery of married mothers from alcoholism will choose women who are (1) married, (2) have kids, and (3) recovering alcoholics. Other parameters such as the age, employment status, and income bracket do not have to be similar across the members of the focus group.

The topic that data will be collected about will be presented to the group, and the moderator will open the floor for a debate.

- (+) There may be a small group of respondents, but the setup or framework of data being delivered and shared makes it possible to come up with a wide variety of answers.
- (+) The data collector may also get highly detailed and descriptive data by using a focus group.
- (-) Much of the success of the discussion within the focus group lies in the hands of the moderator. He must be highly capable and experienced in controlling these types of interactions.

Documental Revision:

This method involves the use of previously existing and reliable documents and other sources of information as a source of data to be used in a new research or investigation. This is likened to how the data collector will go to a library and go over the books and other references for information relevant to what he is currently researching on.

- (+) The researcher will gain better understanding of the field or subject being looked into, thanks to the reliable and high quality documents used as data sources.
- (+) Taking a look into other documents or researches as a source will provide a glimpse of the subject being looked into from different perspectives or points of view, allowing comparisons and contrasts to be made.
- (-) Unfortunately, this relies heavily on the quality of the document that will be used, and the ability of the data collector to choose the right and reliable documents. If he chooses wrong, then the quality of the data he will collect later on will be compromised.

Observation: In this method, the researcher takes a participatory stance, immersing himself in the setting where his respondents are, and generally taking a look at everything, while taking down notes.

Aside from note-taking, other documentation methods may be used, such as video and audio recording, photography, and the use of tangible items such as artifacts, mementoes, and other tools.

- (+) The participatory nature may lead to the researcher getting more reliable information.
- (+) Data is more reliable and representative of what is actually happening, since they took place and were observed under normal circumstances.
- (-) The participation may end up influencing the opinions and attitudes of the researcher, so he will end up having difficulty being objective and impartial as soon as the data he is looking for comes in.
- (-) Validity may arise due to the risk that the researcher's participation may have an impact on the naturalness of the setting. The observed may become reactive to the idea of being watched and observed. If he planned

to observe recovering alcoholic mothers in their natural environment (e.g. at their homes with their kids), their presence may cause the subjects to react differently, knowing that they are being observed. This may lead to the results becoming impaired.

Longitudinal studies:

This is a research or data collection method that is performed repeatedly, on the same data sources, over an extended period of time. It is an observational research method that could even cover a span of years and, in some cases, even decades. The goal is to find correlations through an empirical or observational study of subjects with a common trait or characteristic.

An example of this is the Terman Study of the Gifted conducted by Lewis Terman at Stanford University. The study aimed to gather data on the characteristics of gifted children – and how they grow and develop– over their lifetime. Terman started in 1921, and it extended over the lifespan of the subjects, more than 1,500 boys and girls aged 3 to 19 years old, and with IQs higher than 135. To this day, this study is the world’s “oldest and longest-running” longitudinal study.

- (+) This is ideal when seeking data meant to establish a variable’s pattern over a period of time, particularly over an extended period of time.
- (+) As a method to find correlations, it is effective in finding connections and relationships of cause and effect.
- (-) The long period may become a setback, considering how the probability of the subjects at the beginning of the research will still be complete 10, 20, or 30 years down the road is very low.
- (-) Over the extended period, attitudes and opinions of the subjects are likely to change, which can lead to the dilution of data, reducing their reliability in the process.

Case Studies:

In this qualitative method, data is gathered by taking a close look and an in-depth analysis of a “case study” or “case studies” – the unit or units of research that may be an individual, a group of individuals, or an entire organization. This methodology’s versatility is demonstrated in how it can be used to analyze both simple and complex subjects.

However, the strength of a case study as a data collection method is attributed to how it utilizes other data collection methods, and captures more variables than when a single methodology is used. In analyzing the case study, the researcher may employ other methods such as interviewing, floating questionnaires, or conducting group discussions in order to gather data.

- (+) It is flexible and versatile, analyzing both simple and complex units and occurrence, even over a long period of time.
- (+) Case studies provide in-depth and detailed information, thanks to how it captures as many variables as it can.
- (-) Reliability of the data may be put at risk when the case study or studies chosen are not representative of the sample or population.

Quantitative Data Collection Methods

Data can be readily quantified and generated into numerical form, which will then be converted and processed into useful information mathematically. The result is often in the form of statistics that is meaningful and, therefore, useful. Unlike qualitative methods, these quantitative techniques usually make use of larger sample sizes because its measurable nature makes that possible and easier.

Quantitative Surveys: Unlike the open-ended questions asked in qualitative questionnaires, quantitative paper surveys pose closed questions, with the answer options provided. The respondents will only have to choose their answer among the choices provided on the questionnaire.

- (+) Similarly, these are ideal for use when surveying large numbers of respondents.
- (+) The standardized nature of questionnaires enable researchers to make generalizations out of the results.
- (-) This can be very limiting to the respondents, since it is possible that his actual answer to the question may not be in the list of options provided on the questionnaire.
- (-) While data analysis is still possible, it will be restricted by the lack of details.

Interviews: Personal one-on-one interviews may also be used for gathering quantitative data. In collecting quantitative data, the interview is more structured than when gathering qualitative data, comprised of a prepared set of standard questions. These interviews can take the following forms:

- **Face-to-face interviews:** Much like when conducting interviews to gather qualitative data, this can also yield quantitative data when standard questions are asked.
 - » (+) The face-to-face setup allows the researcher to make clarifications on any answer given by the interviewee.
 - » (-) This can be quite a challenge when dealing with a large sample size or group of interviewees. If the plan is to interview everyone, it is bound to take a lot of time, not to mention a significant amount of money.
- **Telephone and/or online, web-based interviews:** Conducting interviews over the telephone is no longer a new concept. Rapidly rising to take the place of telephone interviews is the video interview via internet connection and web-based applications, such as Skype.
 - » (+) The net for data collection may be cast wider, since there is no need to travel through distances to get the data. All it takes is to pick up the phone and dial a number, or connect to the internet and log on to Skype for a video call or video conference.
 - » (-) Quality of the data may be questionable, especially in terms of impartiality. The net may be cast wide, but it will only be targeting a specific group of subjects: those with telephones and internet connections and are knowledgeable about using such technologies.
- **Computer-assisted interviews:** This is called CAPI, or Computer-Assisted Personal Interviewing where, in a face-to-face interview, the data obtained from the interviewee will be entered directly into a database through the use of a computer.
 - » (+) The direct input of data saves a lot of time and other resources in converting them into information later on, because the processing will take place immediately after the data has been obtained from the source and entered into the database.
 - » (-) The use of computers, databases and related devices and technologies does not come cheap. It also requires a certain degree of being tech-savvy on the part of the data gatherer.

Quantitative Observation: This is straightforward enough. Data may be collected through systematic observation by, say, counting the number of users present and currently accessing services in a specific area, or the number of services being used within a designated vicinity.

When quantitative data is being sought, the approach is naturalistic observation, which mostly involves using the senses and keen observation skills to get data about the “what”, and not really about the “why” and “how”.

- (+) It is a quite simple way of collecting data, and not as expensive as the other methods.
- (-) The problem is that senses are not infallible. Unwittingly, the observer may have an unconscious grasp on his senses, and how they perceive situations and people around. Bias on the part of the observer is very possible.

Experiments: Have you ever wondered where clinical trials fall? They are considered to be a form of experiment, and are quantitative in nature. These methods involve manipulation of an independent variable, while maintaining varying degrees of control over other variables, most likely the dependent ones. Usually, this is employed to obtain data that will be used later on for analysis of relationships and correlations. Quantitative researches often make use of experiments to gather data, and the types of experiments are:

- **Laboratory experiments:** This is your typical scientific experiment setup, taking place within a confined, closed and controlled environment (the laboratory), with the data collector being able to have strict control over all the variables. This level of control also implies that he can fully and deliberately manipulate the independent variable.
- **Field experiments:** This takes place in a natural environment, “on field” where, although the data collector may not be in full control of the variables, he is still able to do so up to a certain extent. Manipulation is still possible, although not as deliberate as in a laboratory setting.
- **Natural experiments:** This time, the data collector has no control over the independent variable whatsoever, which means it cannot be manipulated. Therefore, what can only be done is to gather data by letting the independent variable occur naturally, and observe its effects.

You can probably name several other data collection methods, but the ones discussed are the most commonly used approaches. At the end of the day, the choice of a collection method is only 50% of the whole process. The correct usage of these methods will also have a bearing on the quality and integrity of the data being sought.

4.1.4 Introduction to Apparel Manufacturing Process

Process Flow Chart of Clothing Manufacturing:

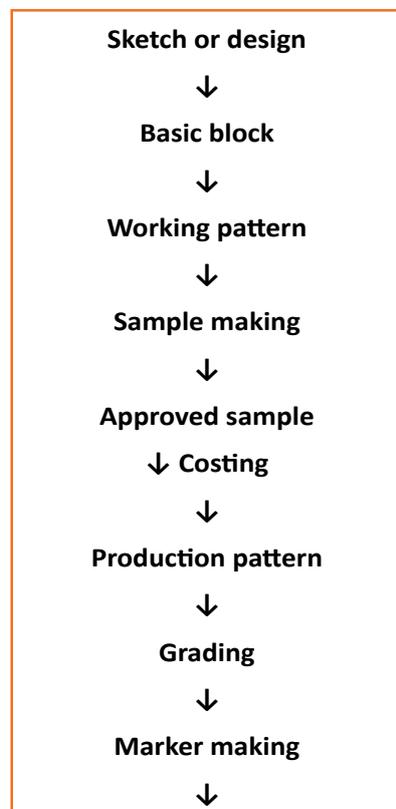


Fig.4.1.3(a): Process Flow Chart of Clothing Manufacturing

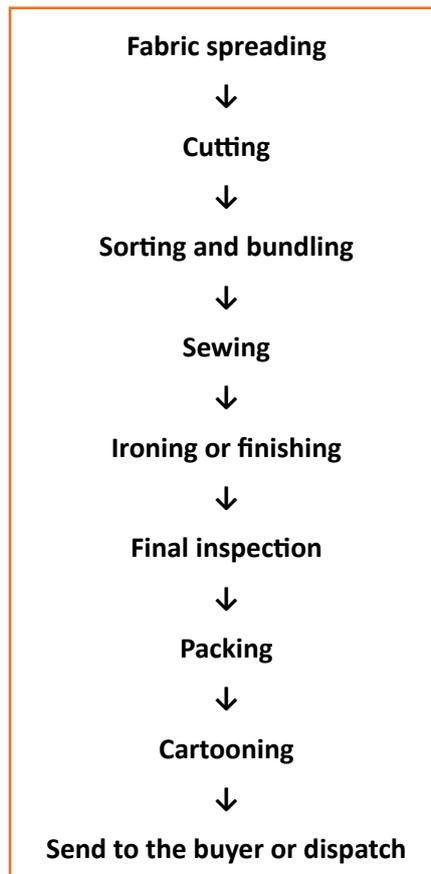


Fig.4.1.3(b): Process Flow Chart of Clothing Manufacturing

All the processes or procedures have discussed in the below table:

Sr. No.	Process	Description
01	Sketch or design	It is nothing but one kinds of engineering art including all the measurements of particular style.
02	Basic block	It is an individual component of apparel without any design or style.
03	Working pattern	To make pattern for a particular style with net dimension.
04	Sample making	To make the sample according to the demand of buyer is called sample making.
05	Approved sample	The sample which is approved by buyer is known approved sample.
06	Costing	To determine cost considering fabric required, making charge, trimmings, accessories, and profit is known as costing.
07	Production pattern	To make pattern for a particular style with net dimension along with the allowance.
08	Grading	The process to grade up the approved sample according to dimension i.e. S, L, M, XL, and XXL are known as grading.
09	Marker making	To make the marker where marker is a thin paper that contains all the necessary pattern pieces for all sizes for a particular style of clothing in such a way that fabric wastage would be least.
10	Fabric spreading	It is a process which plies of fabric is spread in order to get required length and width as per marker dimension.

11	Cutting	Cutting means to cut the fabric according to the marker dimension.
12	Sorting and bundling	To sort out the fabric according to size is known as sorting and for each size making individual bundle is known as bundling.
13	Sewing	It is a process to join up the various parts of the fabric with the help of sewing needle or thread in manually or by using sewing machine.
14	Ironing or finishing	It is a process to get complete apparel treated with steam ironing.
15	Final inspection	To inspect finally the clothing.
16	Packing	It is the process to pack the apparel treated by polyethylene bag.
17	Cartooning	It is a process to keep the pack in hand paper bag for export so as to minimize damage.
18	Send to the buyer or dispatch	When all the processes are completed then apparel are sent to the buyer.

Fig.4.1.4: Process of Clothing Manufacturing

4.1.5 Basic Record Keeping Requirements

Setting up the right record keeping system for your business will help you work efficiently, meet legal requirements and strengthen customer and staff relationships.

There are certain record keeping requirements for businesses in Queensland, and there may be specific laws and requirements related to your industry sector. It's a good idea to protect yourself by seeking expert advice before setting up a record keeping system for your business.

Laws that apply to the apparel industry will determine how long you need to keep records for. If you use an electronic record keeping system.

Basic records

To meet basic legal requirements, you must keep the following:

- **A cash book or financial accounting program:** That records cash receipts and cash payments.
- **Bank accounts:** Cheque books, deposit books and bank statements.
- **Employment records:** Hours of work, overtime, remuneration or other benefits, leave, superannuation benefits, termination of employment, type of employment, personal details of workers, employee personal contact and employment details.
- **Occupational training records:** For both you and employees to comply with work, health and safety laws including evacuation and emergency training attendance.
- **Sales records:** Invoice books, receipt books, cash register tapes, credit card documentation, credit notes for goods returned and a record of goods used by the business owner personally.
- **Proof of purchases:** Cheque butts (larger purchases), petty cash system (smaller cash purchases), receipts, credit card statements, invoices, any other documents relating to purchases including copies of agreements or leases.
- **Work, health and safety (whs) records:** Workplace incidents, risk register and management plan, names of key whs people (e.g. Whs representative, trained safety advisor (tsa), first aid attendant), chemical storage records, first aid incident register, workplace assessments, material safety data Sheets (MSDS).

It is a good idea to keep personal and business records separate, to simplify business reporting and tax returns. For example, using a dedicated business credit and debit card for business expenses will make it easy to separate business and personal expenses.

End of financial year records

To meet legal requirements, maximise your tax return or minimise your tax bill at the end of the financial year, keep the following records:

- **Details of stock on hand:** At the beginning and end of the financial year.
- **A list of debtors and creditors:** For the entire financial year.
- **Capital gains details:** Records of asset purchase dates and agreements, records of sale, disposal and proceeds received, details of commissions paid or legal expenses, improvements made to an asset and any other records relevant to how you calculate your capital gain or capital loss.
- **Depreciation details:** Original purchase agreements or tax invoices, a depreciation schedule, the cost of transporting the items to your business (if applicable), installation costs (if applicable).
- **Expense records:** Cheque butts, receipts, cash register tapes, copies of statements and invoices, credit card documentation, details of payments by cash and log books.
- **Staff and wages details:** Full details of wages, employment contracts, tax deducted, fringe benefits, superannuation, sick pay, holiday pay.
- **Basic accounting records:** Stock records, accounts receivable, accounts payable, other records.
- **Agreements:** Sales and purchase contracts, loan agreements, rental agreements, lease agreements, franchise agreements, sale and lease back agreements, trading agreements with suppliers, legal documentation.
- **Other documents:** Deposits with utilities, contracts with telephone companies, your business name registration certificate, capital gains records.

Best practice and record keeping

Depending on your industry, keeping the following records may be a legal requirement, but it is best practice to keep them for 5-7 years:

- Employee accreditation certificates and licences: copies of permits, registrations and licences employees need to do their jobs.
- Employee resumes and job applications.
- Performance reviews: including assessments of staff performance and agreements between you and your employees.
- Position statements and job advertisements.
- Customer records: personal details, products purchased and product enquiries that are useful for finding new customers.
- Customer complaints: details of complaints about products, service, staff or anything else, and steps taken to resolve them.
- Details of any disputes with other businesses: including how you went about resolving disputes.
- Quotes given and won: specifics of jobs and time spent on them to help with future quoting.
- Details of advertising campaigns and success: to make it easier to repeat advertisements and plan future advertising campaigns.
- Insurance policies: regularly review and update your business insurance, especially when your business grows or changes.

4.1.6 Record Keeping Systems

There are various manual (filing cabinets) and electronic (computer-aided) ways to record, store and retrieve information. Each association should work out and decide on a record-keeping system that suits its particular needs, circumstances and resources (availability of space or computers). The preferred system should be functional, accurate, reliable and user-friendly.

Record-keeping systems need to consider the:

- Nature of information to be stored and retrieved.
- Security and access of files and information (particularly computer records).
- Validity and reliability of the information collected and the system on which it is recorded.
- Resources and training required.
- Length of time that the records should be kept (general legal requirement is seven years).

4.1.6.1 Electronic Record Keeping

While some business owners prefer manual record keeping systems, most businesses use an electronic record keeping system - making it easier to capture information, generate reports and meet tax and legal reporting requirements.

There are a number of issues you should consider when setting up an electronic or manual record keeping system, as each has certain advantages and limitations.

Electronic record keeping

Most businesses use accounting software programs to simplify electronic record keeping, and produce meaningful reports. There are many other advantages to using electronic record keeping, as listed below.

Advantages

- Helps you record business transactions, including income and expenses, payments to workers, and stock and asset details.
- Efficient way to keep financial records and requires less storage space.
- Provides the option of recording a sale when you raise an invoice, not when you receive a cash payment from a client.
- Easy to generate orders, invoices, debtor reports, financial statements, employee pay records, inventory reports.
- Automatically tallies amounts and provides reporting functions.
- Keeps up with the latest tax rates, tax laws and rulings.
- Many accounting programs have facilities to email invoices to clients, orders to suppliers, or BAS returns to the Australian Taxation Office.
- Allows you to back up records and keep them in a safe place in case of fire or theft.

Choosing accounting software

Your business may require more than one software program to meet all of your tax and legal needs, so it's important to:

- Seek advice from your accountant or financial adviser before purchasing software for record keeping
- Check which accounting software is tax compliant on the Australian Taxation Office website.

Electronic backup

Set up a secure electronic backup system to ensure records are safely stored and regularly backed up. Daily backups are recommended, particularly for important records. Make sure the backup copies are stored in a separate location to your business in case of fire, theft or a natural disaster.

For small businesses, the cheapest backup options are CDs and memory sticks. If your business has large amounts of data, external hard drives are a popular backup option.

Cloud backup: Cloud computing provides a way for your business to manage your computing resources and records online. The term has evolved over recent years, and can be used to describe the use of a third party for your storage and computing needs.

Cloud backup services are becoming more popular and can be automated for your convenience, but you should make sure the method you choose protects the privacy and security of your business and customers.

4.1.6.2 Manual Record Keeping

Some business owners may want to use a simple, paper-based record keeping system. There are certain advantages to using manual record keeping, as listed below.

Advantages

- Less expensive to set up.
- Correcting entries may be easier with manual systems, as opposed to computerised ones that can leave complicated audit trails.
- The risk of corrupted data is much less.
- Data loss is less of a risk, particularly if records are stored in a fire-proof environment.
- Problems with duplicate copies of the same records are generally avoided.
- The process is simplified as you don't need to be familiar with how accounting software calculates and treats your information.

Streamline your manual record keeping

- Sort and store all paperwork, receipts and payments in 12 separate months.
- Keep all original documents and date all correspondence.
- Record all transaction dates and payment amounts.
- Save all online financial transactions by month and financial year in your inbox and in a separate folder on your hard drive.
- Backup all electronic records on an external hard drive or other storage device other than your computer's internal hard drive.
- Capture nearly all of your income and expenses in statements from both your bank and credit card accounts.
- Request that all statements and bills be sent on a monthly basis - allowing you to reconcile all financial records each month.

4.1.7 Necessary Production Reports for a Garment Factory

In a garment factory, production manager's day starts with production reports. Production manager enters to factory floor with questions such as -

- How many garments are made last production day by each line? Compare actual production with production target given to the floor in-charge and line supervisors.
- What were the issues for low productions? Why too much quality issues?
- Who is responsible for not achieving yesterday's target?

Production managers get answers of their question in reports with data. In this industry, line supervisors are very smart to tell you numbers to show good line performance and hide their shortfall. So, instead of discussion and verbal reports most of the managers believe on written and printed reports.

To know factory's day to day performance very well what all production and production related reports must be made and reported to higher management? Each factory has their own set of policies and system to run their factory. So, list of production reports may vary company to company.

There are few common reports; those are widely used and are very important to know. Here such reports and explained the purpose of those reports. All reports are related to production. Few reports are information based and others are analysis and performance based.

Operator Attendance Report

This report explains how many sewing operators; helpers are present today in each line. From this report manager quickly assess, what would be today's production target. Which lines have shortage of operators and where there are enough operators and from where some operators can be shifted to another line to fill all lines and run production smoothly? Operator attendance report is an important one to floor in-charge. Yesterday's operator's clock-in and clock out report is also important to see whether all operators worked full time or not.

Daily Production Report (DPR)

Daily Production Report contains yesterday's production records line wise and style wise. Production information in term of:

- How many cutting has been loaded to each line yesterday and total loading done to a particular from loading of the style?
- How many pieces has been stitched yesterday and cumulative production till-date of all styles those are currently loaded.
- How many pieces have been dispatched to finishing or washing department?
- Form daily production report managers can assess, whether a line is producing as per target or production is getting delayed.

Fig.4.1.5: Daily Production Report

Hourly Production Report

This report carries information of today's hourly production. In this report line's output is being updated hourly or bi-hourly. This report helps line supervisors to chase operators when line output goes down. Where production data is recorded manually, only line output data is captured and displayed on production board. But factories those use real time production monitoring system, operator wise hourly production data can be viewed. I have shown one such report for example in the following image.

Hourly Production Report														
Date	17-Nov-15												Line#	A1
Emp. No.	Name	Operation	H-1	H-2	H-3	H-4	H-5	H-6	H-7	H-8	H-9	H-10	Total	
11002	Lata	WB ATT TO LIN ING	40	81	115	108	44	0	0	0	0	0	388	
11524	Kavita	WB TOP STITCH	40	105	99	108	88	0	0	0	0	0	441	
10221	Sikha	WB FIT LBL ATT	0	93	93	77	22	0	0	0	0	0	285	
22546	Anil	WB WC LBL ATT	0	0	36	0	0	0	0	0	0	0	36	
11247	Sunit	PARTS OL	80	167	55	100	192	92	162	54	0	0	902	
44561	Sushma	FLY IRON	0	0	0	0	128	0	0	0	0	0	128	
11478	Anchal	FLY READY R	62	73	40	73	0	0	0	0	0	0	248	
2210	Sagar	COIN PKT BONE RDY AT	22	185	160	145	187	90	116	112	0	0	1018	
22154	Susmita	FRT PKT FACING ATT	40	140	75	50	130	52	104	60	0	0	651	
10225	Archna	FRT PKT EC	0	44	62	0	32	0	0	40	0	0	178	
25512	Anand	FRT PKT EC	44	128	122	100	80	20	90	70	0	0	654	
22518	Sarita	FRT PKT BAG TOP STIT	22	66	82	80	40	0	30	20	0	0	340	
44587	Kapil	FRT PKT BAG TOP STIT	22	64	86	60	40	20	40	30	0	0	382	
11478	Ravi	FRONT LOAD ING	0	182	218	108	128	0	0	0	0	0	636	
2254	Latamani	SIDE PKT ATT R	67	113	130	108	86	0	0	0	0	0	504	
88575	Rani	SIDE PKT ATT L	40	118	130	108	86	0	0	0	0	0	482	

Fig.4.1.6: Hourly Production Report

Efficiency and Productivity Report

The daily production report provides actual output numbers of each line and each style. Line output is directly proportional to number of manpower in a line. If you have two different styles (of different work content) running in two lines, performance of those line can't be compared with output figures. The easy way to check line's performance is measuring line efficiency and machine productivity irrespective of styles, number of manpower and number of machine used.

Manpower and Machine utilization Report

Manpower and machines are primary resources of a company. A Manager need to look into resources to check how company resources are get utilized? Factory should not have excess manpower on the floor. On the other hand factory must have minimum required manpower to a factory to produce goods according to the plan. Both the manpower and machines are cost to the company. So it is import to check this report daily basis.

This report may also include number of employees who were present in overtime work hours?

Garment Inspection Report

Inspection report comes under quality report. But garment inspection report is also one important report for production manager and top management to monitor stitching quality of products. As all produced garments are not acceptable if certain quality level is not maintained. It is production department's responsibility to produce quality product. Inspection report displays line wise defects per hundred units (DHU) and percentage defective data, total pieces send for alteration/repair.

Repair and Rejection Report

This report contains information such as – style wise and color wise defective garments produced by lines. Defect wise no. of garments is sent to repair section and number of garment received from repair section after alteration. This information is essential because in case you have number of damaged or rejected garments, you can cut and sew fresh garments and replace those damaged garments prior to final inspection.

Cutting Production Report

Cutting department's production status is also an important report to be looked into by production manager. Style wise and color wise cut quantity is checked. Sewing line can be fed with cuttings only when there is enough cutting in cutting store. Looking into cutting plan what all fabrics are going to cut today for following day's feeding?

Material Inventory Report

Once status of production, efficiency, and quality report part is over, managers looked into material availability status. You know that materials are the one major reason for shipment delay and breaking the production schedule. This report carries information such as fabric and trims in-house status in details with expected in house date for balance materials. Managers chase with merchandising and sourcing department for sourcing material on time.

4.1.8 Naming Conventions for Records

All records need to be well organized and named or labelled correctly, whether they are physical or electronic records. This ensures records are identifiable and accessible to all employees. Naming records according to the 'Naming Standard' will:

- Ensure record titles are consistent, logical and predictable.
- Distinguish similar records from each other at a glance and by doing so, will facilitate the storage and retrieval of records, which will enable users to browse file names more effectively and efficiently.
- Make file naming easier, because users will not have to 'rethink' the process each time.
- Provide quicker search and retrieval, as users do not need to think about which words may have been used to describe a document/record when conducting a search and in turn this assists in responding to access requests (e.g. Right to Information, Privacy etc.).
- Ensure disposal of records are in line with the organization.

Here are some guidelines:

- Keep file names short, but meaningful:
 - » Long file names mean long file paths and long URLs which increase the likelihood of error, are more difficult to remember and recognise, and are more difficult to transmit in emails as they often 'break'. Most electronic systems also have a character limitation for URLs.
 - » Avoid using initialisms, abbreviations and codes that may not be commonly understood.
- Avoid unnecessary repetition and redundancy in file names and file paths. For example, if the file is a PowerPoint presentation, you don't need the word "presentation" in the filename.
- Use the underscore (_) as element delimiter. Do not use spaces or other characters such as: ! # \$ % & ' @ ^ ` ~ +, . ; =) (
 - » The underscore (_) is a quasi-standard for field delimiting and is the most visually ergonomic character. Some search tools do not work with spaces and should be especially avoided for internet files.
- Use the hyphen (-) to delimit words within an element or capitalize the first letter of each word within an element.
 - » Spaces are poor visual delimiters and some search tools do not work with spaces. The hyphen (-) is a common word delimiter. Alternatively, capitalizing the words within an element is an efficient method of differentiating words but is harder to read and may not be searchable.

- When including a number in a file name always give it as a two-digit number, i.e. 01-99, unless it is a year or another number with more than two digits.
- If using a date in the file name always state the date 'back to front', and use four digit years, two digit months and two digit days: YYYYMMDD or YYYYMM or YYYY or YYYY-YYYY. This will ensure that files are sorted in proper chronological order with the most significant dates appearing first. The date should go at the start of the file name.
 - » Only use dates in a file name for things that need to be tracked by date, such as meetings, reports and other recurring events. Do not use dates as versioning in electronic document management systems.
- When including a personal name in a file name give the family name first followed by the initials or initials. The family name is the standard reference for retrieving records. Having the family name first will ensure that files are sorted in proper alphabetical order.
- Order the elements in a file name in the most appropriate way to retrieve the record. This will depend on the way you work.
 - » For example, if you work with student records you may want to use Lastnamefirstname_studentID_documentType since you are more likely to browse by name.
 - » If you are organizing meeting agendas or minutes you may want to start with the date.
- If using an electronic document management system, do not put versions in the file name unless you need to maintain each version of a record as a separate record.
 - » Versioning will be maintained within the electronic document management system. The whole point of electronic document management is that you no longer have to maintain multiple versions of a file to show its history. You can easily go back to a specific version or date and view the state of the file at that time. For this reason, you no longer need to put dates or version numbers in the filename.
 - » The filename remains the same for the life of the document. It will not change when you upload new versions, so if you hardcode a version number or a date in the name, it may become out of date the next time an update is made.
- Avoid putting personal or confidential information in a filename (where possible), such as JSmith_termination.docx. Administrators or unauthorized users may be able to view file names. This can sometimes conflict with guideline 1 which is to keep names meaningful, so the right balance needs to be determined for the organization. Perhaps some aspects could be flagged as a property instead of directly in the name so they are less evident.

Correspondence

The file names of correspondence should include the following elements so that the record can be easily identified and retrieved:

- Name of correspondent (sender or receiver as appropriate)
- Subject description (where it is not given in the folder title)
- Date of letter/email/memo
- If incoming correspondence, include 'rcvd'

4.1.9 Follow Organizational Standards for Maintaining Records

These rules shall apply to every company engaged in the production, processing or manufacturing of any art silk cloth, cloth, cotton yarn or cotton cloth, processed yarn and processed cloth, man-made fibre yarn or man-made fibre cloth, silk yarn or silk cloth, wool,woolen yarn or woollen cloth, yarn or other apparel products.

Maintenance of records

Raw materials:

Cotton and man-made fibres: Proper records shall be maintained showing all the receipts, issues and balances, both in quantities and cost, of cotton, manmade fibres and filament yarn from man-made fibres used in the manufacture of cotton apparel. Where cotton or man-made fibres or filament yarn made from man-made fibres, is obtained from different sources including imports, records shall be maintained separately for imported and indigenous supplies, variety-wise in such a manner as to enable the company to determine the quantity and cost of receipts, (including all direct charges upto mills) issues, and balance of materials. The names and specifications used for different varieties of cotton/man-made fibre/filament yarn from man- made fibre shall conform to the nomenclature and specifications as prescribed by organization standards.

The records shall indicate the actual quantity and value of each variety of cotton or other raw materials mentioned above, used in each mixing prepared for manufacturing different counts of yarns.

Records: Records containing the following information must be kept by the pest control officer:

- Observations from monitoring, including any evidence of pests
- List of 24-hour pest control methods used
- Name, amount and point of use of any pesticides used
- Location of all pest sparrow trap, monitors and bait stations detailed on a map

Waste:

Soft Waste: Proper records shall be maintained to show the quantity and realisable value of usable soft waste collected from each mixing in each cost center of the Spinning Department, quantities re-used in each mixing, used in the waste plant, if there be any, sold out with the sales realisation thereof and the balance lying in stock. Proper records shall be maintained to show the quantity and realisable value of other soft wastes such as droppings, sweepings, etc., collected from different cost centres of the spinning department, re-used in the waste plant, if any, sold out with sales realisation thereof and the balance lying in stock. The quantity of this waste collected at regular intervals, say quarterly, during the relevant period shall be reconciled with such waste for which due credit is afforded to the respective production/on technical basis/past performance/trial run during the said period.

Hard waste: Proper records shall be maintained to show the quantity and realisable value of hard waste collected, type wise, such as superfine, fine, medium, coarse etc separately from spinning department and pre-weaving department reused in the waste plant if any sold out with the sales realisation thereof and the balance lying in stock. The quantity of this waste collected at regular intervals, say quarterly, during the relevant period shall be reconciled with such waste for which due credit is afforded to the respective production on technical basis/past performance/trial run during the said period.

Any waste cotton purchased for use in the manufacture of yarn shall also be recorded properly regarding receipts, issues and balances both in quantity and value.

- **Yarn:** In case the company is purchasing yarn from outside sources for use in the manufacture of cloth, proper records shall be maintained showing all the receipts, issues and balances, both in quantity and value. This record shall be kept count-wise, separately for carded and combed varieties.

- **Cloth:** In case the company purchases cloth in grey stage for processing, proper records shall be maintained showing the quantity and cost of such purchases, issues to processing and balance in stock, fabric-wise. Where the company receives cloth in grey stage for processing only, proper records shall be maintained showing the quantity of such receipts, issues to processing and balance in stock.
- **Sizing materials:** Proper records shall be maintained to show the receipts, issues and balances, both in quantities and cost, of each items of sizing materials such as starch, maize, tallow, gum, etc. used in the different types of sizing solution used for sizing the warp yarn. The cost shall include all direct charges up to the mills wherever specifically incurred. In case the issues are made as per "recipes" prepared in advance, a periodic reconciliation between the actual material consumption and that as per "recipes" shall be made both in quantity and value. Separate records shall be maintained in such details as may enable the company to work out the cost of sizing materials required per kilogram of warp yarn sized.
- **Dyes and chemicals:** Proper records shall be maintained to show the receipts, issues and balances, both in quantities and cost of each item of dyes and chemicals used for dyeing and printing the various yarn and or cloth manufactured and processed. The cost shall include all direct charges up to the mills or processing house, wherever specifically incurred. The issues shall be properly identified with the cost centres, departments and ultimately with each sort of cloth processed as far as practicable. In case the company resorts to the recording of consumption of these materials as per "recipe" in respect of each fabric, a reconciliation between the actual consumption and "recipe consumption" shall be made periodically and necessary adjustment for variations are to be indicated in the cost records.
- **Process materials/chemicals:** De-sizing, souring scouring, bleaching, finishing, mercerizing and other materials:- Proper records shall be maintained to show the receipts, issues and balances both in 'quantities and cost of each item of ' process materials/chemicals, such as de-sizing chemicals, bleaching chemicals, finishing chemicals, mercerizing chemicals, tabulizing chemicals etc used in the processing of cloth. The cost shall include all direct charges up to the mills or processing house wherever specifically incurred. The issues shall be properly identified with the cost centres, departments and products manufactured.

Where any of the dyes and chemicals and processing chemicals are produced by the company, separate records showing the cost of manufacture of such material indicating the break-up of raw materials consumed for the production and conversion cost shall be maintained in such details as may enable the company to determine the actual cost of such materials produced.
- **Recoveries of process materials and chemicals:** Proper records shall be maintained indicating the quantity of materials or chemicals recovered from different processes. In the case of certain materials or chemicals thus recovered which cannot be re-used in the process due to lower concentration and are sold, the realizations from such sales shall be recorded and adjusted against the cost of consumption of the respective materials or chemicals, if practicable, or otherwise adjusted against the processes concerned on a reasonable basis. In case further processing is necessary to make these materials or chemicals useable or saleable, as the case may be, adequate records of cost involved for such further processing shall be maintained. If such further processing is done by any outside agency, records to show the quantity sent for processing, quantity processed and the cost involved thereon shall be maintained in detail.
- **Consumable stores, small tools, machinery and spares:**
 - » Proper records shall be maintained to show the receipts, issues and balances both in quantities and cost of each item of consumable stores, small tools machinery spares, bobbins, pins, shuttles, rollers, etc. The cost shown shall include all direct charges upto, the mills or processing house wherever specifically incurred.
 - » In the case of consumable stores and small tools, the cost of which are insignificant the company may, if it so desires, maintain such records for the main group of such items.

- » The cost of issues of consumable stores, small tools and machinery spares, shall be charged to the-relevant heads of account such as production, repairs to plant and machinery and repairs to buildings. Materials consumed on capital works such as additions to buildings. Plant and machinery and other assets shall be shown under the relevant capital heads.
- » Proper records shall be maintained to show the quantity and cost of items which are not forming part of the machinery and replaced as and when necessary, such as bobbins of all sizes, pirns, winding cones, cheeses, reels, sliver drums, rollers in frames, shuttles, etc., lying in the shop floor at the end of the relevant year in order to enable the company to arrive at the actual consumption of such items during the relevant year. The method followed for charging the cost of the above items and adjusting the income, if any, derived from the disposal of any of the above items discarded, in the cost of the products manufactured shall be indicated in the cost record.
- » Sales realisation of old and discarded stores materials, scrap, etc. shall be identified wherever possible with respective cost centres and credit given accordingly otherwise it shall be deducted from the common mill overheads
- **Wastages, spoilages, rejections, losses, etc. of materials:**
 - » Proper records shall be maintained showing the quantity and cost of wastages, spoilages, rejection and losses of raw materials. Dyes and chemicals, process materials, consumable stores, small tools and machinery spares, whether in transit, storage, manufacture or for any other reason. The method followed for adjusting the above losses as well as the income derived from the disposal of rejected and waste materials including spoilages, if any, in determining the cost of products shall be indicated in the cost records.
 - » Necessary records shall be maintained showing the quantity and realisable value of hard waste derived in different departments, re-used, sold out and balance in stock. Sufficient records to show the hard and soft waste used both in quantity and value in the waste recovery plant for yarn of lower counts to be used in the manufacture of waste blankets shall be maintained. The method followed for adjusting the above wastage as well as the income derived from the sale of such waste in determining the cost of product shall be indicated in the cost records.
 - » Necessary records shall be maintained showing the quantity and cost of wastage in cloth produced, due to spoilage, etc. in various departments and sold out as waste. The method followed for adjusting the above wastage as well as any income derived from the sale of such waste, in determining the cost of the product shall be indicated in the cost records.
 - » Separate records shall be maintained for fents, rags, chindies, etc. arising out of finished fabrics, group-wise. Such grouping shall be as per the one adopted by central excise authorities. The quantity of fents, rags, etc. formed in the case of each fabric may be determined on technical basis if actuals are not available. In such cases reconciliation of such waste accounted for in the production on technical basis and that actually formed, group-wise, shall be made at regular intervals, say quarterly, within, the relevant period.

Salaries and Wages:

- Proper records shall be maintained to show the attendance and earnings of all employees and the cost centres or departments and the work on which they are employed. The records shall also indicate separately:
 - » Overtime wages earned
 - » Piece-rate wages earned
 - » Incentive wages earned, either individually or collectively as production bonus or under any other scheme based on output

» Earnings of casual labour engaged on casual work under classified headings

- Idle time shall be separately recorded under classified headings indicating the reasons therefor. This data shall be maintained, as far as possible cost centre-wise, otherwise for principal costs like ring frame, looms, bleaching, dyeing, printing, warehousing, etc. The method followed for accounting of idle time payments in determining the cost of the products shall be disclosed in the cost records.
- Any wages and salaries allocable to capital works such as addition or heavy repair works to plant and machinery, buildings or other fixed assets shall be accounted for under the relevant capital heads.

Workshop/repairs and maintenance:

Proper records showing the expenditure incurred by the workshop under different heads and on repairs and maintenance by the various cost centres and departments shall be maintained. The records shall also indicate the basis of charging the workshop expenses to different cost centres, departments and units. Wherever maintenance work is done by direct workers of any production cost centre, the wages and salaries of such men shall be treated as other direct expenses of the respective cost centre. Expenditure on major repair works, from which benefit is likely to accrue for more than one financial year shall be shown separately in the cost records indicating the method of accounting in determining the cost of various product manufactured during the relevant period. Expenditure incurred on works of capital nature shall be capitalized. The cost of such jobs shall include the expenditure on materials, labour and due share of the overheads. The jobs carried out by the workshop attached to the spinning, weaving or processing departments, for other units of the company and vice-versa shall be charged on a reasonable basis and applied consistently.

- **Design studio:** Proper records showing the expenditure incurred by the design studio if any, shall be maintained. The records shall also indicate the basis of charging the studio expenses to the different cost centres and departments in the printing section. Screen making, photo engraving, pentagraph, chromium plating and rotary screen making: Proper records showing the expenditure incurred by these departments shall be maintained. The records shall also indicate the basis of charging the expenses of these departments to the respective cost centres of the, printing department and ultimately to the products. The basis so adopted shall be reasonable and applied consistently.
- **Expenses on export:** Proper records showing the expenses incurred on the export item of cotton apparel, if any, shall be separately maintained so that the cost of export sales can be correctly determined for each type of the product exported. The expenses incurred on exports as well as any export incentives. such as cash subsidy, drawback duty and benefit derived out of the import entitlement license issued, etc., if any, shall be reflected separately in the Cost of sales statements relating to export sales.

Packing:

Proper records shall be maintained showing the quantity and cost of various packing materials such as Hessian cloth, polythene, paper boards, packing boxes, mild steel wires, hoops and buckles used for different types of packing of yarn, cloth and Processed cloth separately. In the absence of actual consumption of such materials for each type of packing, apportionment of material cost shall be made on the basis of quantity requirement as per standard specifications. In such cases, reconciliation of major material cost as per standards and that as per actuals shall be made periodically, say quarterly. Records shall also be maintained showing the other expenses incurred in respect of packing. Where expenses are of a general nature and cannot be identified directly with the types of packing, apportionment of such expenses to the different types of packing shall be on an equitable basis and the basis of such apportionment shall be clearly indicated in the cost records and applied consistently.

Research and Development expenses:

Proper records showing the details of expenses, if any, incurred by the company for research and development according to the nature of such research, namely, development of products, existing and new, processes of manufacture, design and development of new plant facilities, market research for new products, etc. shall be

maintained separately. The method of charging these expenses to the cost of products during any year shall be indicated in the cost records. Wherever the utility of such research extends over more than one financial year such expenses shall be treated as "deferred expenses" and charged to the cost of the products on some equitable basis which is to be followed consistently.

Yarn/cloth in grey stage for self-consumption:

Proper records shall be maintained showing the quantity and cost of each item of yarn and cloth transferred to another department/unit of the company for self-consumption. The rates at which such transfers are effected shall be at cost.

Work-in-progress and finished goods stock:

Adequate records shall be maintained showing the cost of work-in-progress in each productive cost centers of the spinning, weaving and processing departments of the company. Proper records showing the opening stock, production, issues for further processing/sales and closing stock of all the finished products like yarn of various counts either carded or combed. Cloth of various constructions and processed and finished cloth of various constructions, designs, etc., shall be maintained.

The method followed for determining the cost of work-in-progress and finished goods stocks shall be indicated in the cost records so as to reveal the cost elements that have been taken into account in such computation. The method adopted shall be followed consistently.

Material Movement Statistics Transactions:

- **Purchase Receipts:** shipment from a supplier, including planned purchase orders and blanket purchase agreements.
- **Return to Vendor (RTV):** the return of goods from a specific receipt to the supplying vendor.
- **Return Material Authorization (RMA):** immediate adjustment transaction - return of goods against a sales order (may or may not include a credit memo).
- Triangulation - supplier drop shipments.
- **Multiple-organization drop shipments:** drop shipments that span legal entities.
- **Inventory inter-organization movements:** the movement of material from one organization to another.
- Internal Requisitions and Internal Sales Orders.
- **Standard Sales Orders:** the order data as defined or captured by Oracle Order Management.
- **Prepayment Invoices:** those associated with a specific movement transaction.
- Invoices - only those associated with a specific movement transaction.
- **Consigned receipts and returns:** creates an arrival record for the consigned receipt and a dispatch record for the consigned return.
- **Credit/Debit Memos:** those associated with a specific movement transaction.

Production records:

Quantitative records of all finished and packed production. Issues for further processing, department-wise, issues for sales and balance in stock both packed and in pre-packed condition of:

- Different counts and types of yarn (both grey and processed).
- All sorts of cloth in grey stage.

All sorts of processed and finished cloth produced shall be maintained by the company. In the process department., The production of different machines, count group-wise and variety-wise only need be kept. The cost of all finished and packed production may be kept in detail. Details of the, quantity of cotton blankets produced, if any, from waste cotton shall also be kept in the cost records. Adequate records to show the production of yarn/ cloth in grey stage processed cloth in various stages of production in the respective intermediary productive departments shall also be maintained.

4.1.10 Documentation of the Quality System

- It is extremely easy to overlook the fact that Documentation plays a key role in the Quality Management System.
- Documentation is a tool that captures your intentions for Quality and then cascades those intentions down into every level of the organization.
- Documentation also allows you to capture your organizations best practices & tribal knowledge into a “memory bank.”
- This prevents all the lessons learned over time from leaving when the employees walk out the door.
- Effective execution of your Documentation System lead to a higher level of control over your critical.
- Effective documentation also results in employee who are performing their job safely and with an adequate amount of information which leads to a sustained level of high quality.
- This is exactly why documentation should NOT be viewed as simply a regulatory requirement that lacks any real value.

Body of Knowledge:

- Identify and apply quality system documentation components, including quality policies, procedures to support the system, configuration management and document control to manage work instructions, quality records, etc.

4.1.11 Quality Documentation Hierarchy

The following 4-tiered hierarchy has been established as a best practice for your Quality Documentation System In order to adequately cascade Quality through the organization.



Fig.4.1.8: Quality Documentation Hierarchy

Quality Manual

- The top tier in the hierarchy is the Quality Manual. This is the guiding document for which all subsequent decisions should be aligned with.
- The Quality Manual is a high level document that's authored and approved by upper management and it outlines the companies goals, mission & vision. It should outline what the company stands for & why they exist.
- The Quality Manual includes the Quality Policy – which is the company's commitment to quality & customer satisfaction.
- While the Quality Manual is a regulatory requirement (ISO 9001), that this doesn't mean it's only value is to satisfy a regulatory requirement. It is a regulatory requirement because having a quality manual has been shown to add value to the organization.

Quality Procedures

- The next tier in the Quality Documentation System are the Quality Procedures.
- Your quality procedures are the center of your documentation system. They describe the responsibilities of the various personnel and functional groups as they operate within the Quality System.
- They are aligned with the vision of the organization and outline the general operations of the business.
- These procedures should span all the major processes and practices within your organization and should include references both upward to the Quality Manual, and downward to the Work Instructions associated with each process.

Work Instructions

The third tier of the Quality Documentation System are the Work Instructions. These are the detailed "How – To" instructions that describe the specific actions required to achieve a Quality product. For Production processes or services, your Work Instructions may cover many of the following details:

- The manner in which the work will be done.
- The equipment and tools that will be used.
- The environment or location associated with the work.
- Material handling requirements.
- Safety alerts for the employees.
- A cross-reference to any other required processes or work instructions.
- The critical process parameters to be monitored & the instructions on how to monitor.
- The critical product characteristics to be monitored & the instructions on how to monitor.
- Equipment maintenance procedures.
- Methods for verifying that the product meets specifications.
- Other non-product related criteria for the final product.

Effective implementation of Work Instructions

- To make your work instructions the most effective they can be – You should make them simple, concise & complete, which can be a difficult process.
- Start with making your work instruction complete. Ensure you've gotten all the details into the work instructions. You'd rather over-communicate than under-communicate.

- Then work through the process of refining your work instruction to drive simplicity & conciseness. This is where you should attempt to communicate your message in as few words as possible. This will drive understanding & usage by the workers on the floor.
- Finally, make sure these work instructions are physically located at their point of use, where the function is actually performed. If this is not the case, you are greatly reducing the likelihood that they will actually be used and increasing the likelihood for a deviation or non-conformance.

Quality Records

This final tier in the Quality Documentation System are your Quality Records. This is where you capture all the data, information, records, forms, etc. Quality Records are the objective evidence to prove that your Quality System is being executed per procedure.

Your Quality Records also describe how the quality of the end product was verified to have met the specifications & thus will meet the customer's needs & expectations. Always Remember – If you don't document it, you didn't do it.

4.1.7.1 Records Retention

- Because our Quality Records are the living proof that our product was manufactured per specifications and will meet the customer's needs – this makes them highly auditable.
- As such, you must establish a retention policy on your Quality Records to ensure that they are available to review and audit at a moment's notice.
- This is an integral part of your document control process discussed below. These records are also normally part of your recall traceability system.
- For example, if a supplier notifies you of an issue on a lot of raw material, your records will assist you in tracing that raw material through the process to the affected finished goods.

4.1.12 Documentation & the Body of Knowledge

I'm about to show you how Documentation impacts all 7 areas within the body of knowledge, shown below:

- Management & Leadership
- The Quality System
- Product & Process Design
- Product & Process Control
- Continuous Improvement
- Quantitative Methods & tools
- Risk Management

What you'll learn below is that Documentation plays a key role in each of these areas, especially in the area of control.

Documentation as part of Management & Leadership

- Within the Management & Leadership section we learned about Supplier Management & the need for Supplier Quality Agreements which clearly communicate and document our requirements for supplied components or services.

- This is a great example of a Quality Record that drives control of future product.
- We also learned about supplier audits, surveys & supplier scorecard – all of these documents considered Quality Records which fall within your Quality Documentation System.
- Finally, we also discussed the Receiving Inspection process. The data generated here, including any non-conformances, are also considered Quality Records that ensure quality and conformance.

Documentation as part of The Quality System

- As you've read in the previous section, the Quality System is comprised of 14 key elements, many of which rely on Documentation in the form of procedures & work instructions as their primary method of control and standardization.
- You'll also learn later about Quality Audits & Quality Training – both of which whose final records should be retained as part of your Quality Documentation System.

Documentation as part of Product & Process Design

- As your organization moves through the design process, they will be forced to document Design Inputs, Design Outputs, Design Review, Design Validation/Verification.
- On top of this, the design process often results in the creation of Technical Drawings & Specifications which are just another form of documentation that is meant to control a product's design & define the product's specifications.
- Finally, many of your reliability and maintainability documents (FMEA, FTA) are considered quality records that improve quality, etc.

Documentation as part of Product & Process Control

- Once a product has moved into production, you should have created documentation which fully defines & controls your production process. These are normally your production Work Instructions & Control Plans.
- Your Control Plan, is meant to define the approved methods to confirm conformity before, during & after production to further ensure customer satisfaction.
- Your Documentation in this stage is meant to standardize your validated processes & best practices to deliver consistently high quality products.

Documentation as part of Continuous Improvement

A critical process for Continuous Improvement is the CAPA process. This process results in CAPA records that include your investigation details, root cause analysis & corrective actions. Your root cause analysis will likely include the output of any of the 7 QC Tools that you've used in your investigation.

1. What does the C stand for in D-M-A-I-C? Control.
2. And how do you control a process improvement? You make it part of your Procedure or Work Instruction as a new requirement.
3. Documentation as part of quantitative methods & tools.
4. This is the one area within the body of knowledge where there isn't have a direct link between Documentation and a particular tool or method, etc.
5. However if you're performing a Designed Experiment or a Process Capability Study as part of an official Quality Protocol or Validation, where the outcome will be a Quality Improvement.
6. Protocol is a Quality Record.

Documentation Systems

Now that we've discussed the Documentation Hierarchy in detail, we now need to cover the nuts and bolts of the Documentation Systems that maintain all of those documents.

- **Configuration Management:** Control of Design & Configuration Documentation
- **Document Control:** Control of Manufacturing Procedures & Records

Configuration Management

- Configuration Management is "The collection of activities needed to define, identify, manage, record, or approve the hardware & software characteristics of a product."
- The term configuration refers to how a complex product is composed of various units & sub-assemblies. This is very important for companies that design and manufacture complex and dynamic products who then must manage their products configuration to ensure that the manufacturing process is aligned with the design as the design configuration changes over time.
- Imagine your final product is an assemblage of 10 sub-assemblies, and that each of those sub-assemblies contains 10 components.
- So your final device contains a total of 100 components all assembled up together.
- Now imagine that you're planning to make a design enhancement each month to 1 component from each of the 10 sub-assemblies.
- So in each of those 10 months, you'll actually be building a new, unique configuration of the final product each month until all 10 design changes are complete.
- How would you make sure that your production process is correctly building the right sub-assemblies and that the final assembly is meeting the changing design?
- You would use Configuration Management.

Document Control

As discussed above, your documentation system will generate many Quality Records which will act as your objective evidence that your Quality System is operating effectively. Also – as part of your Quality System Documentation Hierarchy, you learned that you must develop and maintain many different Quality Procedures & Work Instructions that also must be effectively controlled. These two activities form the basis for Document Control which can be defined as the control of all documentation required by, or generated from the activities associated with the Quality Management System.

The activities within Document Control includes but are not limited to:

- Approval of documentation by SME's prior to distribution to the affected work area.
- Periodic review of documentation for compliance & accuracy.
- Removal of obsolete documentation from circulation.
- Removal of out of date revisions of procedures or work instructions.
- Control & standardization of the distribution of new revisions of documents.
- Ensuring that documentation is legible, identifiable & readable.
- Ensuring that documentation is availability at the point of use.

4.1.13 Reporting to the Manager/Management

What is Reporting to the Manager/Management?

Reporting to manager or management is the process of providing salient information to the manager or the management team about the status and progress of the business team or the project itself.

Who does Reporting to the Manager/Management?

Members of the team report to their managers or to management teams to make them completely informed and aware of the team's standing and development. The team secretary can also be delegated by the team leader to create the team report to the business manager.

Why do people do Reporting to the Manager/Management?

Business teams report to managers or management teams for the following reasons. Generally, team members and leaders communicate important matters about the team and the business to the managers and management team through the reports that they send. The information in the report will help team members, leaders, associates, and managers to compare and contrast data from the previous report, make strong connections and inferences, and make rational decisions.

Also, the members of the team and their leaders also make reports to the manager as part of the chain of command, in which subordinates report important information to the superiors. This ensures that leaders and managers become fully aware of the things that happen in the team and the business.

How to do Reporting to the Manager/Management / Ways to do Reporting to the Manager/Management

Reporting to manager/management involves the provision of essential information on the undertakings, routines, status, and progress of the business team and the project itself.

Important information on the team and business status and progress are included in the report to the manager/management team. It is vital to utilize updated, complete, accurate, and factual information, as these serve as the foundation for the next moves of the team leaders and members.

The team's achievements and problems are also indicated in the report. The accomplishments of the team serve as indication of the team's partial success in their goals. Also, the team's feats let the team members and leaders to become inspired and motivated in their tasks, thus, boosting their performance. The team's problems, if identified earlier, allow the team members and leaders to rank them according to priority and discuss ways to solve actual problems or prevent potential problems.

Advantages of Reporting to the Manager/Management

Reporting to manager/management is advantageous to the business team for the following reasons. Communication is one primary advantage of reporting to the manager or the management team. With the team members and leaders informing the business managers on the status and progress of the group and the business itself, the managers can give their response to the business team, allowing the latter to make necessary actions in their work flow.

The information inculcated in the management report also allows team members, leaders, and affiliates to compare and contrast information between the current and previous reports. As a result, they will be able to make evidenced-based conclusions and make rational decisions, which will help direct the team to a successful path.

Disadvantages of Reporting to the Manager/Management

While reporting to the manager or management team can be advantageous in a number of ways, there are also times in which it can be a disadvantage to the business team.

Reporting to the manager or management group in paper is viewed as costly by some groups, such as the start-up teams, which is still in its early phase development. Being a juvenile team in the market could be challenging as the organization is still adapting its norms and an additional expense may be challenging for the team's stability.

Doing reports to the manager can be time-consuming. Instead of focusing on their regular tasks and responsibilities, team members and leaders have to generate a detailed report, containing accurate and factual information.

Best Practices for doing Reporting to the Manager/Management

Reporting to the manager and the management team helps the team members, leaders, and affiliates to become entirely knowledgeable, updated, and wary on the standing and development of the team and the business project itself.

With regard to the language used in writing the report, team members and leaders should consider that not all members of the team are aware with jargons, or terminologies that are specific to a certain field or industry. Also, the use of acronyms should be limited, as team members, leaders, and managers may have a varied interpretation to the acronym.

Reports contain two types of data – qualitative and quantitative. Qualitative data are descriptive data while quantitative data involves numbers and figures. While the former can be expressed through words, sentences, and paragraphs, quantitative information can be best presented in tables, charts, graphs, and diagrams.

Organization of data is also important in reporting to managers and management teams for easy comprehension of information. This can be done by using headings and subheadings as guides to the readers, along with the use of bullets to prevent readers from becoming overwhelmed by the report. Also, writing important details in bold will help readers locate important information in the report.

Completeness and accuracy of data are two of the most important pillars of a good report, as these help the report become credible to the team members, leaders, and managers. In addition, a report will lack and inaccurate data may result to faulty plans, strategies, and actions.

Reporting a workplace issue

Promoting a Respectful and Collaborative Workplace: Resolving Workplace Concerns or Conflict Procedure takes a risk management approach to the resolution of conflict. The procedure empowers staff members to proactively manage their relationships in the workplace and resolve workplace concerns as early as possible and at a local level.

Resolution pathway

If you have a workplace concern, including bullying, harassment, discrimination or interpersonal conflict, it should be reported immediately. You can follow below given points regarding any concerns:

Speak with your supervisor or manager - If you have a workplace conflict or concern, you are encouraged to speak with your supervisor or manager in the first instance. They will help you plan a constructive conversation with your colleague.

If you do not wish to speak with your manager or supervisor about your concern, you are encouraged to speak with your Human Resource, who will initiate the conflict resolution process.

Self-help - If you feel comfortable, speaking directly with the other people involved can be a really effective way to resolve your concern. You may want to ask your supervisor, manager, or Human Resources manager to be present at the conversation.

A constructive conversation between you and your colleague should:

- Describe the specific behaviour or circumstances that is causing concern.
- Describe the effect the behaviour or circumstance is having on you or your work.

- Give your colleague the opportunity to ask questions and respond.
- State your desired outcome.

Raise your concern

If you do not feel comfortable having a conversation directly with your colleague or if the conversation has been unsuccessful, you can consult any of the following people for advice and a possible strategy:

- Human Resource Department
- Health and Safety Officer
- Equity and Diversity Manager

Escalation to a triage process

If the issue cannot be resolved locally, it may be escalated to a triage process. In consultation with your supervisor or manager, the relevant Human Resources Department for your department will consider the best approach to find a resolution and may provide a summary of the issue to the higher authority. An Officer will be actively involved in directing the triage process and is there to ensure you are better informed about your choices and feel supported.

- Identify who is involved.
- Work out what the desired outcome is.
- Direct a resolution pathway based on the desired outcome.
- Identify whether the issue should be referred to an alternative system for resolution, for example a complaints resolution pathway (see below).

Reporting fraud and corruption

If you suspect, or become aware of any fraud, corruption, misconduct or maladministration in the organization or your team, this is a matter of public interest and you have a responsibility to report it.

Reporting fraudulent or corrupt practice is also known as 'whistle blowing' or making a public interest disclosure (PID).

Reporting through the correct channels will ensure you are not disadvantaged for raising your concern. To be afforded this protection, it's important you report your concerns correctly.

4.1.14 Vendor Management in Apparel Industry

Vendor management

Vendor management is a discipline that enables organizations to control costs, drive service excellence and mitigate risks to gain increased value from their vendors throughout the deal life cycle. Actually a vendor or supplier is a third party who performs functions on a company's behalf or provides services to a company.

In apparel manufacturing industry, suppliers are appointed by an export house or by the buyer, for the production of fabric and trims. Though the apparel industries are capable of producing most of their requirements by in-house manufacturing, time to time they often prefer outside sourcing than the in-house manufacturing. The reasons could be the limited time availability, the quality level expected by the customer, and higher manufacturing cost of the product. Whenever there is a specific requirement in fabric or trims or accessories, for which there is a lack of expertise in-house to produce, the manufacturer prefers outside sourcing.

The main advantage of sourcing the fabric and trim is to transfer the risk and enables the garment exporter to concentrate on only garment production and also it helps to get high quality product, due to the higher experience of the vendor and state of the art technologies used. Figure contains the vendor management prospects.

However, few other limitations are also associated with this process like the exporter has less control over the skills and training of suppliers, employees and so there may be a negative impact on quality.



Fig.4.1.9: Vendor management

Vendor / supplier selection criteria

The process of finding an ideal supplier is often not an easy job and requires dedication and hard work. The process is generally affected by wide range of factors like value for money, quality, reliability and service.

The suppliers who can offer a high quality product may be costlier (sometimes) at the initial stage, but it will pay-off over time through good image and high quality. Every company will have their own importance and preferences based on their firm's business policies and strategy. However, it is always recommended to choose a strategic approach to select the supplier which will help the manufacturer to analyze their purchasing decisions.

Categories and criteria of vendor selection process are point out below:

Quality:

- Services/supply
- Human resources
- Documentation
- Cooperation
- Quality management

Logistics:

- Schedule or volume effectiveness
- Technical handling

Technology or Innovation:

- Resources
- Product/know how
- Innovative power
- Cooperation

Commercial aspects:

- Price
- Quotation behavior
- Contract
- Process
- Cooperation

Risk:

- Financial stability
- Market/dependence
- Availability/delivery capability

Safety:

- Industrial safety
- Environmental protection

Vendor selection process

Vendor selection process for a particular product or service category should be defined by a “cross- functional” team of representatives from different sectors of the organization. In a manufacturing company, for example, members of the team typically would include representatives from purchasing, quality, engineering and production. Team members should include personnel with technical / application knowledge of the product or service. A common procedure for a vendor selection cycle is given below.



Fig.4.1.10: Vendor selection process

Identify Suppliers:

- Gather the opinions of stakeholders and define the criteria for the selection process. This list of stakeholders may include members from research and development, purchasing, marketing, quality assurance and any other area of your organization that touches the supplier selection process.

- Identify a few suppliers to assess their capabilities and compare pricing.
- The supplier selection team should work with the potential suppliers to establish specifications. For example, they should explain how the supplier's materials would be used in your products and within the manufacturing process.
- A key criterion in selecting the right supplier is value. Cost should not be the lone driver; you should instead look at the total cost of ownership, which looks at the supplier's, Customer service, Delivery commitments, Reliability and responsiveness and Resource savings.

Measure performance:

- Conduct an audit before signing in the contract to confirm the supplier.
- The audit will help the manufacturer to understand that the supplier does not have any significant compliance or quality system failures that could affect your ability to produce top- quality products. Another reason to conduct the audit beforehand is to understand the supplier's strengths and weaknesses before the relationship becomes official.
- Even after the contract is signed, you should continue auditing, basing the frequency of the audits on the criticality of the supplier. To determine the frequency, all suppliers should be categorized into a level of risk or importance. This prioritization will help you be smarter and more effective with your resources and place a higher focus on your important, high-risk suppliers, while continuing to monitor second-tier suppliers.
- Best-in-class supplier programs conduct audits throughout multiple stages of the manufacturer/supplier relationship.

Supplier feedback:

- The supplier self-assessment can be used to identify performance gaps, as well as discover how the supplier understands their own operation.
- In addition to audits and assessments, it also is beneficial to monitor informative metrics that direct value to the business.
- Examples of these metrics include rejected lots, perfect shipments and documentation errors. The metrics selected should measure the total cost of ownership, as well as improve performance toward the maximum finished product performance.

Certification:

- As supplier relationship grows stronger, and both parties feel they are receiving positive performances, the supplier may be able to achieve a certified status.
- Certification must be obtained with sustained successful performance and can be lost with poor performance or a negative compliance outcome from an audit.
- As the relationship continues to grow, the supplier also will become more integrated into your manufacturing process.

Types of supplier or vendor for apparel industry

- 1. Nominated supplier:** Nominated suppliers are the suppliers who are recommended by the buyers of a particular order. This process was initiated by the buyers to achieve a better control over their product, throughout the supply chain. This process has become more common in recent days. The nominated suppliers are mainly recommended for the products like accessories, fabrics, packaging material and logistics. This improves the consistency in the product quality and on-time deliveries for the buyers irrespective of the manufacturing company. The major reasons behind this process are as follows:

- » The nominated suppliers can supply the high quality raw materials as prescribed by the buyer so that the buyer will not have any quality deviation between different manufacturing firms.
- » The nominated supplier can avoid unnecessary delays in the order processing. Since they are developing raw materials or products for only this particular buyer, they know the importance very well.

Advantages of nominated supplier:

- » Time saving for garment manufacturer because they have to only deal with one supplier to get one or more material.
- » Quality assurance of the raw materials is ensured and taken care by buyer.
- » Nominated supplier can be involved in product development since they are already having good experience in the area.

Along with these advantages, there are certain disadvantages for nominated suppliers:

- » The nominated suppliers may become overconfident about their product quality.
- » There may be a monopoly arising in the market.
- » Nomination may lead to unethical practices like corruption by agents and traders.
- » Loss of price competitiveness as supplier may sometimes overcharge.

- 2. Non-nominated supplier:** Most of the time, the buyer use to send the technical information sheet of a particular order and he/she will ask the manufacturers to source the raw materials, accessories and other materials to develop their product. In this situation, the manufacturers will access different vendors / suppliers who are in their company data base as a regular supplier and they choose the particular one based on their requirements.

Advantages of non-nominated supplier:

- » The non-nominated supplier works hard and tries his best to follow the instructions given by buyer or garment manufacturer due to highly competitive market.
- » Garment exporter may get the chance to explore with the innovative products offer by a non-nominated supplier.
- » The manufactures may also get some potential suppliers who can offer high quality product at low-cost, based on the raw material availability or technology available.

The disadvantages of these suppliers are as follows:

- » There may be flaws in the quality of the raw material due to a communication gap between buyer and supplier.
- » To get involved with these suppliers in product development process is a difficult task.
- » It will be difficult for the buyer to control the areas like social compliance and ethical business practice norms followed by these suppliers.

However, for both type of supplier, lead time generally remains same irrespective of minimum order quantity (MOQ), order quantity and quality parameters of the raw material.

Vendor/supplier evaluation

The basic requirement of vendor / supplier evaluation is to develop an objective way to evaluate vendors for selecting the best within the best. The evaluation process is done to keep in consideration all the relevant factors and select the right vendor / supplier. In this process, all the relevant factors and subjective issues that can influence selection are considered. The supplier evaluation is based on his / her performance in the areas of

quality, quantity, delivery time adherence, pricing and service. The performance in the above said areas is based on many factors like company policy, business strategy and competitiveness.

The important criteria for vendor evaluation are given below:

- **Pricing factors:** The various pricing factors are price stability, accuracy in pricing, competitive pricing, price change notification in advance, price sensitivity and billing.
- **Quality factors:** The quality factors to be considered are purchase order compliance, conformity to specifications, reliability, long life, service, after sales support, latest technology usage.
- **Delivery factors:** The delivery factors to be considered are time, quantity, lead time, packing and documentation.
- **Service factors:** Service is a very important factor that influences vendor evaluation and selection. Poor service will lead to avoidance of a particular vendor. The vendor should always have a win-win approach towards the customer and ensure that the customer gets the best product at the lowest possible price. He / she should adopt professional approach with more courteousness and should be ready to handle customer issues and complaints. The vendor should have technical competence and should be well equipped to solve customer's technical issues with the product or service. There should be an immediate response to any issue that arises from the customer related to a product or service. The supplier should also provide emergency support for the customers.

Vendor evaluation methods: Supplier evaluation is a term used in business and refers to the process of evaluating and approving potential suppliers by quantitative assessment. The purpose of supplier evaluation is to ensure a portfolio of best in class supplier is available for use. There are several techniques that are used by companies to evaluate suppliers and measure performance. The first step in implementing any of the techniques being discussed is to determine the attributes that should be considered. A firm should focus on the attributes that it finds most important. Some attributes are easy to measure while others are not. Some models are proficient in considering total costs, but they are usually very difficult to implement and time-consuming. Thus, the resources available to the firm's purchasing function will drive the firm's model choice. The three most common approaches are:

1. The categorical system
2. Weighted-point average system
3. The cost-based system

The categorical system is the most subjective technique since it does not differentiate between the weights of the attributes considered. The weighted- point average system overcomes this drawback by assigning weights to each attribute. The cost-based system is the most objective of the three methods because it also considers non-performance costs.

Supplier evaluation methods are usually a time consuming activity, so they are not performed frequently. In real time situation, many companies do the evaluation on a monthly or quarterly basis. Some companies evaluate suppliers only once in a year. These assessments, however, are mutually beneficial only if both parties are willing to cooperate and provide the necessary inputs.

Supplier measurement systems are most commonly used for the following purposes:

- Track performance of supplier
- Identify supplier improvement opportunities
- Develop supplier
- Benchmark suppliers against best practices.

Benefits of vendor management: The benefits of building effective and lasting vendor relationships are uncountable. Vendors or suppliers of your business's goods and services are some of your important business partners and as such, a concerted effort must be made towards creating an effective vendor management system, capable of maximizing the business and vendors relationship that exists.

Vendor management is vital for the economic well-being of the company. An effective vendor management structure must be established in the company in order to streamline activities. Besides, fabric received in the factory should be tracked vendor-wise. Vendor-wise tracking enables the management to tab the vendors giving less fabric and make informed decisions for the future. The most common benefits expected from a third party vendor are:

- Reduction in cost
- Quality / performance improvement
- More flexibility
- Quicker turnaround times and delivery
- Easy access to external expertise
- Aiding easier and increased availability of services
- 10-20% reduction in contingent labor spend

What are and How to Conduct Vendor Ratings?

Vendor ratings are an ongoing activity by companies and are a process of measuring the capabilities and performance of a vendor. These ratings are part of the company's vendor management program. Vendor ratings are calculated from weighted variables, the most common being:

- **The quality of the service:** This would cover such factors as customer service, billing accuracy, quality of the service or products provided.
- **Prices and cost of using the service:** All companies require competitive pricing that remains fairly stable so that they can forecast their future costs.
- **Adherence to delivery schedules:** This includes promptness, quantity, lead time, packaging and the ability to provide ad hoc deliveries.
- **Capability of the business:** This includes problem resolution, technical support and overall service provided.

The final scores are compared and a final supplier ranking produced. Low ranking and performing suppliers can then be identified and the appropriate action taken. This form of vendor ratings provide a process to review and rank a great number of vendors that they do or wish to undertake business with. Below are the benefit:

- It provides a comprehensive feedback process that can be communicated to both staff and vendors.
- It is an effective method of controlling a business's vendors.
- It is a good measure of vendor improvements or lack of performance.
- Good vendors often publish ratings that have been scored by major companies.

Large retail companies such as Amazon and eBay also provide facilities for consumers to mark each of their sellers and provide feedback for other potential purchasers to read. These ratings have become an important part of the host company's business model and the comments are sought after by potential customers.

Leading provider of research and analysis on the global information industry, holds a well-documented vendor ratings process that is hotly followed by large companies looking to contract new suppliers and review their existing vendor base. Gartner publish their vendor ratings criteria and award one of the following ratings:

- **Strong Positive:** The vendor is considered a strong strategic choice.
- **Positive:** The vendor should be short listed.
- **Promising:** The vendor shows potential in specific areas.
- **Caution:** The vendor faces challenges in some areas.
- **Strong Negative:** The vendor faces difficulties in multiple areas.

Resources

Scan the QR code or click the link to access the videos or e-book.

Description	QR Code
Maintenance Record Keeping	 https://youtu.be/_ASmUn2_kLM
Data Collection	 https://youtu.be/caUiRsg5M6k
Production Reports for a Garment Factory	 https://youtu.be/1n11f12GzbM
Quality Documentation Hierarchy	 https://youtu.be/z23iVctxVb0

Exercise

1. What is the purpose of record keeping?
 - a) Reducing lost and misfiled documents
 - b) Providing faster search and retrieval of documents
 - c) Helping to better organize existing documents
 - d) All of the above
2. Data can be classified on basis of _____?
 - a) Quality
 - b) Quantity
 - c) Both (a) and (b)
 - d) None of the above
3. Why data collection is important?
 - a) Data collection aids in the search for answers and resolution
 - b) Data collection facilitates in decision-making processes.
 - c) Data collection improves quality of expected results or output
 - d) All of the above
4. What are the various methods of Data Collection?
 - a) Face to Face Interview
 - b) Questionnaire
 - c) Web based research
 - d) All of the above
5. To meet basic legal requirements, you must keep record of _____
 - a) Stock in Hand
 - b) Debtor and Creditor
 - c) Issue and Receipt
 - d) All of the above
6. Supplier should be identified on the basis of _____
 - a) Total cost of ownership
 - b) Customer service
 - c) Delivery commitments
 - d) All of the above



5. Maintain Health, Safety and Security in the Store and Gender & PwD Sensitization



Unit 5.1 – Maintain Health, Safety and Security at Work Place

Unit 5.2 – First Aid & CPR

Unit 5.3 – Sensitivity towards People with disability and Gender Equality



AMH/N0504

Key Learning Outcomes

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

1. Comply with health and safety related instructions applicable to the workplace.
2. Use and maintain personal protective equipment as per protocol.
3. Maintain a healthy lifestyle and guard against dependency on intoxicants.
4. Follow environment management system related procedures.
5. Identify and correct (if possible) malfunctions in machinery and equipment.
6. Report any service malfunctions that can not be rectified.
7. Store materials and equipment in line with manufacturer's and organizational requirements.
8. Safely handle and move waste and debris.
9. Minimize health and safety risks to self and others due to own actions.
10. Seek clarifications, from supervisors or other authorized personnel in case of perceived risks.
11. Monitor the workplace and work processes for potential risks and threats.
12. Carryout periodic walk-through to keep work area free from hazards and obstructions, if assigned.
13. Report hazards and potential risks/threats to supervisors or other authorized personnel.
14. Participate in mock drills/ evacuation procedures organized at the workplace.
15. Undertake first aid, fire-fighting and emergency response training, if asked to do so.
16. Take action based on instructions in the event of fire.
17. Follow organization procedures.
18. Analyze the First Aid & CPR.
19. Follow Covid Protocol.

UNIT 5.1: Maintain Health, Safety, and Security at Work Place

Unit Objectives

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

1. Identify methods to be vigilant for potential risks and threats associated with the workplace.
2. Handle tools and equipment in work area.
3. Check the workplace and work processes for risks like fire, electric shocks, etc.
4. Demonstrate the use of personal protective equipment.
5. Analyze sanitary facility in work place.
6. Analyze the work related facilities and benefits.
7. Explain about safety sign in working area.
8. Follow Covid Protocol.

5.1.1 Introduction

Features in garment industry that could be improved to prevent injuries include; communication, involvement of employees in decision making, education and training of employees and management on prevention strategies, and the ergonomic conditions at the plant.

The clothing industry is generally seen as a safe place to work, and when compared to other industries, there are relatively few serious accidents in clothing plants. The hazards we face are different. The major health risks in this industry do not arise from immediate, potentially fatal hazards. Instead, the risks that clothing workers face come from more subtle hazards whose effect accumulates over time.

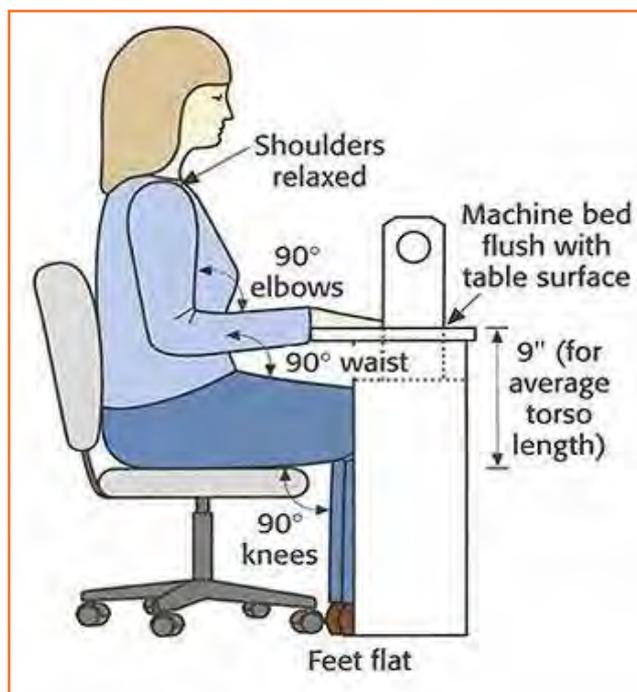


Fig.5.1.1: Body Posture

Store Keeper faces a much higher risk of muscle injury and pain than those working in other sectors. The frequency of neck and shoulder injuries is shown to increase largely for employees with their increasing years of employment. As a result, long term health is affected as well.

Because of poor workstation design and chairs, and organizational factors have heightened this risk. Therefore, factors like posture, repetition and force have had increasingly adverse effects on the workforce in this industry.



Fig.5.1.2: Body Posture

Apart from workstation based injuries, it also the neglect of safety protocols and empowerment of workforce that causes this hike in injuries. Following good housekeeping and ensuring an active role of the top management and a special regard for the greater seniority of the of the workforce can be good preventative measures

In India, the readymade garment industry had its beginning during the first half of the 20 th century and has witnessed impressive growth during the last four decades. It is reported to be the second highest contributor to India's export basket, after gems and jewellery. There are around 70,000 garment manufacturing units in the country providing employment to more than 3 million persons.

5.1.2 The 'Ergonomics'

Ergonomically-designed job ensures that an employee who is tall is given a comfortable space in or near his/her workspace so that the work efficiency is not hindered. Similarly, an employee who is shorter is able to reach all of his or her tools and products without upsetting comfort and safe assortment.

Workers are usually compelled to work in the confinement of the job or workstation that previously was designed with no dynamism or change when they are hired. This leads the workforce to work in difficult postures and positions, all of which may result in work-related injuries/disorders.

The work-place related injuries often start as minor aches and pains but can develop into incapacitating injuries that affect everyday activities. Ergonomics aims at preventing injuries by monitoring the risk factors such as force, repetition, posture and vibration that can cause injuries to develop.

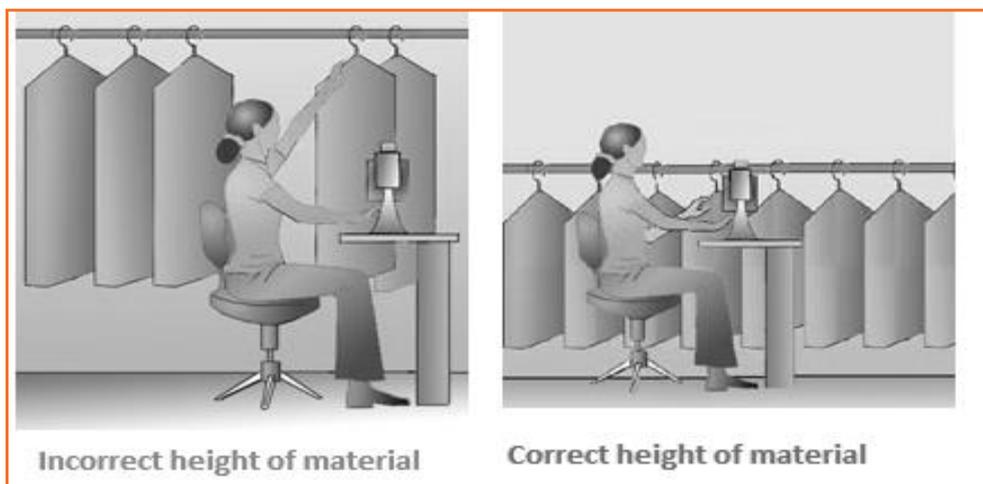


Fig.5.1.3: Situating the material

Injuries and illnesses among textile and apparel workers

- 81% complained CTDs to the wrist.
- 49% of workers is suffering from neck pains.
- 35% report obstinate lower back pain.
- 25% have suffered a compensable increasing trauma disorder.
- 14% reported CTDs to the elbow.
- 5% reported CTDs to the shoulder.
- Absenteeism increases as working conditions worsens.
- High employee turnover is associated with detrimental working conditions.
- Embroidery tasks are associated with pain in the shoulders, wrists, and hands.
- Ironing by hand is associated with elbow pain.
- Fitting fabric in frames like of work, are associated with CTDs of the hands and wrists.

Some fundamental ergonomic principals that should be followed in our workplaces are:

- **Proper tools:** Tools and equipment provided at work place should be appropriate for the specific tasks being performed. The apparatus should allow the workers to keep their hands and wrists straight – the position they would be in if they were droopy relaxed at your side. The workers should bend the tool– not the wrist. The tool should fit easily into the hand. If the grip size is too large or too small, it will be uncomfortable and will increase the risk of injury. Tools should not have sharp edges.
- **Keep repetitive motions to a minimum:** Workstations can be restructured to avoid the number of health hazards which chances due to repetitive motions that must be performed. Using a power-driven screwdriver or tools with a notch device can decrease the number of twisting motions with the arm. Work stations should have enough space for the given tasks and provide proper chairs. For deterrence of ergonomic injuries, the labour force should be encouraged to change work and take frequent but short breaks. Some tasks can be mechanical or reformatted to eliminate musculoskeletal injuries. Manufacturing tools and equipment should integrated ergonomic design codes and should not require an extreme amount of force to operate.
- **Avoid awkward postures:** The industry is such that the workforce’s job should not require you to work with your hands above shoulder height on a regular basis. Arms should be closer to the body and not raised too high. Bending of their wrists, back and neck should be avoided.
- **Use safe lifting procedures:** The employee should avoid lifting objects that are too heavy. Use more than one person or a mechanical device to reduce the load. The workstation should not require lifting objects above the head or twisting his/her back while lifting. One must keep the load close to his body. Heavy and often lifted objects should be kept between knee and shoulder height and not on the floor or above the head level.
- **Get proper rest:** It is imperative to take frequent breaks to rejuvenate the body and mind so that they don’t get injured. The workforce should be groomed to understand that they should take a break from the work not just mentally but physically too. If a person has errand which doesn’t allow him to sit, he must take intervals from his work to relax his leg muscles. If he is doing a sitting job, he must go for a walk whenever his work permits.



Fig.5.1.4: Cleaning the Tools

For example, if you stand all day, while performing your job you should sit down to rest your legs and feet during your breaks. If you sit down, when working you should stand up and walk around during your breaks to give your back a rest and to increase circulation in your legs. By doing this the musculoskeletal injuries can be prevented.

- **Other things to consider:** Chemicals also have a part in garment manufacturing. Dyes, enzymes, solvents and other chemicals are used to create different fabric finishes and provide durability to the product. Proper ventilation and personal protective equipment are important for protection of workers engaged in chemical processing. Similarly, for workers who handle the finished material and may be exposed to excess chemicals and off-gassing, protective equipment should be used.

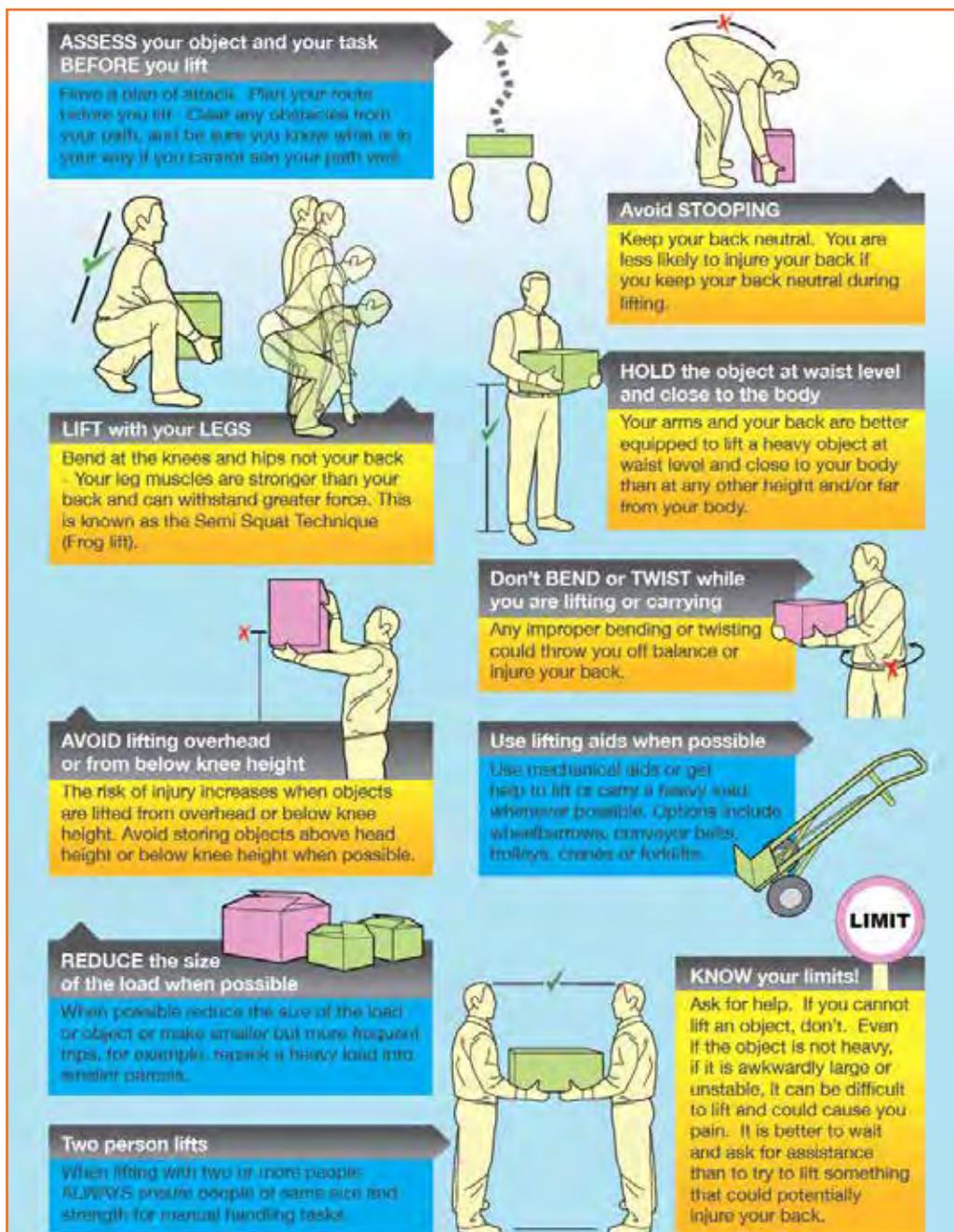


Fig.5.1.5: Do's and Don'ts in material handling

5.1.3 Environmental Control Measures

Hazardous substances in one form or another can be found in almost all small and medium-sized enterprises. The garments industry generates a lot of dust from fabrics being cut and sewn. Some fabrics release chemicals which saturate the air causing difficulties in breathing and eye irritation. Solvents used for cleaning fabrics and garments may cause fatigue, headache and dizziness. Dust and solvents, when breathed, can lead to lung diseases and are very dangerous. Not only will this affect the well-being of your workers, it will also result in a reduction of productivity and product quality, increased absenteeism and turnover of staff. High levels of dust interfere with efficient production and require cleaning operations that may spoil materials and finished products. Improved conditions usually mean increased output, higher productivity and quality. There are simple and inexpensive ways to control most of the environmental problems. Improvements often result in cost savings, productivity benefits and increased safety of workers. The following rules provide a series of low-cost measures for sound environmental control.

5.1.3.1 Clean Regularly and Properly - Don't Spread Dust

Dust originates from fabrics and threads, from cutting and sewing to packing operations. Thus, it is very common to see small clothing enterprises with ceilings and walls full of dusty cobwebs. Even machines which are not regularly cleaned could be full of dust which may cause them to break down.

Dust increases wear and tear on machinery, necessitating more maintenance. It also negatively affects the quality of raw materials and finished products. Dust entering the respiratory system can damage the worker's lungs. Some dust can also cause allergies. Dust should be removed regularly and eliminated from the source. More comprehensive cleaning should be carried out as often as necessary. This cleaning should also include walls, ceilings, storage racks and other areas where dust accumulates. Dust on windows, walls and lamps will significantly reduce the lighting in the workplace.



Fig.5.1.6: Cleaning the Shop Floor

One low-cost cleaning method is sweeping the floor carefully with an appropriate broom and accompanying dust pan to prevent dust from spreading. Spraying water on the floor before sweeping will avoid dust remaining airborne. When dust is moistened it can be easily removed with a broom. More effective methods of controlling dust include using a vacuum cleaner or a wet mop.

5.1.4 Make Local Ventilation Cost-effective

Local ventilation should only be considered as a means of reducing chemical hazards when other means have failed. There are cost-effective ways of improving ventilation.

Use proper fans

Apart from those used for ventilating workstations, fans may be utilized to remove dangerous substances from the workplace. Contaminated air can be pushed or blown outside by having more open windows. A few points should be considered:

- There should be no obstacles between the fan and opening. Anything in the way significantly reduces the desired effect.
- The air speed should be low to reduce turbulence. In the garment industry, different fans are used; some use industrial fans or wall fans as shown in Fig. There are advantages and disadvantages for these types of fans. Industrial fans are so powerful that workers near them may be affected. Ceiling fans of the rotary type may lift the cloth being sewn, hence speed should be controlled.
- Contaminated air should not be blown in the direction of other workers on the way to the opening.



Fig.5.1.7: Using Fans

- Care should be taken that air expelled from the workplace does not affect people outside the enterprise.
- A fan may not be sufficient to remove vapours from hazardous fumes such as those sometimes used in silkscreen printing. Extractor systems to remove dust and hazardous chemicals should be installed. These systems may be quite expensive and it may be more economical to replace the hazardous chemicals.

5.1.5 Good Lighting for Quality Products

Good lighting does not mean more light bulbs and more use of electricity. Natural lighting is usually a better option than the bulbs. But if there is a difficulty in arranging for a natural lighting through windows and ventilators, its important that the bulbs and other elements of artificial lights should be well-maintained. A good lighting arrangement is directly proportionate to an efficient workforce.

80% of the absorption of information from our surroundings are from our eye as a sense organ. Bad lighting means wrong or lesser absorption of information, leading to lower productivity. Eye strain in low light can lead to head ache and again decreases the productivity level of the worker.

It is imperative to understand the ways in which we can arrange for a good lighting without increasing the electricity bills. First of all one has to identify if at all you need to work upon the existing brightness level in the work place. Lighting requirements are reliant on three main features:

- The environment of the working area
- The nature of the task
- The sharpness of the worker's eyesight

A sewer needs focused light at needle point, so needle lights should always be fitted. A worker packing garments requires more largely lighting. In many situations, packers work on special tiered work tops, where lights are built into the station. The age group of the workforce is also important factor to determine this. Which means, an older worker may need twice as much light as a younger one. Another way to identify the gap, in lighting problem is going around the workplace, observing the workers and asking them about their visual problems. The plan of improvements may not have much impact if the workers' eyesight is insufficient. An eyesight test for all employees should be carried out. Even if some workers do not follow advice about obtaining glasses. One will be aware of the problem and a possible reason for low efficiency and decreased productivity.

5.1.5.1 Use of Daylight

It is very unfortunate that many corporations undermine the fact that natural light is the best and the cheapest source of illumination. One had to gauge the surface area of the work area and measure the windows and skylights. Ideally the open space that includes the windows, ventilation windows and door should be one-third of the total area of work.

However a determinant of choosing the natural light is the heat that is emitted in the work place.



Fig.5.1.8: Use of daylight

If there is too many machinery omitting heat, it isn't a great idea to allow the natural heat to come in and add up to the temperature.

The higher the window, the more light is in. Skylights can double the light of a low light but if made in a lower level, it faces obstacles and is blocked by the machineries and storage containers. If the factory doesn't have a skylight, one must consider to replace the opaque roofs with translucent or transparent plastic rooftops.

It is important to paint the walls in lighter shades which not just give a sense of space to a room, but the workstation would look illuminated. It enhances the visual conditions and a pleasant cheerful environment is encouraged.

The matt finish of whitewash is a great idea. Many enterprises are implementing white tile ceilings. To avoid harmful glare, one should avoid gloss paint for walls. Pale colours are better than white. A slightly dimmer colour below eye level is accommodating. But one should maintain cleanliness, since lack of regular cleaning can result in the loss of at least 10 to 20 per cent of light. Special care should be taken to clean skylights, which are sometimes difficult to reach.

These colours are much better than the black formerly used for the bodies or chrome finish for the Figs, which reflect more glare. An unsatisfactory circulation of natural light over the work area, particularly in embroidery rooms, is a problem. Considering the fact, one must change the layout of benches and machines in order to minimize shadow zones. Workstations with high lighting requirements should be moved closer to the windows and possibly be assembled together for the provision of additional lighting. However, if the workstation layout

responds well to your production needs, you may instead reorganize the delivery and height of the lamps or add needle lights which are good options.



Fig.5.1.9: Sunlight in the Shop Floor

5.1.6 Reporting an Accident and an Incident

Your responsibility requires you to be aware of potential hazards and correct reporting processes. If you notice a potentially hazardous situation, eg: a client expressing violent behavior, it is important that you report it immediately to management and fill out the appropriate forms as legally required of you.

If you are injured at work you must:

- Report the injury to management as soon as possible, and certainly within 24hours.
- Seek proper treatment for your injury.

5.1.6.1 Accidents

Always work in a safe manner to prevent accidents from occurring in the first place. Make sure that you have been given adequate information and on-the-job training about the first aid facilities and services available in your workplace, including:

- Where to find first aid kits.
- Location of first aid rooms.
- Complete, up-to-date contact details of trained first aid officers in the workplace procedures for critical accidents – such as who should be responsible for calling.
- The ambulance/doctor/nurse and what is the best method of contact, measures for evacuation of the injured person/s.
- Emergency procedure for the elimination of life-threatening chemicals commonly used in the workplace.
- Universal precautions for the control of infection.
- Who to contact for debriefing/psychological support.

Reporting of incidents and accidents is required under the Work Health and Safety (WHS) legislation. Workplaces tend to have well developed reporting procedures in place, which aim to fully understand the accident/incident and prevent any future occurrences through investment in injury prevention, based upon accurate data. Reporting and recording should also facilitate costing and associated financial loss.

Always report an accident to management immediately. There should be a form at each workplace that you (or the person involved) and any witnesses can fill out, where possible, otherwise. The form should cover the following areas:

- **Description of the occurrence:** What was the event that occurred, which required this report to be completed?
- **Nature of injury or disease:** Select the most appropriate description from a range of options. What injury or disease happened as a result of the occurrence?
- **First aid, medical treatment or hospital admission:** This section asks for a description of what was done to treat the injury or disease.
- **Part of the body affected:** Tick off which part or parts of the body were affected as a result of the occurrence.
- **Source of injury:** What actually caused the person to be injured or acquire a disease? This could be a piece of machinery or other hazardous materials for example.
- **Probable cause or causes of injury:** How was the source listed above actually responsible for the injury?
- **Investigation:** This asks a series of questions that seek to find out why the person has been injured or has acquired a disease.
- **Notification checklist:** This checklist makes sure that everyone who should have been contacted regarding the matter has been contacted and asks whether appropriate action has been taken by the authorities.
- **Preventative action:** This asks whether or not any action has been taken to prevent the occurrence from happening again.
- **Witness details:** This part is to be filled out if someone saw the occurrence happen. It is essential if any sort of legal action is to be taken.

5.1.7 Mock Drills/ Evacuations

Fire safety and evacuation plans sketch staff duties and accountabilities in time of emergency. Continuing training is required to help safeguard that the employees are conscious of those duties and responsibilities. Fire fighting trainings serve as an prospect for staff members to validate, under replicated fire conditions, that they can perform those duties and responsibilities safely and efficiently. It's also a time for them to demonstration that they are aware of defend-in-place strategies and can take advantage of your facility's fire protection features and exit facilities to protect the people in their care.

Fire drills are excellent exercise designed to evaluate staff response to a replicated emergency. They are also a test of your facility's fire safety/evacuation strategies and staff training programs. It is not essential that all fire drills run smoothly. That's okay, so long as staff and the organization learns from them and correct mistakes made. It's vital, therefore, that there be a analysis of each drill so that any problems met can be addressed. Perhaps the problems are due to unfinished or outdated fire safety/emigration plans. Perhaps there's a need for additional staff training.

The two essential components of a fire preparedness plan are the following:

1. An emergency action plan, which details what to do when a fire occurs.
2. A fire prevention plan, which describes what to do to prevent a fire from occurring.



Fig.5.1.10: Fire Safety

5.1.8 Low-cost Work-related Welfare Facilities and Benefits

Work-related welfare conveniences and facilities are never given heed to. Who cares about toilets, first-aid kits, lunch rooms or lockers? What do they have to do with the hard authenticities of production? One answer is that workforces care. During each working day, workers need to drink water or some other beverage, eat meals and snacks, wash their hands, visit a lavatory, and rest to recover from fatigue. This can be difficult or easy, unpleasant or comfortable, a health risk or an aid to hygiene and nutrition. The essential facilities in the factory show if you care about employees more or the machines.

Another good reason is that extra efforts for better facilities are often appreciated far beyond the time and money capitalized, Work-related facilities benefit workers to overcome problems which are important to them. Let workers express their priorities for improvements and give their feedback. You may be surprised at the results. Giving a hygienic and wel-maintained workplace is indirectly showing yur employees how much you care for them.

A small enterprise can be a community where workers are loyal, with good industrial relations and high morale, It can also be a place where workers look for the first chance to leave and care little about the owner's success. Which kind of initiative do you want? The series of low-cost facilities that trails will help to retain the best staffs.

5.1.8.1 Essential Facilities

Drinking water

Drinking water is indispensable for all workers; if this is not provided, they become thirsty and gradually dehydrated. This greatly increases fatigue and lowers productivity, especially in a hot environment. Place water vessels near each group of workers, or provide taps or cascades with clean water in a central place. This will minimize the time lost in going to get a drink. However, drinking water should not be placed in washrooms or toilets, near dangerous machines or other hazards, nor in places where it can be contaminated by dust, chemicals or other substances.

If there is any doubt about contamination, water must be thoroughly boiled or properly filtered or treated. Unhealthy water will lead to illness and therefore absenteeism from work. Before starting to use a new water source for drinking purposes, it is advisable to have it tested to make sure it conforms to the national standard for drinking water. The design, construction and operation of deep wells for the extraction of ground water should be subjected to the provisions of existing water codes. Piped water should only be used when a hygienic water supply is guaranteed. A clear distinction between potable and non-potable water taps should be made and a "Safe Drinking Water" sign should be put up near to each tap.

Drinking water vessels should be made from materials that can easily be cleaned, Even if the vessels are filled with fresh water, the water inside, if kept for even a short time, can become unhygienic. It should therefore be different frequently. It is also imperative to make sure that drinking water is cool. If a water cooler is too luxurious, the water vessels can be placed in the coolest place in the factory. It will facilitate the water to remain cool throughout the day. They should not be left uncovered, under the sun or in a hot place. Drinking fountains for production areas are very advantageous from a hygienic point of view. They can be fitted with a jet or bubbler outlet and/or goose-neck or other outlet for filling drinking cups. The fountain should be free from sharp angles and designed to prevent unnecessary splashing. Water outlets should be above the rim of overflow level so that they will not be contaminated with waste water. The water outlet should be shielded to prevent the lips of a drinker from being placed on it. Drinking water containers should be attended by a designated person. Containers should be made of impermeable materials. A cooling device would be an advantage. (Unglazed pottery can be used, due to its unique cooling effect, in dust-free places.) Containers should be provided with suitable covers, and kept in a cool place protected from the sun. The water must be changed frequently.

To avoid the possible spread of infection, it is better to use throwaway cups or to provide separate cups for each worker and to arrange for regular washing. When containers are used, it is important to clean them regularly. Cleaning and other necessary conservation tasks should be assigned to a specific person. In addition, the provision of a competence for boiling water will enable people to make coffee or other hot beverage during breaks. Hot water is required if the enterprise has a childcare facility.

5.1.8.2 Sanitary Facilities

There are several reasons why the provision of washing facilities is important:

- Dirt and grime can be ingested and cause sickness or disease; they are, in any case, unpleasant and demoralizing.
- Washing is a necessity when women have their monthly periods.
- Washing is required for basic hygiene after using the toilet.
- Apart from the obvious basic need, sanitary facilities are required by law. Clienteles often create an impression of an enterprise through the quality of its sanitary facilities.

- There should be a sufficient number of hygienic facilities on the work locations and each should be conveniently located to avoid long walks, waiting and hindrance. The law of the country must be monitored, but the following are the minimum requirements:
- One restroom is required for up to five men; two toilets for six to 40 men.
- One separate restroom for up to five women and two toilets for six to 30 women.
- One wash-basin for every 15 workers.



Fig.5.1.11: Signages

Ideally, there would be a separate toilet for men and women. These should be characterized as follows:

- The toilet bowl must be free from stain or odour and function properly.
- The walls of the toilet must be clean and tiles unstained.
- The ceiling of the toilet must be free from cobwebs and dust.
- Floors must be clean and safe (no broken tiles, nor slippery surface).
- Proper illumination must be provided inside the toilet.
- Toilets must have a continuous supply of water; in case water is limited in the area, water should be stocked in containers and refilled regularly.
- Mirrors and rubbish bins should be provided in the washroom.
- Soap and toilet paper should be provided.
- The washroom should provide complete privacy to users and should be fully ventilated.

5.1.9 Be Ready for Emergencies

Misfortunes can happen even if proper defensive measures are installed. So, always be prepared for emergencies and have readiness for disaster management, like cuts and bruises, eye injuries, burns, poisoning and electric shocks. Every enterprise should maintain a well-stocked first-aid box and assign at least one person from every shift to handle emergencies. First-aid boxes should be clearly marked and situated in a place, so that they are readily reachable in an emergency. They should not be more than 100 metres away from any place on the work site. Ideally, such kits should be near a wash-basin and in good lighting conditions. Their supplies need to be regularly checked and replenished. The contents of a first-aid box are often regulated by law, with variations according to the size and the likely industrial hazards of the enterprise. A typical basic kit may include the following items in a dustproof and waterproof box:

- Sterile bandages, pressure bandages, dressings (gauze pads) and slings. These should be individually wrapped and placed in a dustproof box or bag. Adequate quantities of the different sizes should be available at all times to treat small cuts and burns.
- Cotton wool for cleaning wounds.



Fig.5.1.12: First Aid

Ideally, there would be a separate toilet for men and women. These should be characterized as follows:

- The toilet bowl must be free from stain or odour and utility properly.
- The walls of the toilet must be clean and tiles unstained.
- The ceiling of the toilet must be free from torpors and dust.
- Floors must be clean and safe (no broken tiles, nor slippery surface).
- Proper illumination must be provided inside the restroom.
- Lavatories must have a continuous supply of water; in case water is limited in the area, water should be stocked in containers and refilled regularly.
- Mirrors and rubbish bins should be provided in the washroom.
- Soap and toilet paper should be provided.
- The washroom should give complete privacy to users and should be fully aired.

5.1.10 Safety Signs at Workplace

Safety Signs: Sign providing information or instruction about safety or health at work by means of a signboard, a colour, an illuminated sign or acoustic signal, a verbal communication or hand signal.

Signboard: A sign which provides information or instructions by a combination of shape, colour and a symbol or pictogram which is rendered visible by lighting of sufficient intensity. In practice, many signboards may be accompanied by supplementary text, eg 'Fire exit', alongside the symbol of a moving person. Signboards can be of the following four types:

1. **Prohibition sign:** A sign prohibiting behaviour likely to increase or cause danger (eg 'no access for unauthorised persons').



Fig.5.1.13: Prohibition sign

2. **Warning sign:** A sign giving warning of a hazard or danger (eg 'danger: electricity').



Fig.5.1.14: Warning sign

3. Mandatory sign: A sign prescribing specific behaviour (eg 'eye protection must be worn').



Fig.5.1.15: Mandatory sign

4. Emergency escape, Fire and First-aid signs: A sign giving information on emergency exits, first aid, or rescue facilities (eg 'emergency exit/escape route').

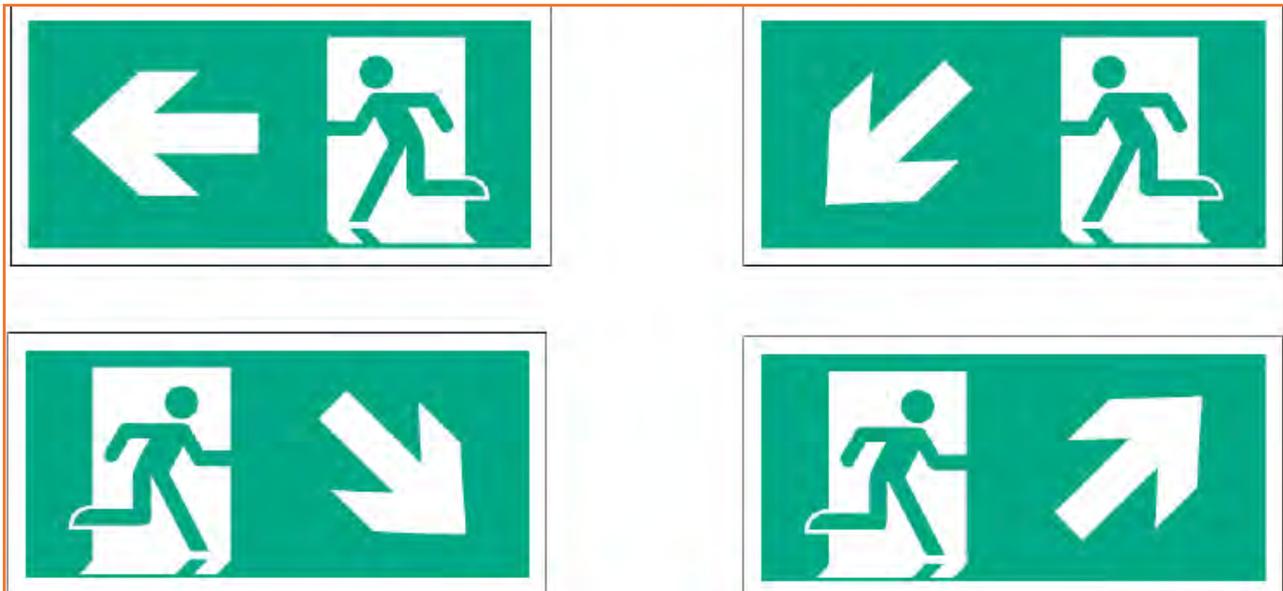


Fig.5.1.16: Emergency escape

Signs for emergency exits

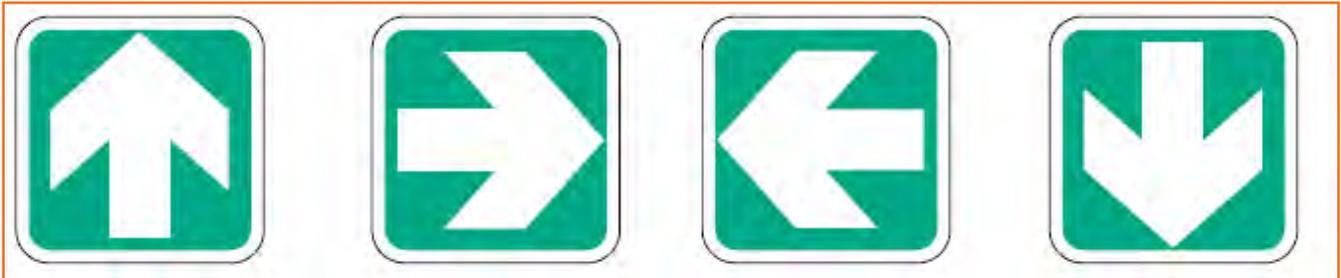


Fig.5.1.17: Signs for emergency exits

Signs for Fire and First Aid



Fig.5.1.18: Signs for Fire

5.1.11 Prevention and Management of Corona Virus

As we all know a new respiratory disease called COVID-19 is spreading across the world. India has also reported cases from states and the government is trying to contain the spread of the disease. We can play a major role in preventing its spread by follow Covid safety guidelines.

COVID-19 is a disease caused by the “novel corona virus”. Common symptoms are Fever, Dry cough, Breathing difficulty, Some patients also have aches and pains, nasal congestion, runny nose, sore throat or diarrhea



Fig.5.1.19: Prevention from COVID-19

COVID-19 spreads mainly by droplets produced as a result of coughing or sneezing of a COVID-19 infected person. To protect yourself from Covid-19, follow below guidelines.

- Maintain a safe distance from others (at least 1 metre), even if they don't appear to be sick.
- Wear a mask in public, especially indoors or when physical distancing is not possible.
- Choose open, well-ventilated spaces over closed ones. Open a window if indoors.
- Clean your hands often. Use soap and water, or an alcohol-based hand rub.
- Get vaccinated when it's your turn. Follow local guidance about vaccination.
- Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze.
- Stay home if you feel unwell.
- If you have a fever, cough and difficulty breathing, seek medical attention. Call in advance so your healthcare provider can direct you to the right health facility.

This protects you, and prevents the spread of viruses and other infections.

Exercise

1. While working at workplace, your waist should be at:
 - a) 30°
 - b) 60°
 - c) 90°
 - d) 120°
1. We receive _____ per cent of all information through our eyes.
 - a) 75%
 - b) 60%
 - c) 70%
 - d) 80%
2. In case of fire do not use _____.
 - a) Lift
 - b) Stairs
 - c) Ladder
 - d) Window
3. The factors that lead to reduction in injury rates include:
 - a) Empowering workforce
 - b) Following safety protocol
 - c) Good housekeeping practices
 - d) Support from top management
 - e) All of the above
4. Lighting requirements are reliant on:
 - a) The environment of the working area
 - b) The nature of the task
 - c) The sharpness of the worker's eyesight
 - d) All of the above

UNIT 5.2: First Aid & CPR

Unit Objectives

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

1. Apply first aid on an injured person.
2. Interpret the procedure of CPR.

5.2.1 First Aid

First aid is the assistance given to any person suffering a sudden illness or injury, with care provided to preserve life, prevent the condition from worsening, and/or promote recovery. It includes initial intervention in a serious condition prior to professional medical help being available, such as performing CPR while awaiting an ambulance, as well as the complete treatment of minor conditions, such as applying a plaster to a cut. First aid is generally performed by the layperson, with many people trained in providing basic levels of first aid, and others willing to do so from acquired knowledge. Mental health first aid is an extension of the concept of first aid to cover mental health.



Fig.5.2.1: First aid Pyramid

There are many situations which may require first aid, and many countries have legislation, regulation, or guidance which specifies a minimum level of first aid provision in certain circumstances. This can include specific training or equipment to be available in the workplace (such as an Automated External Defibrillator), the provision of specialist first aid cover at public gatherings, or mandatory first aid training within schools. First aid, however, does not necessarily require any particular equipment or prior knowledge, and can involve improvisation with materials available at the time, often by untrained persons.

Vital Signs	Good	Poor
Heart Rate	60-100 beats per minute	Less than 60 or greater than 100 beats per minute
Respirations	14-16 breaths per minute	Less than 14 breaths per minute
Skin	Warm, pink and dry	Cool, pale and moist
Consciousness	Alert and orientated	Drowsy or unconscious

Fig.5.2.2: Vital Signs

Awareness	Assessment	Action	Aftercare
<ul style="list-style-type: none"> Observe Stop to Help 	<ul style="list-style-type: none"> Assess what is required to be done Ask yourself, 'Can I do it?' 	<ul style="list-style-type: none"> Do what you can Call for expert medical help Take care of your and the bystander's safety 	<ul style="list-style-type: none"> Once you have assisted the victim, stay with him/her till expert care arrives

Fig.5.2.3: Four A's of First Aid

While delivering First Aid always remember:

- Prevent deterioration.
- Act swiftly, deliberately and confidently.
- Golden Hour – First 60 minutes following an accident.
- Platinum Period – First 15 minutes following an accident.
- Prevent shock and choking.
- Stop bleeding.
- Loosen victim's clothes.
- Regulate respiratory system.
- Avoid crowding/over-crowding.
- Arrange to take victim to safe place/hospital.
- Attend to emergencies first with ease and without fear.
- Do not overdo. Remember that the person giving first aid is not a doctor.

Injury	Symptom	Do's	Don'ts
Fracture	<ul style="list-style-type: none"> Pain Swelling Visible bone 	<ul style="list-style-type: none"> Immobilise the affected part Stabilise the affected part Use a cloth as a sling Use board as a sling Carefully Transfer the victim on a stretcher 	<ul style="list-style-type: none"> Do not move the affected part Do not wash or probe the injured area
Burns (see Degrees of Burn table)	<ul style="list-style-type: none"> Redness of skin Blistered skin Injury marks Headache/seizures 	<ul style="list-style-type: none"> In case of electrical burn, cut-off the power supply In case of fire, put out fire with blanket/coat Use water to douse the flames Remove any jewellery from the affected area Wash the burn with water 	<ul style="list-style-type: none"> Do not pull off any clothing stuck to the burnt skin Do not place ice on the burn Do not use cotton to cover the burn

Bleeding	<ul style="list-style-type: none"> • Bruises • Visible blood loss from body • Coughing blood • Wound/Injury marks • Unconsciousness due to blood loss • Dizziness • Pale skin 	<ul style="list-style-type: none"> • Check victim's breathing • Elevate the wound above heart level • Apply direct pressure to the wound with a clean cloth or hands • Remove any visible objects from the wounds • Apply bandage once the bleeding stops 	<ul style="list-style-type: none"> • Do not clean the wound from out to in direction • Do not apply too much pressure (not more than 15 mins) • Do not give water to the victim
Heat Stroke/Sun Stoke	<ul style="list-style-type: none"> • High body temperature • Headache • Hot and dry skin • Nausea/Vomiting • Unconsciousness 	<ul style="list-style-type: none"> • Move the victim to a cool, shady place • Wet the victim's skin with a sponge • If possible apply ice packs to victim's neck, back and armpits • Remove any jewellery from the affected area • Wash the burn with water 	<ul style="list-style-type: none"> • Do not let people crowd around the victim • Do not give any hot drinks to the victim
Unconsciousness	<ul style="list-style-type: none"> • No movement of limbs • No verbal response or gestures • Pale skin 	<ul style="list-style-type: none"> • Loosen clothing around neck, waist and chest • Check for breathing • Place the victim's legs above the level of heart • If victim is not breathing, perform CPR 	<ul style="list-style-type: none"> • Do not throw water or slap the victim • Do not force feed anything • Do not raise the head high as it may block the airway

Fig.5.2.4: First Aid for different types of injuries

1st Degree Burn	2nd Degree Burn	3rd Degree Burn	4th Degree Burn
Will recover itself in a few days. Action Required: Place under running water.	Serious but recovers in a few weeks. Action Required: Place clean wet cloth over the burnt area.	Very Serious and will require skin grafting. Action Required: Place a clean dry cloth over the burnt area.	Extremely Serious and requires many years with repeated plastic surgery and skin grafting, is life threatening. Action Required: Leave open and prevent infection.

Fig.5.2.5: Degree of Burns

5.2.2 Splints and Aids of Torso

A splint is a bandage that immobilizes a broken bone. Sometimes this is done by using rigid objects such as sticks or boards. For some injuries, however, this isn't possible and the only option is to tie the broken limb to the body.

5.2.2.1 Splints

During the application of a splint, it is important to not attempt to straighten the break. This will lead to more injury and pain for the affected. Instead, the splint should be applied to the break the way it was.

When using rigid material

Always use long enough pieces to reach the joints beyond the break. For example, when splinting a forearm, the material should be long enough to touch both the wrist and the elbow. This helps keep the material in place and prevents too much pressure from being applied to the wound.

- Always put padding between the rigid material and the body to keep the victim comfortable.
- Knots should be tied between the body and the rigid material. This is an easier option when it comes to untying them. However, if this can't be carried out, the knots should be tied over the rigid material.
- Padding should always be used between the body and the rigid material in order to provide a comfortable setting to the affected.



Fig.5.2.6: Splint the Forearm

- Splint the wrist in the same way. The entire forearm should be immobilized.



Fig.5.2.7: splint the Wrist

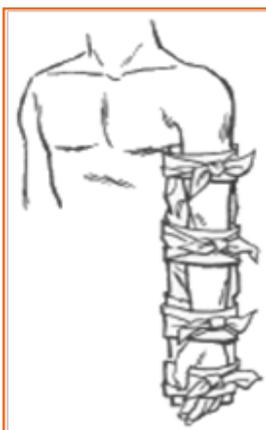


Fig.5.2.8: Splint the Elbow

- To splint the elbow, use enough rigid material to go from the armpit to the hand. The entire arm should be immobilized. Do not attempt to straighten or bend the elbow; splint it in position.
- To splint the upper leg, use long pieces of rigid material that will reach from the ankle to the armpit. Above the hips, tie long straps around the torso to hold the top of the splint in place.



Fig.5.2.9: Splint the Upper Leg

- The pieces used should be long enough to reach the joint beyond the break. For instance, when a forearm is splinted, the material should be long enough in such a way that it includes both the wrist and the elbow. This helps in preventing too much pressure to the wound and also helps in keeping the material in place.



Fig.5.2.10: Splint the Lower Leg

5.2.3 CPR

Basic life support (BLS) is a level of medical care which is used for victims of life-threatening illnesses or injuries until they can be given full medical care at a hospital.

First aid is as easy as ABC – airway, breathing and CPR (cardiopulmonary resuscitation). In any situation, apply the DRSABCD Action Plan.

DRSABCD stands for:

- Danger:** Always check the danger to you, any bystanders and then the injured or ill person. Make sure you do not put yourself in danger when going to the assistance of another person.
- Response:** Is the person conscious? Do they respond when you talk to them, touch their hands or squeeze their shoulder?
- Send for help:** Call ambulance.
- Airway:** Is the person's airway clear? Is the person breathing? If the person is responding, they are conscious and their airway is clear, assess how you can help them with any injury.



Fig.5.2.11: Basic life support chart

If the person is not responding and they are unconscious, you need to check their airway by opening their mouth and having a look inside. If their mouth is clear, tilt their head gently back (by lifting their chin) and check for breathing. If the mouth is not clear, place the person on their side, open their mouth and clear the contents, then tilt the head back and check for breathing.

- Breathing:** Check for breathing by looking for chest movements (up and down). Listen by putting your ear near to their mouth and nose. Feel for breathing by putting your hand on the lower part of their chest. If the person is unconscious but breathing, turn them onto their side, carefully ensuring that you keep their head, neck and spine in alignment. Monitor their breathing until you hand over to the ambulance officers.
- CPR (cardiopulmonary resuscitation):** if an adult is unconscious and not breathing, make sure they are flat on their back and then place the heel of one hand in the centre of their chest and your other hand on top. Press down firmly and smoothly (compressing to one third of their chest depth) 30 times. Give two breaths. To get the breath in, tilt their head back gently by lifting their chin. Pinch their nostrils closed, place your open mouth firmly over their open mouth and blow firmly into their mouth. Keep going with the 30 compressions and two breaths at the speed of approximately five repeats in two minutes until you hand over to the ambulance officers or another trained person, or until the person you are resuscitating responds.
- Defibrillator:** For unconscious adults who are not breathing, an automated external defibrillator (AED) is applied. An AED is a machine that delivers an electrical shock to cancel any irregular heart beat (arrhythmia), in an effort get the normal heart beating to re-establish itself. Please ensure that a trained person is there

to apply the AED. If the person responds to defibrillation, turn them onto their side and tilt their head to maintain their airway.

1. Airway

Once you have assessed the patient's level of consciousness, evaluate the patient's airway. Remember, if the patient is alert and talking, the airway is open. For a patient who is unresponsive, make sure that he or she is in a supine (face-up) position to effectively evaluate the airway. If the patient is face-down, you must roll the patient onto his or her back, taking care not to create or worsen an injury. If the patient is unresponsive and his or her airway is not open, you need to open the airway. Head-tilt/chin-lift technique can be used to open the airway.

Head-tilt/chin-lift technique

To perform the head-tilt/chin lift technique on an adult:

- Press down on the forehead while pulling up on the bony part of the chin with two to three fingers of the other hand.
- Tilt the head past a neutral position to open the airway while avoiding hyperextension of the neck.



Fig.5.2.12: Airway

2. Cardiopulmonary resuscitation

Cardiopulmonary resuscitation circulates blood that contains oxygen to the vital organs of a patient in cardiac arrest when the heart and breathing have stopped. It includes chest compressions and ventilations as well as the use of an automated external defibrillator.



Fig.5.2.13: CAB

- **Compressions:** One component of CPR is chest compressions. To ensure optimal patient outcomes, high-quality CPR must be performed. You can ensure high-quality CPR by providing high-quality chest compressions, making sure that the:
 - » Patient is on a firm, flat surface to allow for adequate compression. In a non- healthcare setting this would typically be on the floor or ground, while in a healthcare setting this may be on a stretcher or bed.
 - » The chest is exposed to ensure proper hand placement and the ability to visualize chest recoil.
 - » Hands are correctly positioned with the heel of one hand in the center of the chest on the lower half of sternum with the other hand on top. Most rescuers find that interlacing their fingers makes it easier to provide compressions while keeping the fingers off the chest.

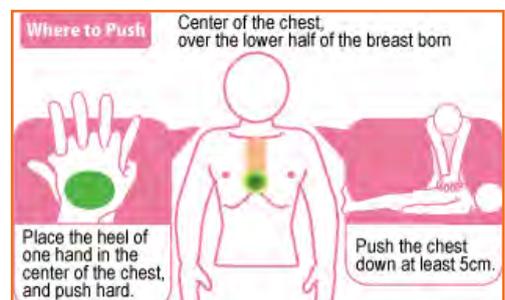


Fig.5.2.14: Compressions

- » Arms are as straight as possible, with the shoulders directly over the hands to promote effective compressions. Locking elbows will help maintain straight arms.
- » Compressions are given at the correct rate of at least 100 per minute to a maximum of 120 per minute, and at the proper depth of at least 2 inches for an adult to promote adequate circulation.
- » The chest must be allowed to fully recoil between each compression to allow blood to flow back into the heart following the compression.
- » For adult co-workers, CPR consists of 30 chest compressions followed by 2 ventilations.
- **Ventilations:** Ventilations supply oxygen to a patient who is not breathing. They may be given via several methods including:

Mouth-to-Mouth

- Open the airway past a neutral position using the head-tilt/chin-lift technique.
- Pinch the nose shut and make a complete seal over the patient's mouth with your mouth.
- Give ventilations by blowing into the patient's mouth. Ventilations should be given one at a time. Take a break between breaths by breaking the seal slightly between ventilations and then taking a breath before re-sealing over the mouth.

Pocket mask

CPR breathing barriers, such as pocket masks, create a barrier between your mouth and the patient's mouth and nose. This barrier can help to protect you from contact with a patient's blood, vomitus and saliva, and from breathing the air that the patient exhales.

- Assemble the mask and valve.
- Open the airway past the neutral position using the head-tilt/chin-lift technique from the patient's side when alone.
- Place the mask over the mouth and nose of the patient starting from the bridge of the nose, then place the bottom of the mask below the mouth to the chin (the mask should not extend past the chin).
- Seal the mask by placing the "webbing" between your index finger and thumb on the top of the mask above the valve while placing your remaining fingers on the side of the patient's face. With your other hand (the hand closest to the patient's chest), place your thumb along the base of the mask while placing your bent index finger under the patient's chin, lifting the face into the mask.

5.2.4 Performing CPR for an Adult

- **STEP 1: Check the scene for immediate danger:** Make sure that you are not compromising your own safety by administering CPR to someone else. Is there a fire? Is the person lying on a roadway? It is important to do whatever is necessary to move yourself and carry the other person to safety.
- **STEP 2: Assess the victim's consciousness:** Gently tap his or her on their shoulder and ask, "Are you OK?" If the person responds in affirmative in a loud or clear voice, CPR is not required. Instead, one should undertake basic first aid and take measures to prevent or treat shock and assess whether there is a need to contact emergency services. If the victim is not responsive, the following steps should be undertaken.
- **STEP 3: Do not check for a pulse:** Unless you're a trained medical professional, odds are you'll spend too much valuable time looking for a pulse when you should be doing compressions.

- **STEP 4: Check for breathing:** Make sure that the airway is not blocked. If the mouth is closed, press with your thumb and forefinger on both cheeks at the end of the teeth and then look inside. Remove any visible obstacle that is in your reach but never push your fingers inside too far. Put your ear close to the victim's nose and mouth, and listen for slight breathing. If the victim is coughing or breathing normally, do not perform CPR.



Fig.5.2.15(a): Performing CPR for an Adult

- **STEP 5: Place the victim on his or her back:** Make sure he or she is lying as flat as possible-this will prevent injury while you're doing chest compressions. Tilt their head back by using your palm against their forehead and a push against their chin.



Fig.5.2.15(b): Performing CPR for an Adult

- **STEP 6:** Place the heel of one hand on the victim's breastbone, 2 finger-widths above the meeting area of the lower ribs, exactly in the middle of the chest.



Fig.5.2.15(c): Performing CPR for an Adult

- **STEP 7:** Place your second hand on top of the first hand, Palms-down, interlock the fingers of the second hand between the first.



Fig.5.2.15(d): Performing CPR for an Adult

- **STEP 8:** Position your body directly over your hands, so that your arms are straight and somewhat rigid. Don't flex the arms to push, but sort of lock your elbows, and use your upper body strength to push.



Fig.5.2.15(e): Performing CPR for an Adult

- **STEP 9:** Perform 30 chest compressions. Press down with both hands directly over the breastbone to perform a compression, which helps the heart beat. Chest compressions are more critical for correcting abnormal heart rhythms (ventricular fibrillation or pulseless ventricular tachycardia, heart rapidly quivering instead of beating). You should press down by about 2 inches (5 cm).



Fig.5.2.15(f): Performing CPR for an Adult

- **STEP 10:** Minimize pauses in chest compression that occur when changing providers or preparing for a shock. Attempt to limit interruptions to less than 10 seconds.



Fig.5.2.15(g): Performing CPR for an Adult

- **STEP 11:** Make sure the airway is open. Place your hand on the victim's forehead and two fingers on their chin and tilt the head back to open the airway. If you suspect a neck injury, pull the jaw forward rather than lifting the chin. If jaw thrust fails to open the airway, do a careful head tilt and chin lift. If there are no signs of life, place a breathing barrier (if available) over the victim's mouth.



Fig.5.2.15(h): Performing CPR for an Adult

- **STEP 12:** Give two rescue breaths (optional). If you are trained in CPR and totally confident, give two rescue breaths after your 30 chest compressions. If you've never done CPR before, or you're trained but rusty, stick with only chest compressions.



Fig.5.2.15(i): Performing CPR for an Adult

- **STEP 13:** Repeat the cycle of 30 chest compressions. If you're also doing rescue breaths, keep doing a cycle of 30 chest compressions, and then 2 rescue breaths; repeat the 30 compressions and 2 more breaths. You should do CPR for 2 minutes (5 cycles of compressions to breaths) before spend time checking for signs of life.

5.2.5 CPR Using AED

- STEP 1:** Use an AED (automated external defibrillator). If an AED is available in the immediate area, use it as soon as possible to jump-start the victim's heart. Make sure there are no puddles or standing water in the immediate area.
- STEP 2:** Fully expose the victim's chest. Remove any metal necklaces or underwire bras. Check for any body piercings, or evidence that the victim has a pacemaker or implantable cardioverter defibrillator (should be indicated by a medical bracelet) to avoid shocking too close to those spots. Make sure the chest is absolutely dry and the victim is not in a puddle. Note that, if the person has a lot of chest hair, you may need to shave it, if possible. Some AED kits come with razors for this purpose.
- STEP 2:** Attach the sticky pads with electrodes to the victim's chest. Follow the instructions on the AED for placement. Move the pads at least 1 inch (2.5 cm) away from any metal piercings or implanted devices. Make sure no one is touching the person, when you apply the shock.
- STEP 8:** Press analyse on the AED machine. If a shock is needed for the patient, the machine will notify you. If you do shock the victim, make sure no one is touching him or her.
- STEP 9:** Do not remove pads from the victim and resume CPR for another 5 cycles before using the AED again. Stick on adhesive electrode pads are intended to be left in place.



Fig.5.2.16(a): Performing CPR for an Adult



Fig.5.2.16(b): Performing CPR for an Adult



Fig.5.2.16(c): Performing CPR for an Adult



Fig.5.2.16(d): Performing CPR for an Adult

5.2.6 Chain of Survival

Chain of Survival is a sequential process for providing treatment to victims of SCA outside of a hospital setting. More people can survive SCA if the following steps occur in rapid succession:

- Cardiac arrest is immediately recognized and the emergency response system is activated.
- Early cardiopulmonary resuscitation (CPR) is started with an emphasis on chest compression.
- Rapid defibrillation occurs.
- Effective advanced life support is begun.
- Integrated post-cardiac arrest care is provided.
- Quick execution of each step is critical because the chances of survival decrease 7 to 10 percent with each passing minute.

UNIT: 5.3: Sensitivity towards People with disability and Gender Equality

Unit Objectives

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

1. Elaborate the details about PWD Sensitization.
2. Explain gender sensitization and equality.

5.3.1 What is sensitization?

The process of becoming highly sensitive to specific events or situations (especially emotional events or situations) Sensitization doesn't always mean feeling the same pain the other person is feeling. It means knowing that the pain exists and there is a different way of living. Despite how the person lives, he or she has a right to exist in a society. It's an attitudinal change and very much required in current time.

Sensitivity to People with Disability

According to the Oxford Dictionary, a disability could be described as an impairment which can be Intellectual, limitations, cognitive, improvement, sensory, exercise or the mixture of all these. Incapacity impacts a person's activities and may happen at birth. Sometimes, it could happen in adulthood. In the medical model, individuals with certain physical, intellectual, psychological and mental impairments are taken as disabled. According to this, the disability lies in the individual as it is equated with restrictions of activity with the burden of adjusting with environment through cures, treatment and rehabilitation.

People with disabilities are subject to multiple deprivations with limited access to basic services, including education, employment, rehabilitation facilities etc. To work towards an inclusive, barrier free society by raising awareness and policy actions, there is a need to have comprehensive reliable statistics on people with disability and their socio-economic conditions

The Constitution of India ensures equality, freedom, justice and dignity of all individuals including persons with disabilities and mandates an inclusive society for all.

The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation Act, 1995) came into force on February 7, 1996. This was an important landmark and was a significant step in the direction of ensuring equal opportunities for persons with disabilities and their full participation in the nation building. The Act provides for both preventive and promotional aspects of rehabilitation like education, employment and vocational training, job reservation, research and manpower development, creation of barrier-free environment, rehabilitation of person with disability, unemployment allowance for the disabled, special insurance scheme for the disabled employees and establishment of homes for persons with severe disability etc.

In order to give focused attention to Policy issues and meaningful thrust to the activities aimed at welfare and empowerment of the Persons with Disabilities, a separate Department of Empowerment of Persons with Disabilities (Divyangjan) (DEPwD) under Ministry of Social Justice & Empowerment was set up in May 2012.

Empowerment of persons with disabilities is an inter-disciplinary process, covering various aspects namely, prevention, early detection, intervention, education, health, vocational training, rehabilitation and social integration.

The disability community is very diverse. Some individuals with a disability may be employed, while others may rely on public benefits as their main sources of income. Some of the public benefits they receive might have limitations. Income, resource and savings limits often prevent individuals from enhancing their financial wellbeing and self-sufficiency as they concentrate efforts on retaining their benefits

Rather than charities, disabled people need sensitivity of the society and initiatives to make their life easy.. New and existing programs are available to help people with disabilities develop skills in financial management and self-sufficiency. Government keeps trying to support in every possible manner so that they can earn their livelihood.

We learn so many virtues from disabled people like patience, courage, positive thinking etc .Hence; this gives us all the more reasons to have a developmental approach towards them. With so many technological breakthroughs happening all over the world, the Governments have spent in Research and development and innovations which would make the life of disabled people happier and easier.

For example, the invention of artificial limbs caused a revolution. They are available to the most disabled people and they can reap benefits from them.

Also, educating them and giving them jobs based upon their physical condition will make them feel a “sense of achievement” and increase their happiness quotient.

Also, disabled people should be trained by specialists in their fields so that they can try and overcome their shortcomings to the maximum extent possible and lead a life which is satisfactory and happy.

5.3.1.1 Myths and Stereotypes

We are all individuals with commonalities and differences and that is true for persons with disabilities as well. As an instructor, it is important to remember to not show pity or put an individual up on a pedestal – everyone should be treated as equals regardless of one’s abilities. When working with people with disabilities, it is important to avoid stereotypes. To debunk common stereotypes and myths, below are some key items to note about persons with disabilities:

- Persons with disabilities are all ages, come from diverse cultures and financial backgrounds.
- People with disabilities work.
- People with disabilities have families.
- Not all persons with disabilities are on or receive benefits such as ESI, Medicaid, etc.
- People with disabilities have goals and dreams.
- All people with disabilities do not necessarily want or need assistance.
- People who are blind or have low vision may wear glasses.
- People who are deaf may use their voice and may be able to read lips, but not all.
- Not all people who use wheelchairs are completely paralyzed – some may be able to walk short distances.
- Delayed or slow speech is not necessarily a sign of a slowed mental process.
- Persons with learning disabilities can be highly intelligent individuals; they simply have a different way of learning.

5.3.1.2 People's first language

Positive language empowers people and helps them feel respected and important. When writing or speaking about people who have a disability, it is important to put the person first, usually addressing them by name or including them as a member of a group, such as a student or co-worker. Group designations such as “the blind,” “the retarded” or “the disabled” are inappropriate because they do not reflect the individuality, equality or dignity of people with disabilities.

Here are some general tips to keep in mind:

- **Offer to shake hands when introduced.** People with limited hand use or an artificial limb can usually shake hands and offering the left hand is an acceptable greeting.
- **Treat adults as adults!** Address people with disabilities by their first names only when extending that same familiarity to all others.
- **Ask First.** If you offer assistance (always ask before assisting someone), then wait until the offer is accepted. Then ask the individual with a disability for instructions on how you may assist them.
- **Relax.** Don't be embarrassed if you happen to use common expressions such as, “See you later” or “Did you hear about this?”, that seem to relate to a person's disability
- **Give them respect** as any other individual.

5.3.2 Gender Sensitization

What is Gender?

The socially constructed and culturally defined roles, responsibilities, attributes, and entitlements assigned to people based on their sex assigned at birth in a given setting, along with the power relations between and among the assigned groups.

Gender equality is the concept that all human beings, irrespective of their sex or gender identity, are free to develop their personal abilities and make choices without the limitations set by stereotypes, rigid gender roles, or discrimination.

What is Gender Bias?

- Gender bias is the tendency to make decisions or take actions based on preconceived notions of capability according to gender. People with disabilities have families.
- Not all persons with disabilities are on or receive benefits such as ESI, Medicaid, etc

It is the process of raising awareness and inculcating empathy about one's own and the other gender. Since one of the most common area of discrimination is based on gender, there is a great need to sensitize the youth on gender related issues. This would strongly contribute in ensuring that equal roles, responsibilities, opportunities, and expectations are assigned to both men and women. Training on gender sensitization will help break the stereotypes around job roles, women's participation in particular trades, and would support in equal participation of men and women in the decision-making process.

5.3.2.1 Why is the Need for Gender Sensitivity

1. Couple communication and decision-making

The role of men and women in household decisions about finances, food consumption, childcare, healthcare or travel often reflect power relations in the home. When power relations are unequal, it results in not only

one sided biased decision but also can increase risky sexual behavior and intimate partner violence. While it is important for women to play a larger role in important household decisions, such as financing, men should also become more involved in healthcare and household decisions around health.

Couple communication and joint decision-making have a positive impact on health outcomes.

2. Access to opportunities and resources

Gender-related factors also affect health outcomes through differential access to opportunities and resources like education, employment and healthcare.

- **Education:** Gender roles often restrict both boys' and girls' access to education which can have long-term effects on health outcomes. For example, more educated women and formally employed women are more likely to use family planning, which reduces the risk of unwanted pregnancy and potentially, the need for abortion
- **Employment:** In many contexts, women's traditional responsibilities are primarily domestic and they do not work outside the home. When they do, they are often part of the informal economy, in lower-paid and less-skilled jobs without opportunities to join unions or trade organizations that advocate for better pay or rights
- **Healthcare:** Women's mobility may limit their access to health services and existing programs intended to increase knowledge of family planning or other health information. Men often do not go to health clinics for their own care or with their partner because pregnancy and child health are seen as a "woman's domain."

3. Social, cultural and gender norms

Norms related to gender, such as gender preference, masculinity and fertility, also influence health outcomes.

- **Gender Preference:** In India, China, and to a certain extent in some African countries, there is a gender bias in child healthcare. Preference for boys can lead to financial resources for education and other services, like healthcare, being differentially allocated within households. Reasons for this preference vary, and include the perception that boys will financially support their parents when they are older, and that families are obliged to pay dowries when their daughters marry.
- **Fertility:** In many areas, a woman's value is often measured by her ability to have children. This can lead women to put their own health or the health of their family at risk by starting pregnancy too early, when not yet physically matured, and giving birth without proper spacing or having more children than the household can support. For couples facing fertility issues, women often bear the brunt of household and community-level stigma and abuse for failing to conceive.
- **Masculinity:** Masculine ideas associating men with strength, virility, dominance and power may increase the number of sexual partners and inhibit the use of condoms, thereby increasing the risk for unwanted pregnancy or the transmission of STIs or HIV through unprotected sex or sexual violence. These masculine norms also may promote or normalize violence against women

Summary of Need for Gender Sensitization

- To provide balance to the society
- To provide equal opportunities to women and men
- To gauge views of all sections of society
- To distribute resources evenly
- To allow same personal freedom for men and women
- To even out the gender bias present in the society

How to stop gender bias

- Education that helps create attitudinal shifts towards gender bias and activities to spread awareness.
- Continuous efforts towards breaking myths and stereotypes around gender.
- Ensuring State accountability to implement various schemes, policies, laws, constitutional guarantees and international commitments.
- Institutionalizing gender sensitive processes within various systems such as law and programmes.
- Encouraging community ownership in preventing violations based on gender discrimination.

Sexual harassment at workplace is an extension of violence in everyday life and severely affects. Women's right to work in a safe and secure environment. While it is the responsibility of every employer to ensure safety of women at the workplace, it is also important for the trainees, both men and women, to be aware of all aspects of sexual harassment at the workplace. Skill training for both male and female trainees and professionals in the skilling ecosystem is centered around the following issues:

- What constitutes workplace sexual harassment?
- Where can the aggrieved complain about the same?
- What are the rights of the aggrieved?
- What is the redressal mechanism?
- Which are the bodies involved in addressing these complaints?
- What are the possible actions that can be taken against the accused?

Resources



Scan the QR code or click the link to access the videos or e-book.

Description	QR Code
Health related threats in apparel industry and control on them	 https://youtu.be/POIQ27GQZp0
First aid	 https://youtu.be/DQ7JPNgU8Wg

Gender sensitization	
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<https://youtu.be/Wi1exdO1lig>

Industry Visit

The purpose of visiting an apparel manufacturing unit is to get hands on knowledge about various processes involved in the work of an Store Keeper. During the visit you have to interact with Store Keepers and supervisors to understand how work is done in industry. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the apparel manufacturing unit. When you go to an apparel manufacturing unit, you should:

- Know about the production system.
- Understand the machine safety and maintenance rules of industry.
- Analyze how Store Keepers:
 - » Use and maintain personal protective equipment as per protocol.
 - » Maintain a healthy lifestyle and guard against dependency on intoxicants.
 - » Follow environment management system related procedures.
 - » Identify and correct (if possible) malfunctions in machinery and equipment.
 - » Store materials and equipment in line with manufacturer's and organizational requirements.
 - » Minimize health and safety risks to self and others due to own actions.
 - » Monitor the workplace and work processes for potential risks and threats.
 - » Carryout periodic walk-through to keep work area free from hazards and obstructions, if assigned.
 - » Report hazards and potential risks/threats to supervisors or other authorized personnel.
 - » Participate in mock drills/ evacuation procedures organized at the workplace.
 - » Take action based on instructions in the event of fire.
- Ask questions to Store Keepers/supervisors if you have any query.

Exercise

1. Heart rate of a healthy person should be:
 - a) 40-60 beats per minute
 - b) 70-110 beats per minute
 - c) 80-100 beats per minute
 - d) 60-100 beats per minute
1. What is not in Four A's of First Aid:
 - a) Awareness
 - b) Assessment
 - c) Action
 - d) Attitude
2. The symptoms of fracture:
 - a) Pain
 - b) Swelling
 - c) Visible bone
 - d) All of the above
3. Which degree of burn is explained as; Extremely Serious and requires many years with repeated plastic surgery and skin grafting to heal?
 - a) 1st Degree Burn
 - b) 2st Degree Burn
 - c) 3st Degree Burn
 - d) 4st Degree Burn
4. is a level of medical care which is used for victims of life-threatening illnesses or injuries until they can be given full medical care at a hospital.
 - a) Basic life support (BLS)
 - b) CPR
 - c) ABC
 - d) All of the above



6. Comply with Industry, Regulatory and Organizational Requirements and Greening of Job Roles



Unit 6.1 - Industry, Regulatory and Organizational Essentials



AMH/N0104

Key Learning Outcomes

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

1. Carryout work functions in accordance with legislation and regulations, organizational guidelines and procedures.
2. Seek and obtain clarifications on policies and procedures, from your supervisor or other authorized personnel.
3. Apply and follow these policies and procedures within your work practices.
4. Provide support to your supervisor and team members in enforcing these considerations.
5. Identify and report any possible deviation to these requirements.
6. Explain the effect and importance of Greening of Job roles.

UNIT 6.1: Industry, Regulatory and Organizational Essentials

Unit Objectives

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

1. Carryout work functions in accordance with legislation and regulations, organizational guidelines and procedures.
2. Seek and obtain clarifications on policies and procedures, from your supervisor or other authorized personnel.
3. Apply and follow these policies and procedures within your work practices.
4. Provide support to your supervisor and team members in enforcing these considerations.
5. Identify and report any possible deviation to these requirements.
6. Explain the effect and importance of Greening of Job roles.

6.1.1 Defining Compliance for Your Organization

According to Merriam Webster the dictionary definition of compliance is as follows:

1. The act or process of complying to a desire, demand, proposal, or regimen, or to coercion.
2. Conformity in fulfilling official requirements.
3. A disposition to yield to others.
4. The ability of an object to yield elastically when a force is applied.



Fig.6.1.1: Regulatory Compliance

Supervisory compliance for industries, world- wide falls under the second definition. There are many managers, general councils, and policy officers that would consent in agreement at any of the other definitions as well. Let's discuss, what is compliance? Whether an organization is confronting an external regulatory compliance from a government agency, or seeks to comply with its own organizational mandates, policies or procedures, compliance in actuality means conforming to requirements and a proof that your organization has done so. This is usually attained by the scheming and development of managerial policies that will map out the projected code of conduct.

From a policy's point of view, there are many aspects that impact an organization's policies, including legislative and regulatory requirements, organizational best practices, and the market demands. If we look at government/ public sector agencies, financial service businesses, and healthcare providers - we find that they are controlled and must develop internal policies in order to ensure compliance. The actual trial comes from the juncture of practice with the laid policy.

After that, they must adopt ways to enforce those policies and measure their effectiveness. Initially this may seem to be an easy and convenient task. But the dilemma is creating a policy – without any mechanism, may it be manual, automated, or third-part, to measure and monitor compliance of the policies is very difficult. In order to build effective policies, we must not only have an understanding of the statutory requirements that will shape

the policy within our organizations, but how these policies relate to the business practices, the workforce, the methodologies of operations and the technologies within the corporation.

Irrespective of the requirements to which an organization must obey, a well-planned model is essential which will be one that assimilates strategies with their people, processes, and technology. This includes education, monitoring, and enforcement. Organizations should look to use machineries and to develop procedures that make it easier to do the right thing or to simply disregard the policy all together. In conducting performance audits, an assessment should be made of compliance with applicable laws and regulations when necessary to satisfy the audit objectives. The auditor should design the audit to provide reasonable assurance of detecting illegal acts that could significantly affect audit objectives. The auditor also should be alert to situations or transactions that could be indicative of illegal acts that may have an indirect effect on the audit results.

6.1.2 Significance of Compliance in Indian Garment Industry

Compliance is the standard for the product which ensures that it is aligned to its industry's qualitative demands. This also includes audits and inspections which are crucial to a proper and formal work environment. Compliance and its demand is rapidly growing in today's industrial scene since globalization of manufacturing standards has also created a demand for ethically created products. This standard of compliance is crucial because of the increase in export of garments from India.

Social Compliance

The treatment of the employees by its business constitutes social compliance. This also includes their environment and their personal perspective on social responsibility as an employee. The treatment of employees regarding wages, work conditions and working hours. A compliance audit is necessary in order to determine if the company meets standard environmental laws.

Compliance Audit

Process Safety Management, Risk Management Programs, and Process Security Management are all organised and provided by audits and assessments. Compliance and its verification is carried out with audits that focus particularly on these policies and procedures. The design and implementation of these audits ensures this compliance. Additionally, all sorts of deficiencies can be addressed and solved through corrective action.

In India, compliance audit consists of a thorough examination of orders, regulations, rules and directions for dealing with prudence, legality, transparency and adequacy. It is the job of auditors to collect information by reviewing documents, visually observing the site and staff interviews. This data is cross checked with applicable regulations and permits to ensure how well the operation is when sieved through applicable and required legalities.

There are three main phases of compliance audit in India:

1. **Pre-audit:** It includes planning and organising the audit; establishing the audit objectives, scope and etiquette; and reviewing the design of the program by inspecting documentation
2. **On-site audit:** It includes conducting personnel interviews, reviewing records, and making observations to assess program implementation
3. **Post-audit:** It includes briefing the management on audit findings, and preparing a final report

Therefore, Indian apparel manufacturers need to follow Government guidelines, and social compliance standards not only within their sphere of operations, but also insist their vendors, distributors, and other collaborators involved in the supply chain to do the same.

6.1.2.1 Core Labour Standards

International labour standards have grown into a wide-ranging system of gadgets on work and social policy, backed by a administrative system intended to address all sorts of complications in their submission at the national level

- Removal of Discernment in Employment and Occupation
- Freedom of Association
- Right to Collective Bargaining
- Elimination of all Forms of Forced or Compulsory Labour
- Effective Abolition of Child Labour

Apparel industry players would ensure that labour contractors don't involve forced labour or child labour and get the supply chain of the suppliers audited. Apparel Export Promotion Council (AEPC), a top organization of Indian apparel exporters, has envisioned a garment factory compliance program 'Disha' -Driving Industry towards Sustainable Human Capital Advancement. The prime objective of this body is to make India a global benchmark for social compliance in apparel Industrial. This Common Compliance Code design will prepare the Indian apparel industry on a mutual platform towards a more social and ecologically compliant industrial atmosphere.

6.1.3 India Adopting Universal Standards on Child Labour

The compliance level of garment factory is very high for Indian exporters. To ensure that all standards are being complied with, the big international companies, mindful of their branding, often generate and follow their own compliance standards. Numerous U.S. companies have incorporated "child labour" in their code of conduct, due to tenacious signal of child exploitation in the industry.

6.1.3.1 Common Compliance Code

There is a compliance exhaustion in the Apparel Industry,. Although they are trading with the global brands, the apparel sellers still don't consent that compliance is an integral management practice. The Indian apparel export industry has been indisputable to implement zero tolerance on child labour and cleanse the supply chain.

"This common compliance code will not only give the opportunity for the industry to negate international claims against child labour promotion in the garment industry, but will also help to improve the image of the industry and win more international businesses," as per PremalUdani, Chairman, Apparel Export Promotion Council (AEPC).

6.1.4 Role of AEPC in Indian Garment Industry

The apparel industry of India is one of the significant export segments. It enjoys a good global ranking because of its quality and price affordability. But there is an emerging need to increase effectiveness in the social domain as the industry faces various labour, compliance and background situations.

Being a labour rigorous industry, social compliance is becoming an integral issue for this sector. The apparel export promotion council of India (AEPC) under the textiles ministry is plateful domestic textile trade to follow the global norms through development and application of tools to help workshops certify, monitor and improve universal standards.



Fig.6.1.2: AEPC Logo

AEPC's assistance to garment exporters

AEPC brings about invaluable backing to Indian garment exporters and also the international buyers who select India as their favoured trading terminus for garments. The body today has grown-up to become the most powerful connotation for promotion and facilitation of garment exports. With an objective of structuring a strong ground for Indian exporters, AEPC is devoted to provide various podiums which would help in increasing garment exports.

Role of Apparel Export Promotion Council in India

In India, the Apparel Export Promotion Council (AEPC) is committed to legal compliance and principled business Practices. It encourages members/exporters to comply with all applicable laws and regulations of the country to meet international compliance standards. Further, the council has designed a garment factory compliance program 'Disha' (Driving Industry towards Sustainable Human Capital Advancement) that aims to spread awareness regarding the importance of compliance among garment exporters.

6.1.5 Indian Garment Industry and Social Responsibility

The apparel industry of India, is one of the biggest segments among the various industries existing. It is also one of the oldest and an eminent industry in terms of output, investment and employment. A sector which has a global market share and has earned reputation for its permanence, worth and magnificence. The industry is growing at a fast pace with change in customer taste and inclinations. There are numerous factors impacting a change in customer preferences. Few of them are here:

- Rise in disposable incomes
- Government policy focused on fast-track growth
- Convenience of shopping at departmental stores and shopping malls
- Increasing demand for branded apparels and fashion accessories
- Boom in the retail industry

6.1.5.1 International Labour Standards

The Indian apparel industry had established itself substantially not just in the domestic but global market too. The improved density from international apparel buyers to comply with labour principles and rights in Indian garment factories has resulted into a vast number of labels and code of conduct.

6.1.5.2 Corporate Social Responsibility

Corporate social responsibility (CSR) fundamentally connotes that the establishment should work in a principled way. It should work in the best interest of the parties associated with it. The notion of social accountability and responsibilities in Indian apparel sector is fastening acceptance. Increasing number of companies are tiresome to work in a mode to defend the interests of the workforce, clients, contractors and the society.

6.1.5.3 Social Responsibility in the Garment Industry

Garment firms have social responsibility associated with workforce and the surroundings. Social responsibility in the global clothing industry gives a deep examination of labour practices and values. But the ways by which the various organisations take up to accomplish their social accountability may be different. A garment factory can fulfil its social responsibility in the following manner:

- By creating and providing a challenging environment to the workforce.
- Creation and provision of fair book of policies for any kind of employee dispute, if any.
- Affirm a safe and positive working environment for the employees.
- Prohibit child labour and abolish any kind of child abuse.
- Provision of equal opportunities to the employees to voice their feedback and have an effective policy for the solution of dispute.
- Ensure ethical recruitment, training, remuneration, appraisal and other policies.

6.1.6 Indian Apparel Trade and Compliance Standards

With the increasing globalisation, a lot of prominence has been placed on global compliance standards in the garment industry. Factories involved in the international trade must keep a proper check of the garment factory compliance at regular interludes. Therefore, every apparel export business needs to have a proper understanding of compliance rules for foreign trade.

6.1.6.1 Why Code of Ethics is Required

The code of ethics is concerned with the quality of the products and services from the workstations along with the working environment that should meet the provisions of audits and assessments. If followed sincerely, these ethics will result into:

- Cumulative national affordability in terms of social compliance.
- Growing competitiveness of small scale industrialists.
- Dropping burden on manufacturers.

Some of the compliance codes in Indian garment industry are listed below.

6.1.6.2 Working Hour & Wage Rate Compliance

- Garment workshops should ensure a confirmation that employees should get minimum wages as per the domestic law and according to their working hours spent by them in the industry.
- Employer should confirm an equal wages to both men and women employees who are performing the same work or work of a similar nature.
- Workforce employed for more than nine hours on any day or for more than 48 hours in any week, shall be qualified to wages at premium legal rates for such overtime work.
- Every employee must be entitled to one holiday in a week. Whenever a worker is required to work on a weekly holiday, he is to be allowed a compensatory holiday for each holiday so lost.

6.1.6.3 Workplace & Work Environment Compliance

- Businesses units should see that they are providing a proper clean, hygienic, well-ventilation, sufficient light and air to provide the workforce with standard work environment. A comfortable workstation with a clean and neat workplace is a mandate.
- Indian garment industries should ensure that the workers are given a comfortable sitting chair with back support and proper leg space.

6.1.6.4 Non-discrimination Compliance

Under federal and state laws, it is in contradiction of the law for proprietors to differentiate staffs and job applicants and/or harassment to occur with their organizations. It is also against the law to treat people unethically or bother them because of the age, disability, homosexuality, marital or domestic status, race, sex or transgender status of any relative, friend or colleague of a job applicant or employee. Employers, managers and supervisors must treat all their job applicants and employees on the basis of their individual merit and not because of irrelevant personal characteristics. They must also do their best to make sure that their employees are not harassing any other job applicant or employee.

6.1.6.5 Social Compliance in India

Religion, community, culture or belief characteristics should never be the basis of distinction among employees by the organisation. All the terms and conditions of employment should be based on a person's ability to do the job. The mandate for social compliance is growing every day. One can accomplish a dynamic and vigorous compliance system only when the workforce is provided with an equal stand to voice their concern and have consultative instrument at the workplace.

The Apparel Export Promotion Council of India (AEPC), a summit framework of Indian apparel exporters, runs all social compliance services to meet international global standards. This council trains and monitors industrial unit to upgrade the factory conditions and labour values and standards.

6.1.7 Health and Safety Compliance in Indian Garment Industry

Apparel industry has won increased attention from consumers, social workers, welfare organisations and trademarked international buyers. Many global players are demanding that their "code of conduct" should be complied to, before entering into an agreement. Nowadays, continuous observance to quality standards and employee contentment have become significant bounds for gauging the company's performance.

Apart from the growing quality of outputs that meet transnationally recognised standards, it is essential for the suppliers to improve safety and health compliance code and provide proper working atmosphere in their work locations.

Numerous overseas countries have established various international compliance standards on safety and health compliance. Exporters should follow these codes to live on in the global market. One should not under-estimate the benefits drawn from regular drilling of compliance codes of conduct which can bring higher price of yields, less employee turnover rate, smooth trade relation as well as global image & status.

6.1.7.1 Need for Compliance Codes

There is prominent impact of social compliance on company's economic outcomes. Companies should adopt compliance code to protect their goodwill and brand name in the market. The Indian apparel industry needs to be hard-hitting on compliance rather than opposing with other developing countries manufacturing low-cost garments.

6.1.7.2 Compliance Code Guidelines

Apparel factories ought to contemplate the below mentioned guidelines when complying with safety and health compliance code standards:

- Trades should comply with international standard code, such as ISO or importing countries standard code to become competitive in international markets.
- It is necessary for workers involved in loading and unloading operations.
- Young adults (between 15 to 18 years) are not allowed to work on any dangerous machine without sufficient training and supervision.
- Ear plugs or muffs should be given in places with excessive sound such as generator rooms and embroidery rooms.
- Factories should have effective fire extinguisher with proper usage instructions.
- Eye-wear and face shields should be a must, providing in areas with danger of flying objects, sparks, glare, hazardous liquids and excessive dust.

Code to protect their goodwill in the market

This industry needs to be tough on compliance rather than challenging with other developing countries manufacturing inexpensive garments. In India, the Apparel Export Promotion Council (AEPC) is committed to legal compliance and ethical business practices and encourages members/exporters to comply with all applicable laws and regulations of the country to meet international compliance standards.

The council has designed a garment factory compliance program 'Disha' (Driving Industry towards Sustainable Human Capital Advancement) that aims to spread awareness regarding the importance of compliance among apparel exporters.

6.1.8 Compliance Code Guidelines for Indian Garment Industry

The Indian apparel industry supports considerably to India's export earnings. India has industrialised as a major following destination for various buyers. The USA and the EU endure to be the most domineering markets for Indian apparel industry, bookkeeping for about two-third of India's textiles exports. These countries have been demanding upon compliance to certain social, environmental and safety standards and norms by the manufacture units involved in export business. Corporate codes of conduct that discourses labour standards vary from corporation to corporation and location to location. Some of the common Indian Garment industry compliance code guidelines are:

- Exporters must not be intricate in unfair labour practices but limited to interferences in matters regarding freedom of association.
- Exporters shall recompense workforce for all hours operated. Workers on a piece rate payment scheme or any other incentive scheme should be paid according to that.

- Exporters shall not illogically restrain the liberty of movement of workers, including movement in canteen during breaks, using toilets, accessing water, or to access necessary medical attention, as a means to maintain work discipline.
- Exporters are about to offer workers with paid annual leaves as required under local laws, guidelines and processes. Exporters shall not impose any undue limitations on workers' use of annual leave or taking any type of sick or maternity leave.
- There shall be no alterations in workers remuneration for work of equal value on the basis of gender, race, religion, age, nationality, sexual orientation, social political opinion, disability or ethnic origin.
- Exporters shall not threaten female workers with firing or any other employment conclusion that adversely distresses their service status in order to avert them from getting married or becoming pregnant.
- Exporters shall confirm that proper ventilation systems are installed within their premises to prevent airborne exposures which may affect the health of workers.
- Members shall not custom any form of physical or mental, emotional violence, threats, harassment, or abuse against workers seeking to form organisations or participating in union activities, including strikes.
- Workers shall be permitted to at least 24 successive hours of rest in every seven-day period. If workers must work on a rest day, another successive 24 hours rest day must be provided.
- Exporters shall pay workers at least the legal minimum wage or the usual industry wage, the one that is Higher. This indeed is the most essential code of compliance for Indian Industry.
- Garment exporters must ensure that the minimum age requirement to unsafe employment shall not be less than 14 years. This is the most significant concern in the country. Each worker has the right to enter into and to terminate their employment freely. Indian apparel makers need to follow all the compliance rules to comply with global standards. Often companies adopt industry compliance codes to project a positive image and protect their goodwill in the market. The Indian garment industry needs to be strong on compliance instead of competing with other developing countries manufacturing inexpensive garments.

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6.1.9 India Complying with International Standards on Child Labour

Child labour has been a grave crime in India. It still exists. Children are in poverty, ignorance, and corruption due to illiteracy. Child labour superfluties under many conditions such as discernment (based on gender, ethnic, or religious issues), inaccessibility of educational and other substitutes, weak enforcement of child labour laws, etc. Large global firms, conscious of their image, often set up their own compliance standards for the exporters to ensure that all standards are being complied with.

Various companies of U.S originality have included child labour in their code of conduct, due to tenacious evidence of child exploitation in the industry. In worldwide market, the buyer's compulsory requirement is to have an audit. As India is a leading garment exporter, the level of garment factory compliance is very high for Indian exporters. The child labour issue is one of the very important aspect that the audit checks. Therefore, all the export units must be highly compliant on issues related to child labour.

6.1.5.1 Code of Conduct for Garment Exporters

- Garment exporters must safeguard that the bottom limit of the age requirement to non-hazardous employment should not be less than 14 years. Moreover, all young workers (between 14 to 18 years) must be sheltered from doing any work that is likely to be dangerous or that may be injurious to their health and physical, mental, social, or moral development. Exporters must detect all legal necessities for work being performed by lawful young workers.
- Further, the trainees or occupational students shall not be under the legal age for employment (as provided under the applicable laws). They cannot be used on regular production lines as long as they are trainees and unless their pay and other benefits are at par with the regular workforce.
- A proper process is followed for checking the age of the workers. The minimum certification and credentials required to be maintained shall include- proof of age certificates by registered/ licensed dentists, birth certificate, school leaving certificate, national identity like passport, driving license, voter card etc. or any other document required under the applicable laws.

Apparel industry players would now make sure that labour contractors don't engage child labour and get the supply chain of the suppliers audited. Apparel Export Promotion Council (AEPC) has intended a garment factory compliance program 'Disha' (Driving Industry towards Sustainable Human Capital Advancement) to make India a global benchmark for social acquiescence in apparel manufacturing and export. This Common Compliance Code project will prepare the Indian apparel industry on a mutual platform towards a more social and environmentally accommodating industrial environment.

6.1.10 Green Jobs

"Green jobs' are defined as jobs that reduce the environmental impact of enterprises and economic sectors, ultimately to levels that are sustainable."

Green jobs can produce goods or provide services that reduce environmental impact, such as green buildings or clean technology adoption. An important section of green jobs lies in sustainable or clean manufacturing. India has already begun preparation towards a green transition by institutionalizing capacity buildings for green jobs through jobs, including legal regulations and skill mapping. The country is accelerating the expansion of green jobs in large industries like automotive, textile, brick manufacturing, power sector, and green buildings. It is gradually expanding its coverage to hard-to-abate sectors such as steel, thermal power plants, and manufacturing SMEs.

India will soon be the most populous country in the world – and home to one of the youngest populations. India is the world's third-largest energy consuming country, with 80 per cent of demand met by coal, oil and solid biomass. Despite its efforts, India is predicted to be among the top three emitters by 2030. Millions of Indian households are set to buy new appliances, air conditioning units and vehicles.

Rapid growth is expected in building stock, other infrastructure, and construction materials. In recent years, India created a massive expansion in renewable energy. India's efforts at promoting LED lighting are a huge success story. Over 367 million LED bulbs, 7.2 million LED tube lights and 2.3 million energy efficient fans have been distributed. This has brought big savings in power use, greenhouse gas emissions and household bills.

India has also taken steps to control plastic pollution, including bans on single-use plastic and strengthening extended producer responsibility. India has also committed to restoring 26 million hectares of degraded land by 2030. But India, like every nation, must do more. And doing more is in the best interests of the entire nation. A recent World Economic Forum estimate suggests that India's decarbonization journey represents a USD 15 trillion economic opportunity by 2070. This journey could create as many as 50 million net new jobs.

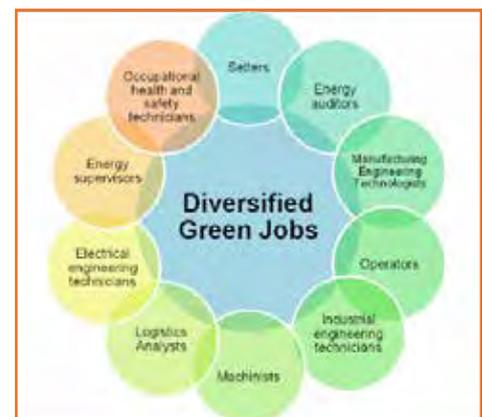


Fig.6.1.3: Diversified green jobs

About sustainability and sustainable workplace

Sustainability, greening the corporation, environment management are gradually becoming a part of the corporate vocabulary. The way the natural resources are extracted and consumed from earth, it is going to be very difficult to replenish them timely. It is often discussed in various forums that for generating the resources we spend in one year; earth takes around 1.5 years for the re-generation. Hence, it can be assumed that there will a requirement of the capacity of almost two Earths by 2030 to keep pace with the present natural resource consumption, and the requirement will be of three planets by 2050.

The current requirement is towards developing long-term, meaningful relationships, and self-discipline for attaining effective results. Thus, the design of the workplace is such that supports the basic and core idea in a more accommodating and comprehensive manner.

A Green workplace is an eco-friendly and focused organisation and leans towards the adoption of business practices that are justifiable in nature, energy efficient, and well suited to the complex as well as the ever changing world of business. It advocates the model based on 3Rs — reduce, reuse, recycle. It encompasses green competencies, green attitude, and green behaviour, which is combined synergistically to help the organisation become green or sustainable. Values are the essential characteristic that both employees and organisations uphold and operate at multiple levels (societal, organisational and personal), thus playing a fundamental role in shaping the organisation's culture with regard to a shift towards greater sustainability.

The idea of introducing green initiatives into the workplace can feel a little daunting at first. And while it may feel overwhelming trying to figure out where to start, there are actually lots of ways we can be more green in the office without bringing the whole forest inside, without huge cost implications and with long-term benefits to the company, employee well-being and future spend. Implementing a few simple changes for a more sustainable, green workplace can be really effective in reducing your business' impact on the environment.

Sustainability is now counted as one of the major pillars of apparel export business and a growth tool. Though its key areas involve saving of energy, water, more greenery in the factories, maximum use of natural resources, green factories, there are many other initiatives which are being taken by various companies as per their need, priorities, and with the changing sustainability landscape, bench marks and issues are also evolving. All these efforts are generating great results, bringing buyers closer to them and creating a sense of profitability and responsibility amongst the companies towards the people and the planet.

A Few Green workplace initiatives

1. Discourage food and water wastage
2. Switch off the lights or power when not in use
3. Switch off the sewing machine when not in use
4. Stop using Single use Plastic
5. Segregate waste as per waste management/disposal policy
6. Any sort of wastages like empty glasses/bottles/plastics/containers etc should be kept in a specific area to be recycled
7. Throw waste only in the allocated basket or trolley
8. Minimise use of paper
9. Use of LED lights
10. Installation of solar panels

Encourage similar practice at home also.



7. Soft Skills

Unit 7.1 - Introduction to the Soft Skills

Unit 7.2 - Effective Communication

Unit 7.3 - Grooming and Hygiene

Unit 7.4 - Development of Interpersonal Skill

Unit 7.5 - Social Interaction

Unit 7.6 - Group Interaction

Unit 7.7 - Time Management

Unit 7.8 - Resume Preparation

Unit 7.9 - Interview Preparation



Key Learning Outcomes

At the end of the module, participants will be able to:

1. Interpret the basic meaning of Soft Skills, their components and their benefits.
2. Interpret Work Readiness and its significance.
3. Explain communication process.
4. Explain about verbal and non- verbal communication.
5. Explain about the barriers in communication process.
6. Maintain cleanliness and hygiene.
7. Identify specific uniform guidelines
8. Maintain positive body language while speaking.
9. Interpret good eating habit and their impact on health.
10. Develop a positive attitude and behavior.
11. Explain team dynamics.
12. Explain how to manage relations.
13. Learn about Stress and anger management skills.
14. Learn to develop leadership qualities.
15. Explain about what is social interaction and what are social interaction behaviors.
16. Practice Self introduction in public.
17. Participate in group discussions in the class.
18. Identify the importance of team building and team work.
19. Explain about the time management.
20. Develop time management skills.
21. Learn about effective time planning.
22. Interpret the importance of resume.
23. Learn how to prepare a resume.
24. Explain the procedure of interview.
25. Practice mock interview.
26. Identify how to present themselves during an interview.

UNIT 7.1: Introduction to the Soft Skills

Unit Objectives

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

1. Interpret basic meaning of Soft Skills, their components and their benefits.
2. Explain the components and their benefits.

7.1.1 What is a Soft Skill?

Soft skills are personal attributes that describes an individual's ability to interact with others. Soft skills is a term often associated with a person's EQ, the cluster of personality traits, social graces, communication language, personal habits, friendliness and optimism that characterise relationship with other people. Soft Skills complement hard skills which are occupational requirements of a job and many other activities. They are related to feelings, emotions, insights and an inner knowing.

Soft skills have more to do with who we are than what we know. As such soft, skills encompasses, the character traits that decide how well one interact with others and are usually a definite part of one's personality.

According to a survey the long term success in job is 75 % due to soft skills and 25 % due to technical knowhow. Soft skills also determine how satisfied and happy one remains in professional and personal situations.



Fig.7.1.1: Soft skills

7.1.2 Components of Soft Skills

- Adaptability
- Emotional Strength
- Leadership Quality
- Team Playing Ability
- Decision Making
- Interpersonal Communication
- Negotiation Skills

7.1.3 Benefits of Soft Skills

Some of the benefits of Soft Skills are as:

- Increased credibility with customers.
- Increased customer satisfaction.
- More productive employees.
- Out service the competition.
- Recognition from the industry, employer and peers.
- New employment opportunities.
- Increased ability to perform on the job.

UNIT 7.2: Effective Communication

Unit Objectives

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

1. Explain the meaning of Communication and process of communication.
2. Elaborate about the types of communication.
3. Identify the barrier in effective communication.

7.2.1 Introduction

In the information age we have to send, receive and process huge number of messages everyday. But effective communication is more than just exchanging information, it also about understanding the emotion behind the information. Effective communication can improve relationship at home, work, and in social situations by deepening our connections to others and improving teamwork, decision making and problem solving.

Effective communication skill is a learned skill, it is more effective when it's spontaneous than formula.

7.2.2 The Communication Process

The process of conveying information through the exchange of thoughts, ideas, feelings, intentions, attitude by speech, gesture, writing etc. is known as communication. It is the meaningful exchange of information between two or more participants.

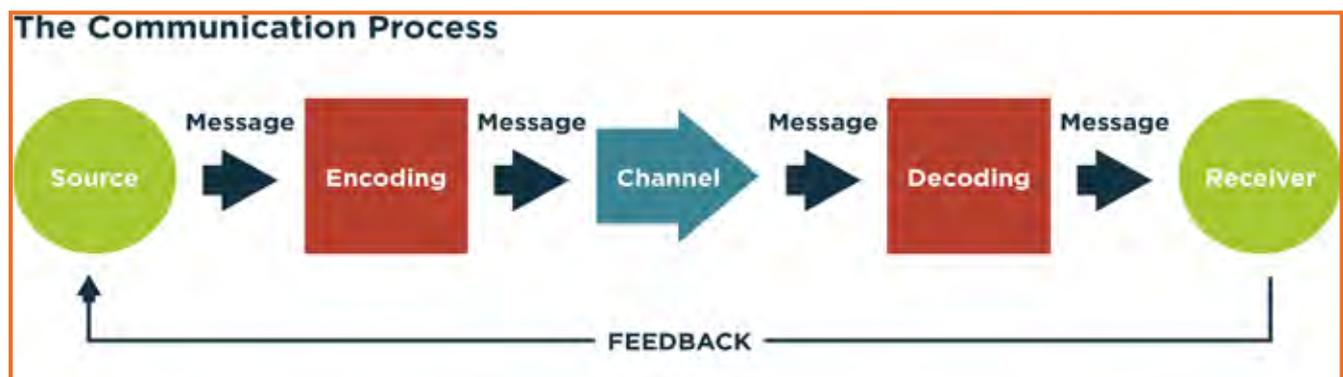


Fig.7.2.1: The Communication Process

Communication requires a sender, a message, a medium and a recipient. Communication process is complete only when a receiver understands the sender message.

Communication with other involves three steps:

1. **Message:** First information exists in the mind of the sender. It can be a concept, idea, formation and feeling.
2. **Encoding:** A message is sent to the receiver in words or other symbols.
3. **Decoding:** Lastly the receiver translates the words or symbols into a concept or information that a person can understand.

7.2.3 Verbal and Non-Verbal Communication

Communication can be categorized into three basic types. These include:

1. **Verbal Communication:** It means you listen to a person to understand their meaning. Verbal communications have the advantage of immediate feedback, are best for conveying emotions and can involve storytelling and crucial conversations.
2. **Written Communication:** letters, books, newspapers are printed messages in which you read their meaning. They are asynchronous, can reach many readers and are best for conveying information.
3. **Nonverbal Communication:** It means you observe a person and infer meaning. Both verbal and written communications convey nonverbal communication and are also supported by body language, eye contact, facial expression, posture, touch and space.

7.2.4 Communicating Effectively Identifying Barriers

There are many reasons why communications fail. These failures are the result of barriers in communication which may occur at any stage in the communication process. Barriers may lead to one's message becoming distorted and therefore risk wasting both time and money by causing confusion and misunderstanding. Effective communication involves overcoming these barriers and conveying a clear and concise message.



Fig.7.2.2: Barriers in Communication

A skilled communicator must be aware of these barriers and try to reduce their impact by continually checking understanding or by offering proper feedback.

Dealing with Barriers

- Use simple, easily understood word. Overcomplicating makes things confusing
- While speaking in other language always prepare beforehand
- Always give or take feedback to ensure the effectiveness of communication
- Be alert to cues
- Listen, listen, listen ...

7.2.5.1 Some Tips for Active Listening

- Concentrate what the person is talking about and not on noise or other external distractions.
- Understand his emotions and you get it all right. Is the speaker angry, happy or plainly inquisitive?
- When the speaker is saying or telling something, don't break the chain of his thoughts.
- Don't avoid completing sentences of the speaker. Let them speak and speak only after they finish.
- It's alright if you haven't understood at first chance. Request to repeat the information.
- Practice makes a man perfect. Listen intently, focus and ignore other noises. Listen more and talk when required.

It takes a lot of concentration and determination to be active listener. Old habits are hard to break and if you're listening habits are not good then you have to break those. Start listening deliberately and remind yourself frequently that your goal is to hear truly what the other person is saying.

UNIT 7.3: Grooming and Hygiene

Unit Objectives

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

1. Maintain cleanliness and hygiene.
2. Keep their dress clean and tidy.
3. Maintain positive body language while speaking.
4. Enable to perform more of the do's than the don'ts.
5. Avoiding bad things such as gutkha and alcohol.

7.3.1 Personal Grooming

Personal Grooming is the term for how people take care of their body appearance. Once you enter your store/ department you need to be dressed in full uniform as per company norms, and also properly groom yourself as per the service standards.

Personal grooming not only makes us presentable to other people but good personal hygiene is essential for good health. Habits that are considered personal grooming include, bathing, dressing, applying makeup, hair removal and taking care of one's teeth and skin.

7.3.2 Positive Body Posture and Language

- Clean hands at all times as they mostly will be handling merchandise and customers.
- Avoid biting nails on the floor.
- Manage body odour & bad breath to be under control as they are offensive to the customer.
- Maintain straight & upright posture on the shop floor.
- Slouching on the floor, hands in pockets, hands on the hips are not courteous to the customer.
- Keep your hands out of your pocket
- Don't Fidget. Fidgeting is a clear sign of nervousness
- Keep your eyes forward. This indicates that you are interested in communication with other.
- Stand up straight with your shoulders back. It communicates confidence.
- Don't cross your arms when meeting other persons.

7.3.3 Personal Hygiene

Personal Hygiene is the set of practices to follow to preserve one's health. Maintaining a high level of personal hygiene will help to increase self-esteem while minimizing the chances of developing infections. Poor personal hygiene can have significant implications on the success of job applications or chances of the promotion.

7.3.4 Physical Fitness

Apart from following these hygienic practices, one should also be physically fit. Physical fitness is an outcome of regular exercise. Exercise may be of many different forms. Jogging, morning-walk, weight-lifting, gym, swimming, cycling, yoga and many more.

Things to be avoided

There are certain habits that have severe ill-effects on one's health. Such habits should be avoided for a healthy life.

- Alcoholism
- Tobacco / Smoking
- Gutkha

UNIT 7.4: Development of Interpersonal Skill

Unit Objectives

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

1. Develop a positive attitude and behaviour.
2. Describe the goal setting.
3. Motivate for team participation at work.
4. Practice relations and stress management at work.
5. Develop leadership qualities.

7.4.1 Introduction

Interpersonal skill development is the blend of different traits of day to day life that play an important role in creating our impression in other's mind. It starts from inside. The role of interpersonal skill development is to help us understand how to make choices about our attitudes and actions.

These include various traits like:

- Positive Attitude
- Motivation
- Goal Setting
- Team Work
- Managing Relations
- Etiquette
- Stress and Anger Management
- Conflict Resolution

7.4.2 Goal Setting

Goal setting is a powerful process for thinking about your ideal future. The process of setting goals helps you to choose where you want to go in life.

Goal setting involves establishing specific, measurable, achievable, and realistic and time targeted goals. Goal setting helps people work towards their own objectives. Goals are a form of motivation that sets the standard for self-satisfaction with performance. Achieving the goal one has for oneself is a measure of success and being able to meet job challenges is a way one measures success in the workplace.

1. Financial
2. Education
3. Family
4. Health
5. Public Service

7.4.3 Team Dynamics

A team comprises a group of people associated for a common purpose. Teams are especially appropriate for conducting complex tasks. A team is a special instance of a group in which shared goal is the common thing. This creates a dynamic between team members and because they are dependent on each other for success. For example a sports team wins or loses as a whole.

Factors of Team Dynamics

- Tolerance and Cooperation
- Set aside feelings of caste, creed, profession
- Put up with each other
- Identify strengths of each
- Who can do what

7.4.4 Managing Relations

We all have different personalities, different wants and needs, and different ways of showing our emotions which affects people around us.

70% of the workplace learning is informal, when people talk to each other at work they actually are learning to do their job better. Friendlier workers are effective communicators, more productive and trusted more by employers and co-workers.

Stress and Anger Management

Anger is a normal and a healthy emotion. Managing anger can be a problem for some people who find it difficult to keep their anger under control. There are many health issues related to a unresolved anger such as high blood pressure, heart attack, depression, anxiety, colds and flu and problems related with digestion.

Always remember:

- Avoid unnecessary stress, learn to say no and take control of your environment.
- Express your feelings instead of boiling them up.
- Accept the things you can't change.
- Learn to forgive.
- Don't react immediately.
- Post pone for a few seconds whatever you wish to say or do.
- Take a deep breath.
- Speak when you have calmed down.

7.4.5 Etiquette

Etiquette are the customs or rules governing behaviour regarded as correct or acceptable in social and official life. It includes:

- Making Positive Impression
- How you treat with people
- Communicating at Workspace
- Work Ethics
- Discipline
- Commitment to work:
- Punctuality
- Ownership and responsibility
- Striving to excel:

7.4.6 Conflict Resolution

What is a Conflict?

A problem or a situation that may be difficult to understand or to deal with.

Why do we need to resolve conflicts?

- If a problem is not solved or addressed at the right time it may blow out of proportion
- An unsolved problem can be like Cancer which spreads and translates itself into all other areas in life
- Unsolved problems may lead to increased levels of bitterness and frustration
- It may foster bad habits like back-biting, gossiping, etc.
- Persons involved in conflict may lose focus and target each other's character instead of the specific behavior to be modified.

How to work out Conflicts?

- **STOP** - before you lose control of your temper and make the conflict worse.
- **SAY** - what you feel is the problem. What is causing the disagreement? What do you want?
- **LISTEN** - to the other person's ideas and feelings.
- **THINK** - of solutions that will satisfy both of you.

If you still can't agree, ask someone else to help you work it out.

7.4.7 Leadership Skills

The ability to lead effectively is based on a number of key skills. These skills are highly sought after by employers as they involve dealing with a number of people in such a way as to motivate, enthuse and build respect. Some of the qualities that every good leader should possess are:

- Honesty

- Ability to delegate
- Ability to take initiative
- Good communications skills
- Confidence
- Commitment
- Positive Attitude
- Creativity
- Be decisive
- Focus on the big picture

UNIT 7.5: Social Interaction

Unit Objectives

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

1. Analyze the social interaction.
2. Define duties and responsibility.
3. Explain about the team work.

7.5.1 Social Interaction

Social interaction is the process by which we act and react to those around us. It includes those acts people perform toward each other and responses they give in return. Social interaction includes a large number of behaviours. They are:

- Exchange
- Competition
- Cooperation
- Conflict
- Coercin

7.5.2 Self- Introduction

Everyone in their lifetime, have to introduce themselves to the audience or a class. It is a speech which lies around 3 minutes to 5 minutes. It is very important that it gives the first impression to other about us. It has a great impact on your self-esteem and self-confidence. It's helpful in:

- Feeling better about yourself
- Boosting your confidence
- Building your self esteem
- Making friends
- Feeling in control

Points for Self Introduction

- | | |
|-----------------|-------------------------------|
| • Wishes | • Location |
| • Purpose | • Hobbies/Habits |
| • Name | • Life Aim |
| • Father's Name | • Achievements |
| • Family | • Favourite Person's or Ideal |
| • Profession | • Your Strengths and Weakness |

7.5.3 Cooperation

Cooperation is the process of groups of organisms working or acting together for their mutual benefit. Cooperation among family members, friends and peers is very common and healthy. It is the backbone of any society.

Family cooperation provides an avenue for a family to come closer. It increases coping skills and decision making.

Experiential Knowledge: contributes to solving problems and improving quality of life.

- **Emotional support:** Esteem, attachment and reassurance
- **Instrumental Support:** Material goods and services.

How to be a cooperative person

For being a cooperative person following things needs to be done:

- Listen carefully to others and be sure you understand what they are saying.
- Share when you have something that others would like to have.
- Take Turns when there is something that nobody wants to do, or when more than one person wants to do the same thing.
- Compromise when you have a serious conflict.
- Do your part the very best that you possibly can. This will inspire others to do the same.
- Show appreciation to people for what they contribute.
- Encourage people to do their best.
- Make people needed. Working together is a lot more fun that way.
- Don't isolate or exclude anyone. Everybody has something valuable to offer, and nobody likes being left out.

UNIT 7.6: Group Interaction

Unit Objectives

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

1. Participate in group discussions in the class.
2. Give speech in the public.
3. Paraphrase the importance of team building and team work.

7.6.1 Group Interaction

Every day we meet with groups of people socially and professionally. How we interact plays a large role in the impressions we create. Interaction that occurs while a group completes a cooperative task describes how the group works.

Everything you do in a group setting makes an impression on everyone in the group. Don't ever think something doesn't matter. Everything matters. Take every opportunity to take part in informal and formal group interactions. Start by making small contributions to discussion, prepare a question to ask or agree with another person's remark. Ask for other persons opinion.

Dos and Don'ts of Group Interaction

Do's	Don't
<ul style="list-style-type: none"> • Speak pleasantly and politely to the group. • Respect the contribution of every speaker. • Remember that a discussion is not an argument. Learn to disagree politely. • Think about your contribution before you speak. How best can you answer the question/ contribute to the topic? • Try to stick to the discussion topic. Don't introduce irrelevant information. • Be aware of your body language when you are speaking. • Agree with and acknowledge what you find interesting. 	<ul style="list-style-type: none"> • Lose your temper. A discussion is not an argument. • Shout. Use a moderate tone and medium pitch. • Use too many gestures when you speak. Gestures like finger pointing and table thumping can appear aggressive. • Dominate the discussion. Confident speakers should allow quieter students a chance to contribute. • Draw too much on personal experience or anecdote. Although some tutors encourage students to reflect on their own experience, remember not to generalize too much. • Interrupt. Wait for a speaker to finish what they are saying before you speak.

Fig. 7.6.1: Dos and Don'ts of Group Interaction

7.6.2 Teamwork

Teamwork is a very important part of working life. They can have a big impact on:

- The profitability of an organisation
- Whether people enjoy their work
- Staff retention rates
- Team and individual performance

Importance of Team Building

Team building activities not only boost morale of the team members, but it can also increase the success rate of the teams. Team building is an important activity as it:

- Facilitates better communication
- Motivates employees
- Promotes creativity
- Develops problem-solving skills
- Breaks the barrier

UNIT 7.7: Time Management

Unit Objectives

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

1. Describe the concept of time management.
2. Develop time management skills.
3. Explain effective time planning.

7.7.1 Time Management

Time management is the act of process of planning and exercising conscious control over the amount of time spent on specific activities, especially to increase effectiveness, efficiency or productivity. It is an activity with the goal to maximize the overall benefit of a set of activities within the boundary condition of a limited amount of time.

Some effective time management

- Delegate tasks.
- Identify time wasters.
- Combine activities – Plan for them.
- Break down big tasks down to the smallest task possible.
- Accomplish them one by one.
- At the end of the day conduct a simple analysis to see which activity took time.

7.7.2 Pareto Analysis

- According to this 80% of the tasks can be completed in 20% of the time. The remaining 20 % of the tasks take 80 % of your time. And the task which should fall in first category should be given a higher priority.
- Time also depends on the method adopted to complete the task. There are always simpler and easier ways to complete the task. If one uses complex ways then it will be time consuming. One should always try to find out alternate ways to complete a task.

Urgent Important Matrix

1. The Urgent and Important Tasks	2. The Non Urgent but Important Tasks
DO NOW <ul style="list-style-type: none"> • Emergencies, complaints and crisis issues • Demands from superiors • Planned tasks or project work now due • Meetings with superiors/colleagues 	PLAN TO DO THEM <ul style="list-style-type: none"> • Planning, preparation • Scheduling • Designing, testing • Thinking, creating, modelling the data

3. The Non Important but Urgent Tasks	4. The Non Important and non-Urgent Tasks
<p>REJECT AND EXPLAIN</p> <ul style="list-style-type: none"> • Trivial requests from others • Apparent emergencies • Misunderstandings appearing in work • Pointless routines or activities 	<p>RESIST AND CEASE</p> <ul style="list-style-type: none"> • Comfort' activities, computer • Games, net surfing, excessive • Cigarette breaks • Chat, gossip, social • Communications • Reading irrelevant and useless material

Fig.7.7.1: Urgent Important Matrix

This matrix helps you understand:

- What should be done
- What should be planned
- What should be resisted
- What should be rejected

The simplest method of managing time is to create a general to do list. Prioritize the task list:

- A daily list of things to do, numbered in the order of their priority
- Start with the most unpleasant and difficult task first latter will completed easily and quickly.
- Map out everything while making a task list
- Learn to say "No" to unimportant things
- Strikeout the things completed so that you are familiar what have been completed and what needs to be completed.

Prioritize the above mentioned activities in the following heads.

Important Tasks	Unimportant Tasks	Urgent Tasks	Not Urgent Tasks

UNIT 7.8: Resume Preparation

Unit Objectives

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

1. Explain the importance of resume.
2. Discuss basic steps for the preparation of a resume.

7.8.1 Introduction

A resume is a self-advertisement that, when done properly shows how your skills, experience and achievements match the requirement of the job you want. The resume is a tool with one specific purpose to win an interview. It convinces the employer that you have what it takes to be a successful in the new career or position.

It also establishes you as a professional person with high standards and excellent writing skills based on the fact your resume is written well. It also helps you clarify your direction, qualifications and strengths, boost your confidence or to start the process of committing to a job or a career change.

One must know about a resume that:

- Your resume is to get you an interview not a job
- Your resume will be screened by an employer for just 15-20 seconds. That's all the time your resume has to make an impact.

There are different sections on the resume in the same order as mentioned under:

Section	What is the employer looking for
Header	Your identity and to contact you
Objective	To check if their requirement and your objective match
Education	To check if you have the basic qualification for the job/ internship you are applying for
Practical Experience/Projects	To see if you have done anything that reflects your potential capability. Also to see how different you are from your peers.
Skills	How equipped you are in terms of your personality traits as well as occupational skills
Interests	Professional aspects apart, how meaningful is your life?
Other	Is there anything else significant and relevant you want to showcase, that will add value to your resume.

Fig. 7.8.1: Different sections on the resume

7.8.2 Points to Remember

- Make sure that the length of your resume does not exceed 2 pages.
- Do a thorough recheck and make sure there are absolutely no errors in your resume. No grammatical errors, no spelling mistakes, no punctuation errors.
- Run through your resume time and again for to make improvements and wording sentences better.
- Choose a professional font in a size 11 or 12. You can use multiple fonts for different parts of resume, but try to limit it maximum of two fonts. Instead changing between fonts, try making specific sections bold or italicized instead.
- The font size of your header and the introduction to a section may be a size 14 or 16.
- Your text should always be printed in solid black ink. Make sure to deactivate any hyperlinks so that they don't print in blue or other contrasting colour.
- Your page should have one inch margin all the way around with 1.5 or 2 point line spacing. The body of your resume should align left and your header should be centred at the top of the page.

UNIT 7.9: Interview Preparation

Unit Objectives

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

1. Explain the procedure of an interview.
2. Prepare for interview.

7.9.1 Interview

An interview is a conversation between two or more people (the interviewer(s) and the interviewee) where questions are asked by the interviewer to obtain information from the interviewee. An interview is the first and last hurdle you need to cross in order to get a job.

Common Types of Interview

1. **Traditional HR Interview:** Most interviews are face to face. The most traditional is a one-on-one conversation with the HR Executive where the candidate's focus should be on the person asking question. You are advised to maintain good eye contact, listen keenly and answer promptly.
2. **Panel Interview:** In this situation, there is more than one interviewer. A panel ranging from two to ten members may conduct this part of the selection process. This is an ideal chance for you to display group management and group presentation skills.
3. **Technical interview:** The objective of this interview is to basically evaluate technical knowledge. Majority of the questions will be based on the skills sets mentioned in the candidate's resume.
4. **Telephone Interview:** Telephone interviews may also be used as a preliminary interview for candidates who live far away from the job site.

Before going for an interview, it is important to have clarity of the role you are applying for. It's also important that you know where you are applying and who will you be talking to. Your answers should tell the employer that you are the match they are looking for.

This requires you to do a small research on the following fields:

- Company & Field
- Job Description
- Yourself (Skills, Values & Interests)
- Resume (Experience)

It is important that you dress professionally. It is a proven fact that the way we dress makes a huge difference in the way we are perceived. 90% of the way you communicate with other people is through body language (gestures, expressions, etc.) and the first Impression we make. It is very simple to make a great first impression.

For a good first impression it is important those we:

- Smell good
- Have a professional appearance

- Pay attention to your grooming
- Make eye contact
- Know what and how you speak
- Our overall personality contributes to our complete perception.

How to dress for Interview

Men	Women
Long-sleeved buttoned shirt (clean and pressed)	Conservative pump, no stilettos
Dark shoes (cleaned and polished) and dark socks	Jewellery -One set of earrings (preferably knobs)
Get a haircut (short hair is always best)	No bangles
No Jewellery (chains, earrings, piercing)	Minimal use of makeup
No beards or Tattoos	

Fig.7.9.1: Dress for Interview

7.9.2 The Do's and Don'ts in an Interview

Some of you might have faced an interview and some of you might not have. However, by now, you definitely have a better understanding what are the accepted standards of a professional behaviour. Read the sentences given and mark them as do's or don'ts, in relation to an interview:

Sentence	Do's	Don'ts
Be yourself		
Burp while talking!!!		
Just out from a 'powder factory' (worn too much make-up)		
Reach just about the right time for the interview		
Just barge in the cabin/ office		
Forget to greet the receptionist/ don't respond		
Think before you speak		
Do your homework- Visit the company website		
Take time to think (TTTT)		
Wear bright colour clothes on the D-day		
Emphasis on your strengths		
Argue/ Debate with the interviewer		
Chew gum during the interview.		
Review your educational and work experiences		
See your documents flying out of the file (Being clumsy)		
Thank the interviewer		
Have the 'they need me' attitude		

Maintain eye contact and good body language		
Only give monosyllabic answers(depends on the kind of questions asked... in-between)		
Carry a copy of your resume		

Fig.7.9.2: Do's and Don'ts in an Interview

7.9.3 During the Interview

- Be confident, not arrogant
- Sell yourself - Keep your energy up
- Maintain your posture
- Be positive, don't complain
- Know your resume and accomplishments.

It isn't sufficient to have ideas. They have to be expressed effectively in the interview. The parameters that the candidates are assessed on during the interview are very simple. These are the parameters that this training program has prepared you for.



8. IT Skills

Unit 8.1 - Introduction to Computer

Unit 8.2 - MS Word

Unit 8.3 - MS Power-point

Unit 8.4 - MS Excel

Unit 8.5 - Internet Concepts



Key Learning Outcomes

At the end of the module, participants will be able to:

1. Familiarise with computers.
2. Identify and use basic uses of a computer.
3. Familiarise with a computer operating system.
4. Use Microsoft Word, Excel and Powerpoint.
5. Familiarise with Internet and use e-mails.

UNIT 8.1: Basic Computer Knowledge

Unit Objectives

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

1. Define the computer.
2. Recognise its various parts.
3. Differentiate the advantages and disadvantages of computer.
4. Explain the web, email services.

8.1.1 What are Computers?

Computer is the greatest technology of all times. An innovative electronic device that takes raw data as input from the user and processes these data under the control of set of instructions which is called program, to give the result the output. The first fully electronic computers, announced in the 1940s, were huge machines. The computer of today's time is thousands of times faster and in any size you want. They can fit on your desk, on your lap, or even in your pocket. Computers work through an interface of hardware and software.

Computers work through an interaction of hardware and software.

- **Hardware = Internal Devices + Peripheral Devices:** All concrete parts of the computer (or everything that we can touch) are known as hardware. The most significant piece of hardware is a tiny quadrangular chip inside the computer called the central processing unit (CPU), or microprocessor. It's the "brain" of the computer—the part that interprets instructions and performs calculations. Hardware items such as your monitor, keyboard, printer, mouse and other components are often called hardware devices.
- **Software = Programs:** Software provides "intelligence" to the computer. Software refers to the instructions, or programs, that tell the hardware what to do. A word-processing program that you can use to write letters on your computer is a type of software. The operating system (OS) is software that manages your computer and the devices linked to it. Windows is a well-known operating system.

8.1.2 Advantages of Computers

Compared to conventional systems, computers offer many notable benefits. The main benefits offered by computers are as follows:

- High Accuracy
- Superior Speed of Operation
- Large Storage Capacity
- User-friendly Features
- Portability
- Platform independence
- Economical in the long term

What can you do with computers?

In the workstation, many people use computers to keep chronicles, records, analyze data, do research, and manage projects. At home, you can use computers to find information, track finances, store pictures and music, play games, and connect with others—and those are just a few of the opportunities. You can also use your computer to link to the Internet, a network that associates computers around the world. With Internet access, you can interconnect with people all over the world, communicate with them and find a vast amount of information. Some of the most prevalent things we can do with computers are cited in this chapter.

8.1.3 The Web

The World Wide Web is an enormous warehouse of information. The web is the most prevalent part of the Internet, partly because it exhibits most information in a visually pleasing format. Headlines, text, and images can be combined on a single web page—along with sounds and animation. A website is a collection of interconnected web pages. The web contains millions of websites and billions of web pages.

Surfing the web means reconnoitering or exploring it. You can find information on the web about almost any topic possible. For example, you can read news stories and movie reviews, check airline schedules, book a hotel, find places to dine, see street maps, search the route to reach a place, get the weather forecast for your city, or research a health condition.



Fig.8.1.1: A Microsoft Web Platform

8.1.4 E-mail

Who writes letters these days? Email which is a short form for electronic mail, is the most appropriate way to communicate with others to date. When you send an e mail message, it arrives almost instantly in the receiver's email inbox. You can send email to many people at the same time and you can save, print, and forward email to others. You can send almost any type of file in an email message, including documents, pictures, and music files.

8.1.5 Instant Messaging

Instant messaging is like having a real-time conversation with another person or a group of people. When you type and send an instant message, the message is instantly visible to all participants. Unlike an email, all participants have to be online (connected to the Internet) and in front of their computers at the same time. Interaction by means of instant messaging is called chatting.

8.1.6 Pictures, Music and Movies

If you have a digital camera, you can move your images from the camera to your computer. Then you can print them, create slide shows, or share them with others by e mail or by posting them on a website. You can also listen to music and watch movies on your computer. Computer has become a prominent source of entertainment.

UNIT 8.2: MS Word

Unit Objectives

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

- Learn the concept of and practice MS-Word.
- Format a document.
- Print a document etc.

8.2.1 Creating a Word Document

Concepts of word processing - MS Word

Most people who use a computer daily use word processing skills. Word processing skills enable us to prepare text documents like letters, memos, and different correspondence. Most up-to-date word processing software package permits us to create text documents that embody photos and drawings.



Fig.8.2.1: MS Word Icon

Once the document that has opened, type a short paragraph of why you are taking this mini- session. For example, are you new to Microsoft Word 2007 or are you up your software your skills? Keep in mind to purposely misspell some words. Later in the session you'll use this paragraph to learn the way to spell check and use basic Word 2007 functions.

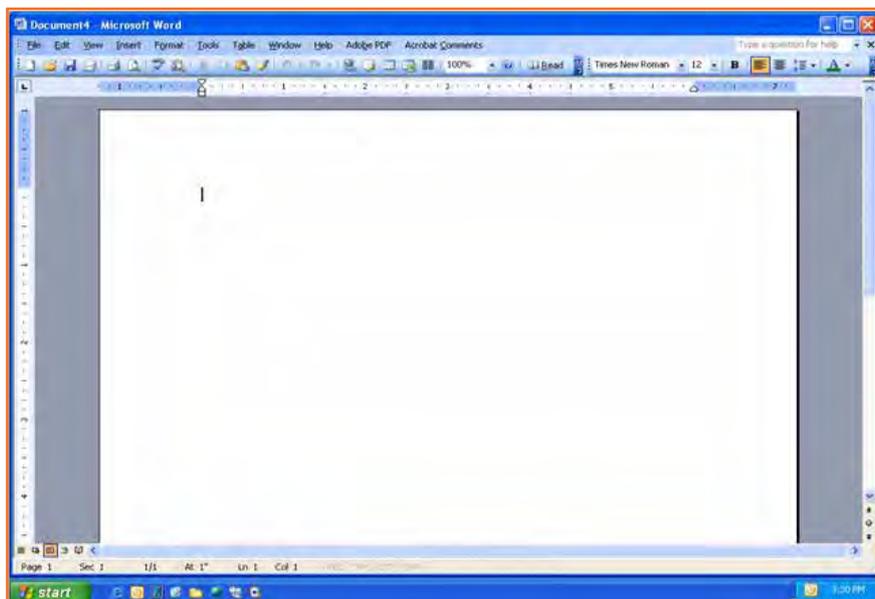


Fig.8.2.2: MS Word Window

The above image shows components of the Word window, that also contains a document in the window. This view displays rulers at the top and along the left aspect that indicate the size of the page.

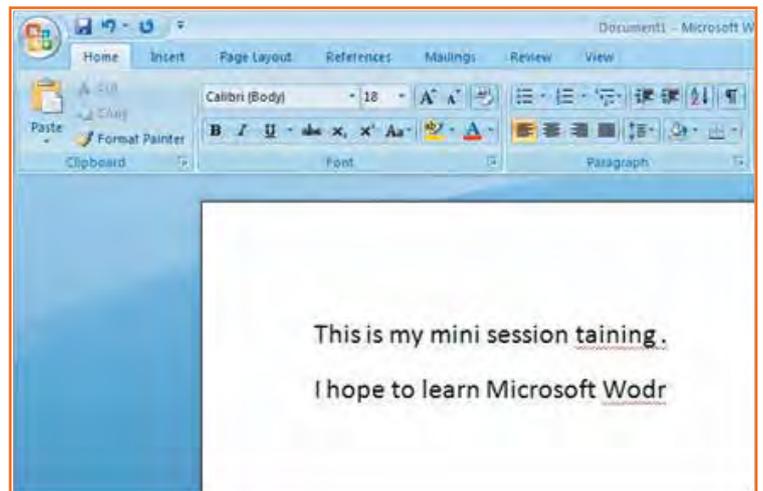


Fig.8.2.3: Writing Text in MS Word

8.2.2 Saving a Document

A Command is used for a first-time save or if you have created revisions to a document and want to replace the previous version with the new revised document. Use the 'Save as' command to save a revised document to a new name, so keeping the original as it was before revisions or to save a copy of a document in a different folder.

- **Step 1:** Save your document in the "My Documents" folder.
- **Step 2:** In the 'File Name' box enter the document name.
- **Step 3:** Check to make sure in the 'Save As Type' box the word document is (*.docx)*.



Fig.8.2.4: Saving a Document

8.2.3 Change Font Type and Size

As shown within the image below, the document that you have just created, you are currently going to format the font size and type different fonts and sizes can offer character to words in your document i.e. once you are creating your resume, you use bold as an 'eye-catcher' also, font size affects word characteristics.

1. **Step 1:** Highlight the text you wish to change the font and size for; in this practice highlight your name.
2. **Step 2:** Click on the font menu, select Theme font for e.g. Arial Black and then select the size of the font (let's say 16) as shown in the image below.

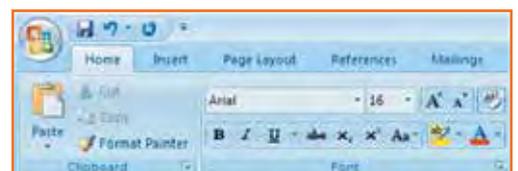


Fig.8.2.5: Change Font Type and Size

3. **Step 3:** Now click on SAVE in the Quick Access Toolbar to save your document (Refer to the second picture below, for saving your document).

8.2.4 Create Headers and Footers by Inserting Texts

Headers and Footers in the word document are needed to insert information like text, page numbers and date. Information on either header or footer can appear in all current document pages by default, you don't have to re-type in the header or the footer column once you add a new page to your current document. The header information appears at the top of the page whereas the footer information appears at the bottom of the page.

Follow to the simple steps and refer to the image below to make it work:

- **Step 1:** Click on the option 'insert' right next to 'Home' from the bar above the word page and select 'Header'.
- **Step 2:** Choose a style you like, (for now use blank).
- **Step 3:** Let's use your last name to fill it; now hit enter.
- **Step 4:** Add today's date and then highlight your last name and date.
- **Step 5:** Click on the Home tab from the menu.
- **Step 6:** Now select 'Home' from the bar and then click on 'left justification button'.
- **Step 7:** finally click 'close Header and Footer'.

NOTE: the Header Menu will close and return you to your document to continue typing.

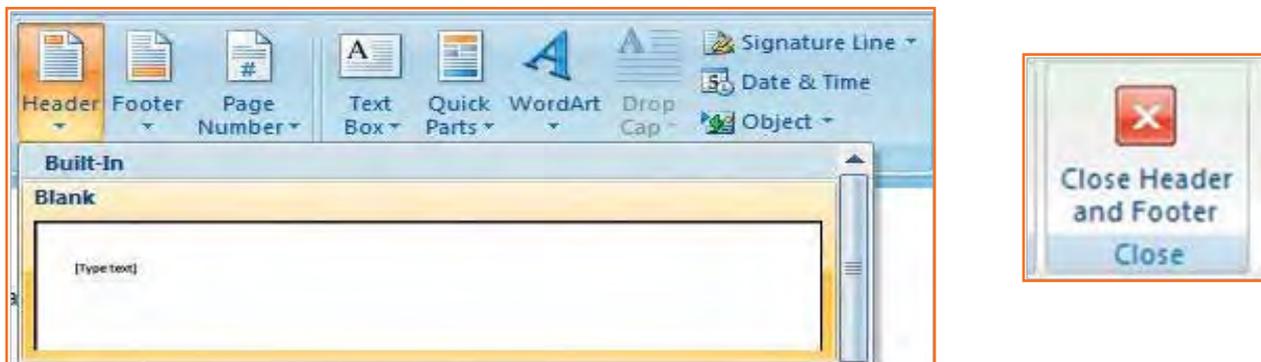


Fig.8.2.6: Headers and footers

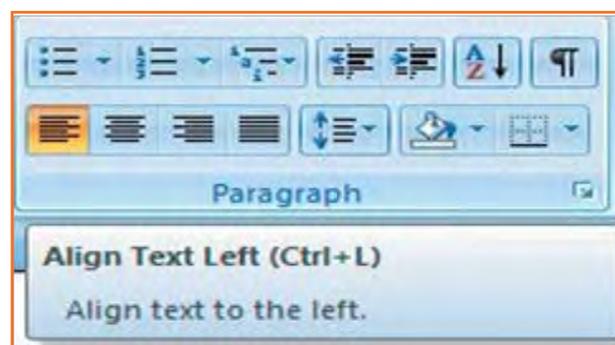


Fig.8.2.7: Formatting

8.2.5 Indents and Spacing

Spacing your word document in a right way!

To prepare project reports which needs paragraphs in double line spacing so it is very important to understand how you would be able to change the space between lines and paragraphs by doing the following:

1. **Step 1:** Select the paragraph or paragraphs you wish to change.
2. **Step 2:** Click on the Home Tab then click 'Paragraph' Dialog Box.
3. **Step 3:** Click the 'indents and spacing' Tab.
4. **Step 4:** In the 'Line Spacing' section, adjust your spacing accordingly.
5. **Step 5:** The image below shows visual version of how your page would like.

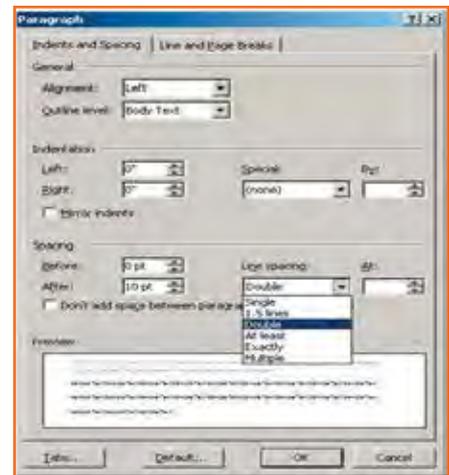


Fig.8.2.8: Indents and Spacing

8.2.6 Modifying Margins

MS-Word 2007 allows you to preview how your paper will look if the margins are modified. The page margins can be modified through the following steps:

- **Step 1:** Click the 'page layout' tab from the bar.
- **Step 2:** Now select 'Margins' from there.
- **Step 3:** Click a default margin Or,
- **Step 4:** Click custom margins and complete the dialog box.

NOTE: As you roll over each Margin preset, it will show you how the document will look when it is modified.

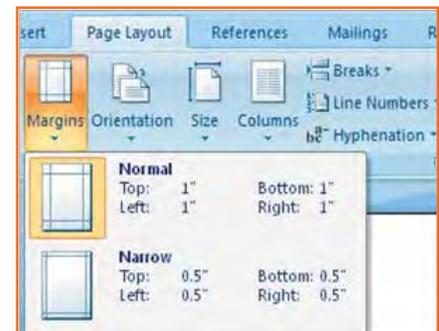


Fig.8.2.9: Modifying Margins

8.2.7 Lists

Lists enable you to format and organize text with numbers, bullets, or in an outline. Instead of using numbers for steps, an outline list is used to show an example of a type of number lists.

8.2.7.1 Bulleted and Numbered Lists

Bulleted lists have bullet points, numbered lists have numbers, and outline lists combine numbers and letters depending on the organization of the list.

How to add list to the existing text?

1. **Step 1:** Select the text you wish to make a list.
 2. **Step 2:** Click a bulleted or numbered lists button from the paragraph tab on the home tab.
- Now, to create a new list in your document, place your cursor where you want the list to begin. Click a bulleted or numbered lists button and start typing.

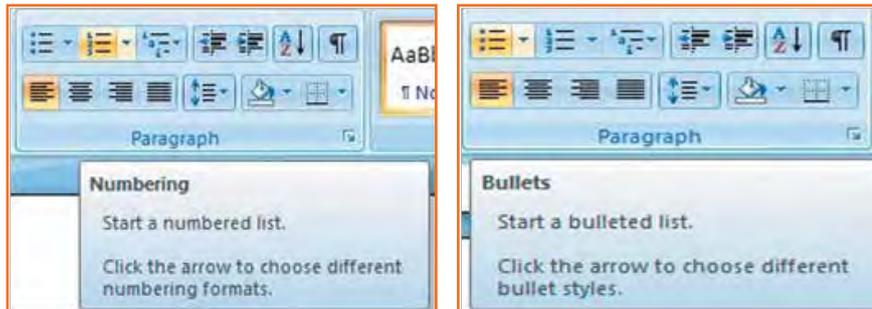


Fig.8.2.10: Bulleted and Numbered Lists

8.2.7.2 Formatting Lists

- **Step 1:** The bullet image and numbering format can be changed by using the bullets or numbering dialog box.
- **Step 2:** Select the entire list to change all the bullets or numbers, or place the cursor on one line within the list to change a single bullet.
- **Step 3:** Right click once.
- **Step 4:** Click the arrow next to the bulleted or numbered list.
- **Step 5:** Now, select a bullet or numbering style.

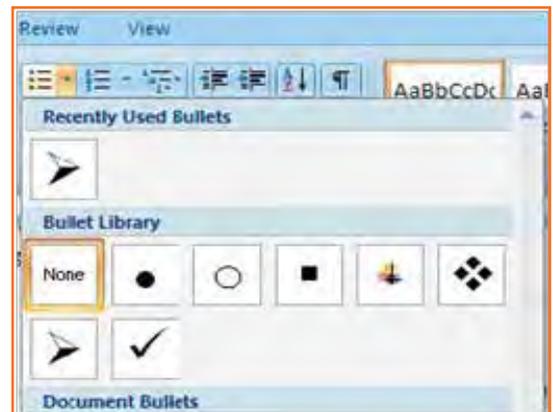


Fig.8.2.11: Formatting Lists

8.2.8 Spelling and Grammar

There are many features in Ms-Word 2007 to help you proof-read your document these features include:

- Spelling and Grammar
- Thesaurus
- AutoCorrect
- Default Dictionary
- Word Count

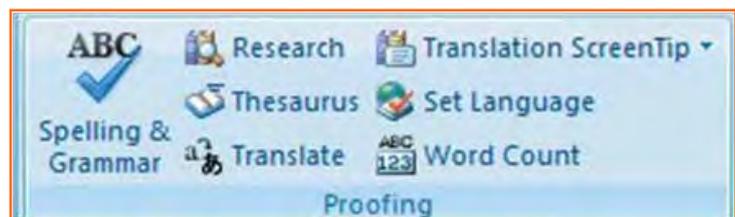


Fig.8.2.12(a): Spelling and Grammar

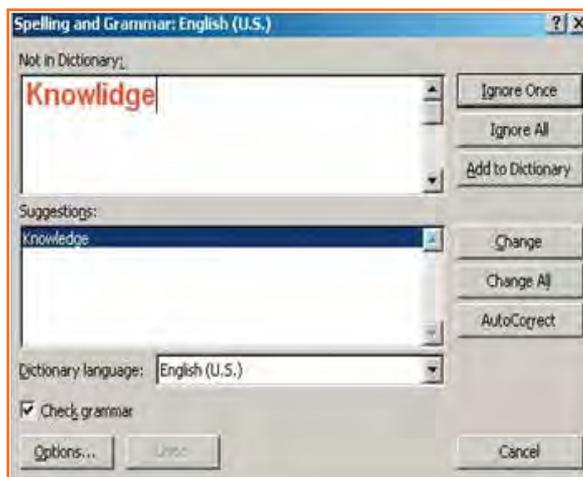


Fig.8.2.12(b): Spelling and Grammar

The most common feature used is the spelling and grammar checker tool. To check the spelling and grammar of your document:

1. **Step 1:** Place the cursor at the beginning of the document or the beginning of the section that you want to check.
2. **Step 2:** Click the 'Review' Tab on the Ribbon.
3. **Step 3:** Click 'Spelling & Grammar' on the Proofing Group.

Note: Any errors will display a dialog box that permits you to choose a additional appropriate spelling or phrasing. Go through the spelling and grammar checker to correct any spelling errors you may have created in your document. Once the spelling and grammar checker has completed, you will see a dialog box that notifies you 'The spelling and grammar check is completed'.

8.2.8.1 Word Count

To count words in one selection, you can select the words you want to count. The status bar displays the number of words in the section for e.g. 50/1,200 means that the section accounts for 50 words out of the total number of 1200 in the document.

Note: To select the sections of text that are not next to each other, select the first section and press hold down CTRL (from the keyboard) and select the additional section.



Fig.8.2.13(a): Word Count

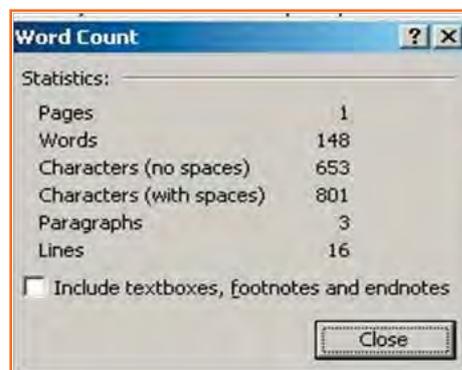


Fig.8.2.13(b): Word Count

8.2.9 Different Editing Modes in Word

Insert mode and an overtype mode. When insert mode (default) is active, the data you can type is inserted at the insertion point where as when over-type mode is active the information is active it isn't inserted however; it replaces text as you sort. To modify between the two modes double click o the OVR letters on the standing bar.

Another interesting fact about the word document is that it's not just a document to write things however you can add expression to your document by inserting pictures with the document, currently let's see however this will be done. Invariably bear in mind to not use any copyright image if you are using any pictures from the Internet.

The insert picture method supports graphics that may be are too large to fit on the clipboard. The default setting for inserting or pasting pictures is "In Line With Text." The Advanced Word options, located in the office Button Commands Gallery, allow you to change the default settings to any of the available text wrapping styles.



Fig.8.2.14: Sample Image

8.2.10 Inserting an Image and Table

1. **Step 1:** Place the insertion point at the location where the image has to be placed In the document.
2. **Step 2:** Select Insert tab>> illustrations gallery.
3. **Step 3:** Now select *Insert picture*.
4. **Step 4:** Navigate to the appropriate location where the image is stored.
5. **Step 5:** Now select the appropriate image which you want to insert in the document by doing a double click on the image.

Similarly, now let's see how to insert a table in a word document

The table feature can be used to organize data into rows and columns without having to set tabs. Tables can even be used to produce forms and side by side paragraphs. A table consists of vertical columns and horizontal rows, the inter-section of these rows and columns produce cells. A cell is every individual square in which you'll be able to enter text. The tab key advances the pointer to next cell (Shift + tab) it moves the pointer backward within a table.

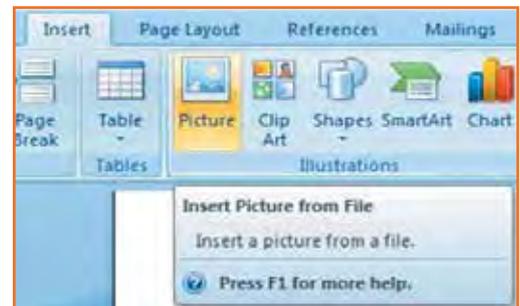


Fig.8.2.15 Inserting an Image

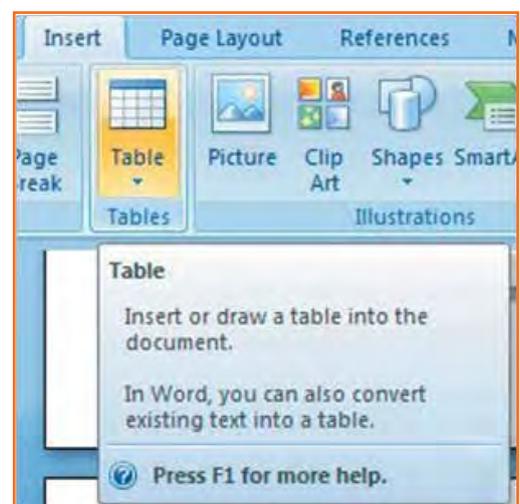


Fig.8.2.16(a): Inserting an Table

Steps below would make it much easier for you to understand how to create a table:

1. **Step 1:** Place the insertion point at the desired location on your word document.
2. **Step 2:** From the bar select Insert tab>>tables gallery.
3. **Step 3:** Now select insert table.
4. **Step 4:** Enter desired numbers of columns and rows at insert table dialog box.
5. **Step 5:** Now select AutoFit behavior.
6. **Step 6:** Click OK.



Fig.8.2.16(b): Inserting a Table

8.2.11 Inserting a Blank Page

The blank page command permits you to manually insert a blank page at the required location. When you fill a page with text or graphics, Microsoft office Word inserts an automatic page break and starts a new page. However, you'll manually add pages or delete pages by adding page breaks or deleting page breaks. Refer to the image given.

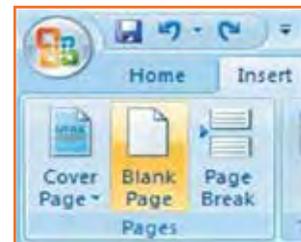


Fig.8.2.17: Inserting New Page

8.2.12 Inserting a Page Break

You can insert a page break anywhere in the document, or you can specify wherever Microsoft Word positions automatic page breaks. If you insert manual page breaks in documents that are quite many pages in length, you might have to frequently re-break pages as you edit the document. To avoid the difficult of manually re-breaking pages, you can set choices to control where word positions automatic page breaks. Refer to the image given.

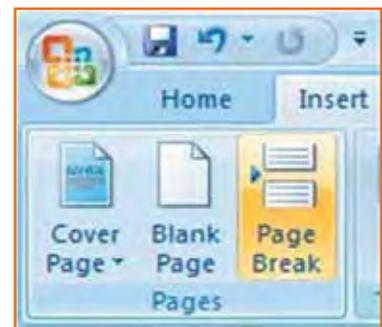


Fig.8.2.18: Inserting Page Break

8.2.13 Inserting a Cover Page

- **Step 1:** From the insert Tab, select Cover Page, the cover page drop down menu will be displayed.
- **Step 2:** Select from the pre-formatted options under Cover Page.
- **Step 3:** To insert a blank page or a page break, position your insertion point at a desired location.
- **Step 4:** Now, from the insert tab, select blank page or page break as shown in the image below.

Now, once the document is ready let's focusing on learning how to get the document in a hard copy.

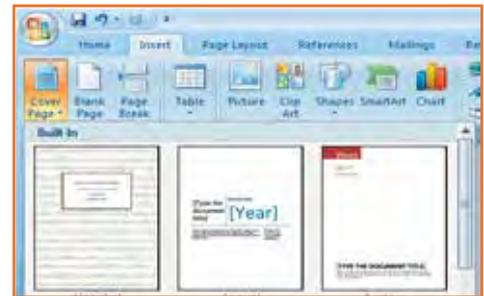


Fig.8.2.19: Inserting Cover Page

8.2.14 Printing the Word Document

1. **Step 1:** Click the 'Home' key, select 'Print', and then 'Print' again.
2. **Step 2:** Choose the printer you will be printing from (Black & White, or Color printer).
3. **Step 3:** Once you have selected the printer of your choice, reassure to check if you have selected the right and the complete document for printing.
4. **Step 4:** Once all above steps are performed, select 'OK' to print your work.
5. **Step 5:** Now that your document is ready and has been printed as well, let's see how can we close and exit this word document completely.

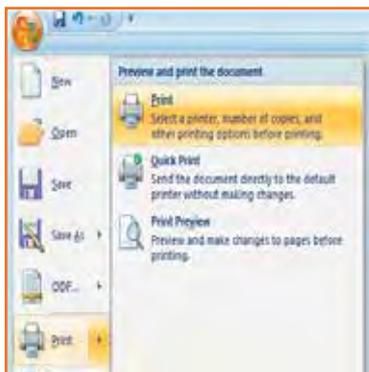


Fig.8.2.20: Printing the Word Document

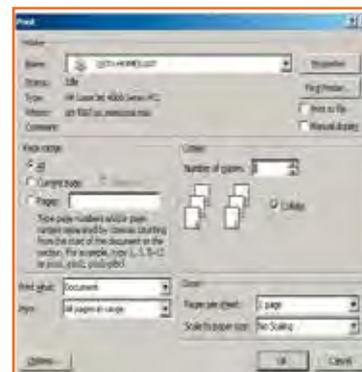


Fig.8.2.21: Print Dialog Box

8.2.15 Closing and Exiting Microsoft Word

It's always good to reassure that your word file has been saved before closing or exiting the word.

Note: Closing word would only close the current document however the word would remain open.

Exiting word would exit the program completely. (You may not have to follow this, it basically depends on what MS word you are having in the system).



Fig.8.2.22(a): Closing and Exiting Microsoft Word



Fig.8.2.22(b): Closing and Exiting Microsoft Word

UNIT 8.3: MS PowerPoint

Unit Objectives

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

- Practice MS-Power-point.
- Make a new presentation.
- Format a slide as well

Power-point is the presentation graphics software in the Microsoft Office suite. PowerPoint has predefined layouts, themes, and templates to create dynamic and professional presentations.

8.3.1 Opening PowerPoint

To open Power-point in Windows, click on the:

Step 1: Start button --> Programs --> Microsoft Power-point. *OR*

Step 2: Double-click on the Power-point icon on the desktop.

When PowerPoint is opened, by default a blank Title slide appears as the first slide in your new presentation. However, to change the layout of an open slide, click on the Layout button in the Home tab.



Fig.8.3.1: PowerPoint Icon

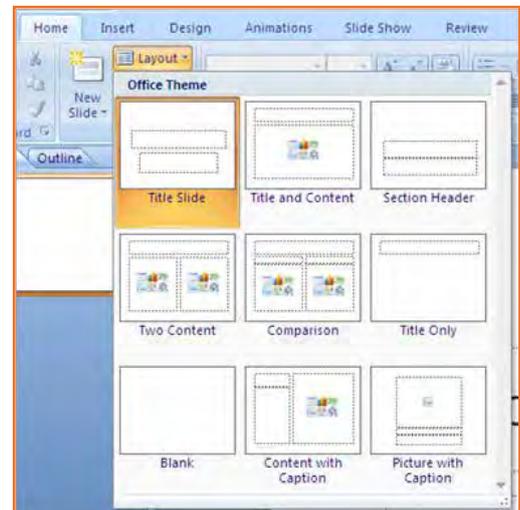


Fig.8.3.2: Layouts in Power-point



Fig.8.3.3: New Document in Power-point

If the Power-point is already open, to begin a new presentation, click on the office button on the top left corner of the screen and choose New.

The New Presentation window can appear. Blank presentation is chosen by default. You wish to click create and a new presentation can open in the Powerpoint window.

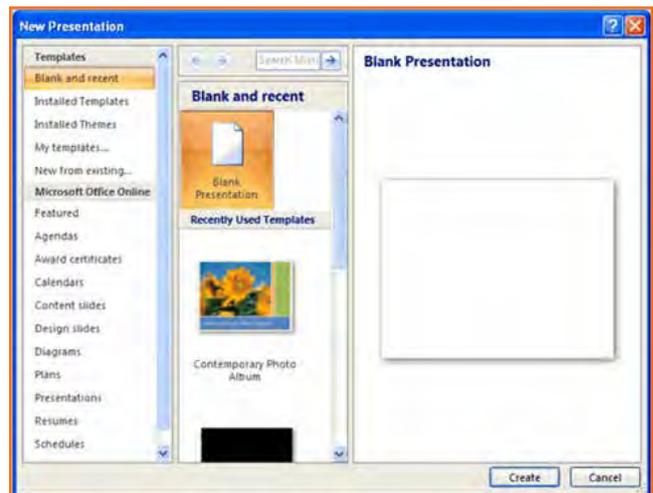


Fig.8.3.4: Create new PowerPoint

8.3.2 Power-point – Understanding the screen

- **Office Button:** It contains the main File Functions: New, Open, Save, Save as, Print, Print Preview, etc.
- **Ribbon Tabs:** Each Ribbon Tab displays a Ribbon that provides a set of Tool Groups. Click on the arrow to open a dialogue box with more options.
- **Command Tabs:** Office 2007 applications automatically open to the Home command tab, which contains formatting options needed to create a basic document. Specialized features can be accessed from other command tabs.
- **Slide and Outline Tabs:** The Slides tab shows thumbnail images of your slides, allowing you to rearrange, add, delete, hide slides and view set transitions as you work. The Outline tab shows the content of your slides, making it easy to rearrange your text.
- **Slide:** In this area you enter the content of your slides. Slides contain placeholders (enclosed by dotted borders) containing text, pictures, and charts.
- **Notes Panel:** This is where you can enter notes. If you wish to enter longer notes, you can go to the View tab and select Notes Page.
- **View Buttons:** These three buttons include:
 - » Normal View - shown here.
 - » Slide Sorter - This allows you to shuffle your slides.
 - » Slide Show - This shows the slides as viewed during presentation.
- **Zoom Slider:** This allows you to zoom in and out on the Slide Panel.

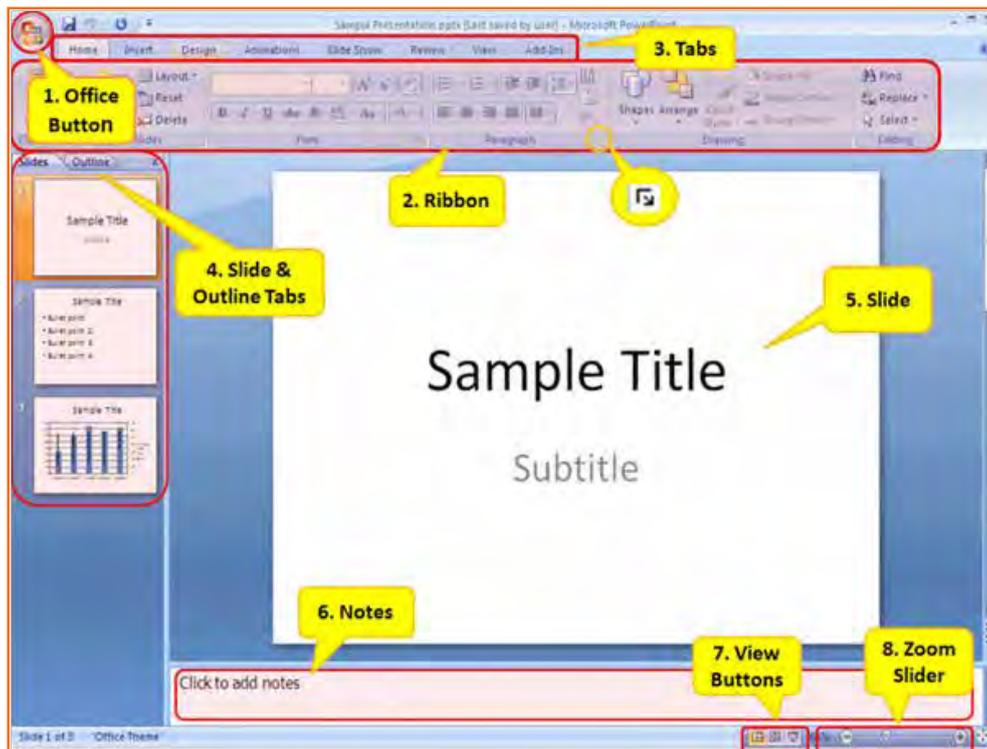


Fig.8.3.5: Power-point screen

8.3.3 Saving a Power-point

- Click the *Save* button on the *Quick Access toolbar*.
- OR
- Click the *Microsoft Office Button* , and then click *Save As*.

In the File name box, enter a new name for the presentation, or do nothing to accept the suggested file name.

In the Save as type list, select the file format that you want, and then click *Save*.



Fig.8.3.6: Save Icon

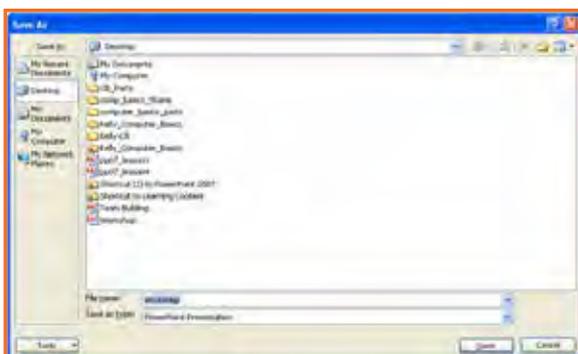


Fig.8.3.8: Save As Dialog Box



Fig.8.3.7: Save As Option

8.3.4 Working with Slides

Insert a New Slide

- **Step 1:** Click the New Slide command in the Slides group on the Home tab. A blank slide will be inserted after your active slide.
- **Step 2:** If you wish to choose the layout while creating your new slide, click the  on the New Slide button and choose a theme.

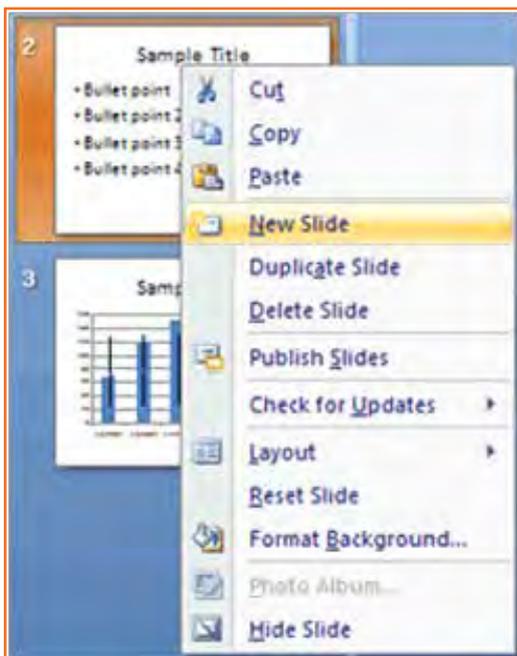


Fig.8.3.10: Insert new slide in PowerPoint



Fig.8.3.9: Insert new slide in PowerPoint

To insert a new slide using the Quick Menu, in the Slides panel right click the slide after which you want a new slide inserted and select New Slide.

Copy and paste a slide

- **Step 1:** Select the slide you want to copy.
- **Step 2:** Click the Copy command on the Home tab.
- **Step 3:** Click inside the Slides tab on the left task pane. A horizontal insertion point will appear.
- **Step 4:** Move the insertion point to the location where you want the copy of the slide to appear.
- **Step 5:** Click the Paste command on the Home tab. The copied slide will appear.
- **Step 6:** You can use the keyboard shortcut Ctrl+C to copy the slide and Ctrl+V to paste it.

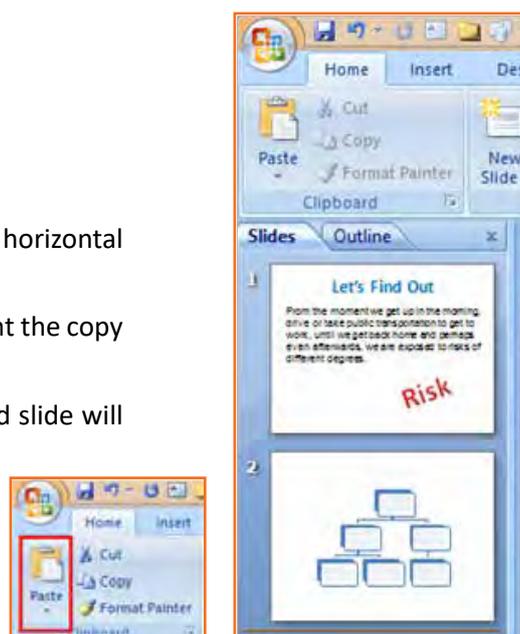


Fig.8.3.11: Copy paste of slide

Delete a slide

- **Step 1:** Select the slide you want to delete and click the Delete command in the Slides group on the Home tab.

Move a slide

- **Step 1:** On the Slides tab in the left task pane, select the slide you want to move.
- **Step 2:** Click and drag the slide to a new location. The insertion point will appear.
- **Step 3:** Release the mouse button.
- **Step 4:** The slide will appear in the new location.

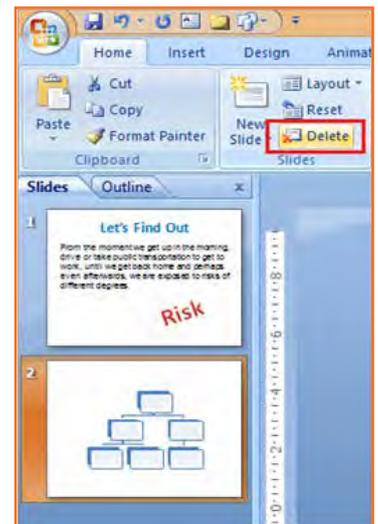


Fig.8.3.12: Delete a slide

8.3.5 View Tabs

Different views allow you to manage different aspects of your presentation.

- **Step 1:** Normal View is the default view. It splits the window into Slide Frame, Notes, and the left frame where you can choose either Slides Thumbnails or Outline.
- **Step 2:** Slide Sorter is thumbnails view of all the slides in the presentation. The slides are displayed horizontally and lets you see the big picture.
- **Step 3:** Slide Show plays the presentation from the beginning with animation.

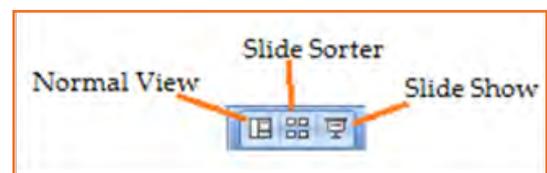


Fig.8.3.13: View Tabs

8.3.6 Animating Text and Images

In PowerPoint, you can add animation to text and objects to draw the audience's attention and add flair to your presentation.

- **Step 1:** Select the object or text box you wish to animate.
- **Step 2:** In the Animations tab under the Animations group, select an option from the Animate drop-down menu. As you hover your mouse over each choice PowerPoint will preview the effect on your slide.

NOTE: Remember that animations are applied only to the article or the text box selected. For adding animation across many slides you may need to add them to every.

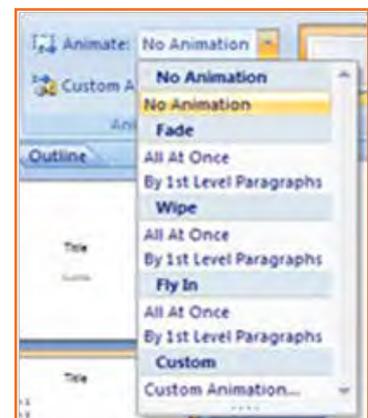


Fig.8.3.14: Animating Text and Images

To apply a custom animation effect:

- **Step 1:** After you select the text or object on the slide you want to animate, select the Animations tab.
- **Step 2:** Click Custom Animation in the Animations group. The Custom Animation task pane will appear on the right.
- **Step 3:** Click Add Effect in the task pane to add an animation effect to the selected text or object.

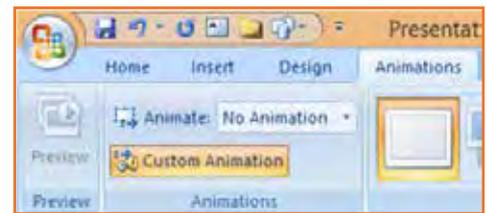


Fig.8.3.15: Adding Animation in PowerPoint

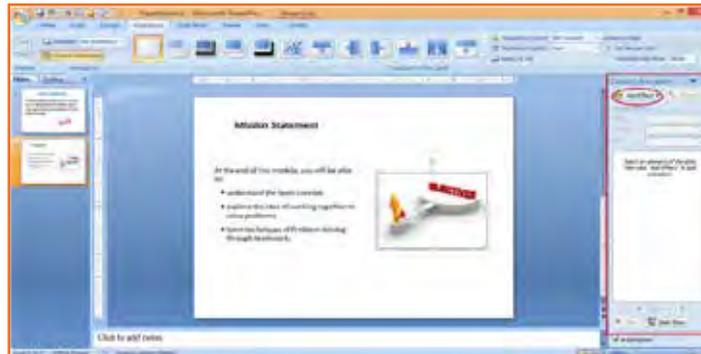


Fig.8.3.16: Animation in Power-point

- **Step 4:** Select Entrance, Emphasis, Exit, or Motion Path to display a sub-menu of animation effects for the category.
- **Step 5:** To customize the speed, properties and timing of your animation, on the Custom Animation Pane click on the effect you wish to modify.
- **Step 6:** To modify an animation, use the options in the Modify: [Effect] section of the Custom Animation Pane. These options will change depending on the effect selected.

Hint: If the button on the Custom Animation Pane says "Change" instead of "Add Effect" click outside the object to deselect it and then click on it again.

8.3.7 Removing Animations

There are two methods:

1. Animations group (remove all at once):
 - » Select the slide and then the object with the animation you would like to remove.
 - » In the Animations tab under the Animations group click on the Animate pull-down menu and select No Animation.
2. Custom Animation Pane (remove one by one):
 - » Select the slide with the animation you would like to remove.
 - » If the Custom Animations pane is not visible, click on the Custom Animation button in the Animations group on the Animations tab.
 - » In the Modify: [Effect] list select the animation to be removed.
 - » Click Remove.

8.3.8 Working with Charts

A chart is a tool you can use to communicate your data graphically.

Chart elements

Let's familiarize with different chart element:

- **Titles:** There are two types of titles:
 - » Chart Title placed above the chart (default).
 - » Axes Titles placed besides the axes (The vertical axis is referred to as the Y axis, while the horizontal axis is referred to as the X axis.)
- **Legend:** The chart key, which displays captions (and/or color coding) to the series on the chart.
- **Data:** This is the range of cells (displayed in excel) that make up a chart. The chart is updated automatically whenever the information in these cells changes.

Inserting Charts

- **Step 1:** Select the Insert tab.
- **Step 2:** Click the Insert Chart command to open the Insert Chart dialog box.
- **Step 3:** Click a chart to select it.
- **Step 4:** The chart will appear on your slide, and Excel will open as a split screen with dummy data already filled in.
- **Step 5:** You add your data and labels to the Excel spreadsheet and the chart will be automatically updated on your slide.

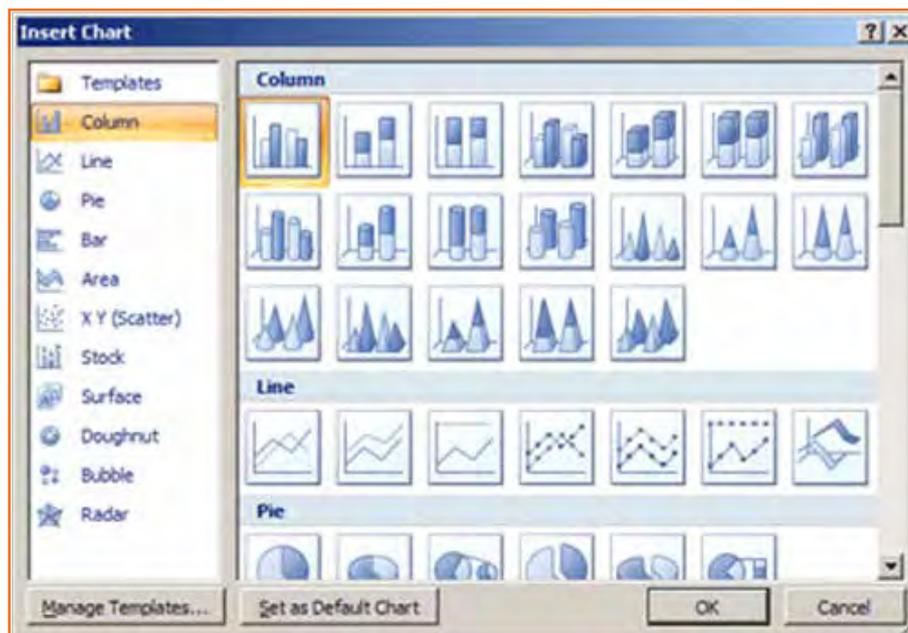


Fig.8.3.17: Inserting Charts

- **Step 6:** When finished, click the Close Window in the upper right hand corner of Excel to close the worksheet.

Changing To a Different Chart

- **Step 1:** You can change your present chart to a different format by right-click on the chart and select Change Series Chart Type. This opens the Change Chart Type dialog.
- **Step 2:** Make a selection and press OK.



Fig.8.3.18: Edit source data

Edit source data

- **Step 1:** Select the chart.
- **Step 2:** Select the Design tab.
- **Step 3:** Click the Edit Data command. An Excel spreadsheet with the current source data will appear.
- **Step 4:** After you edit the data in the spreadsheet, the changes will appear on the slide.
- **Step 5:** Close Excel without saving the spreadsheet.



Fig.8.3.19: Change Chart Type

Modifying the chart layout

- **Step 1:** Select the chart.
- **Step 2:** Click on the Design tab.
- **Step 3:** Scroll through the options in the Chart Layout group, or click the More drop-down arrow to see all available chart layout options.
- **Step 4:** Select a chart layout by clicking on it. The chart layout will change on the slide.



Fig.8.3.20: Chart Layouts

Modify specific areas of the chart layout

- **Step 1:** Select the chart.
- **Step 2:** Select the Layout tab.
- **Step 3:** Locate the Labels group.
 - » Chart Title: Add, remove, or re-position the chart title.
 - » Axis Titles: Add, remove, or re-position the text used to label each axis.
 - » Legend: Add, remove, or re-position the chart legend.
 - » Data Labels: Click this command to display or hide data values next to each chart element.
 - » Data Table: Adds a table summarizing your data to the chart.



Fig.8.3.21: Modify Chart

UNIT 8.4: MS Excel

Unit Objectives

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

- Work on MS-Excel.
- Format cells and cell content.
- Use formulas.
- Make Charts and Pivot Table.

MS surpass stands for - Microsoft excel is one of the foremost common electronic spreadsheet applications supported by both Mack and computer platforms. As with a paper spreadsheet, you'll be able to use excel to prepare your data into rows and columns and to perform mathematical calculations.

MS Excel helps in:

- Managing data online
- Creating visually persuasive charts, and thought-provoking graphs.
- Creating and expense reports.
- Building formulas and editing them.
- Balancing a checkbook.



Fig.8.4.1: MS Excel Icon

This tutorial teaches you how to create an Excel spreadsheet.

Before you start making spreadsheets in excel, you will need to line up your excel setting and become familiar with many key tasks and options like a way to minimize and maximize the Ribbon, configure the quick Access toolbar, switch page views, and access your excel choices.

8.4.1 Exploring the Excel Environment

The tabbed Ribbon menu system is however you navigate through excel and access the assorted excel commands. If you have used previous versions of excel, the Ribbon system replaces the traditional menus. on top of the Ribbon in the upper-left corner is the Microsoft office Button. From here, you'll access important options like New, Save, Save As, and Print. By default, the short Access Toolbar is pinned next to the Microsoft office Button and includes commands like Undo and Redo.

At the bottom-left space of the spreadsheet, you will notice worksheet tabs. By default, 3 worksheet tabs appear each time you create a new book. On the bottom-right space of the spreadsheet you will find page view commands, the zoom tool and the horizontal scrolling bar.

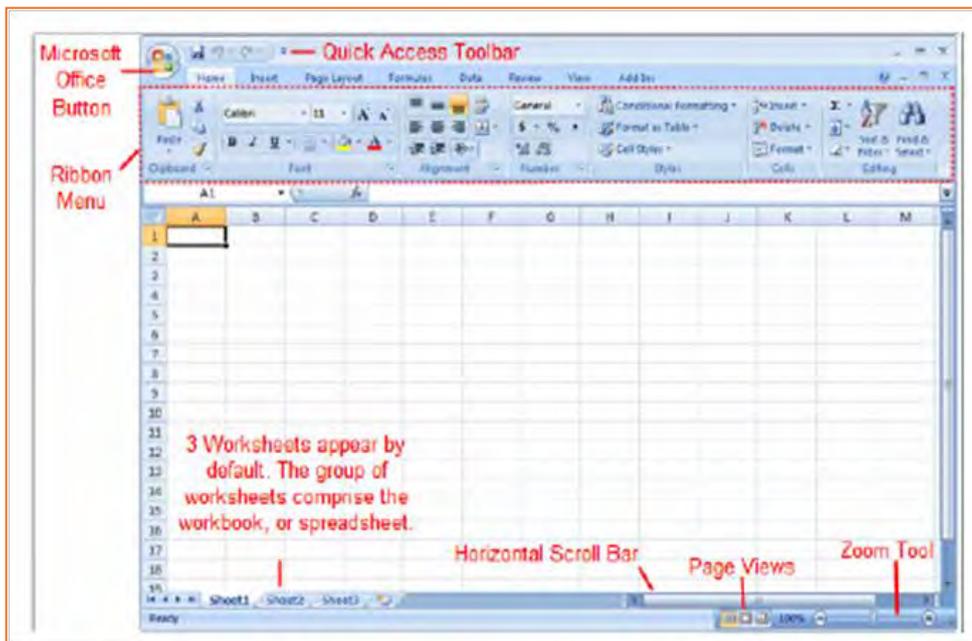


Fig.8.4.2: Excel screen

8.4.2 Zoom In and Out

- **Step 1:** Locate the zoom bar in the bottom-right corner.
- **Step 2:** Left-click the slider and drag it to the left to zoom out and right to zoom in.

To Scroll Horizontally in a Worksheet:

- **Step 1:** Locate the horizontal scroll bar in the bottom-right corner.
- **Step 2:** Left-click the bar and move it from left to right.

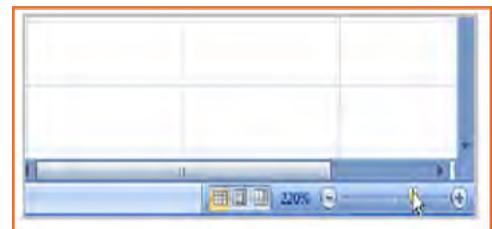


Fig.8.4.3: Zoom In and Out

8.4.3 Page Views

- **Step 1:** Locate the Page View options in the bottom-right corner. The Page View options are Normal, Page Layout, and Page Break.
- **Step 2:** Left-click an option to select it.

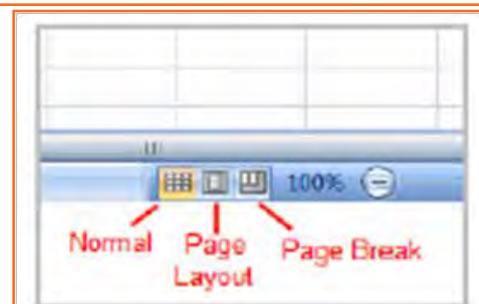


Fig.8.4.4: Page Views

8.4.4 Add Commands to the Quick Access Toolbar

- **Step 1:** Click the arrow to the right of the Quick Access toolbar.
- **Step 2:** Select the command you wish to add from the drop-down list. It will appear in the Quick Access toolbar.

The Save, Undo, and Redo commands appear by default in the Quick Access toolbar.



Fig.8.4.6: The Microsoft Office Button

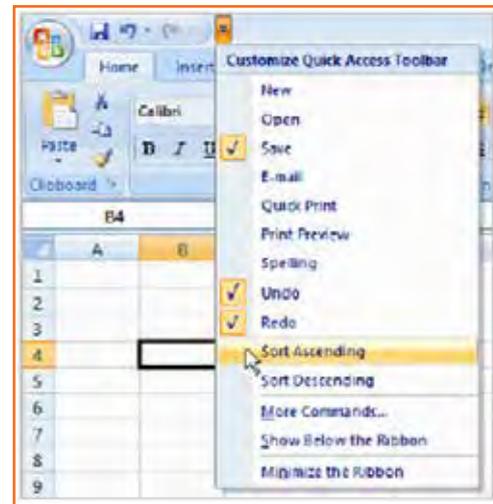


Fig.8.4.5: Quick Access Toolbar

The Microsoft Office Button

The Microsoft office Button appears at the top of the stand out window. Once you left-click the button, a menu appears. From this menu, you'll be able to produce a new spreadsheet, open existing files, save files in a type of ways and print. You'll be able to also add security features, send, publish and close files.

8.4.5 Change the Default Excel Options

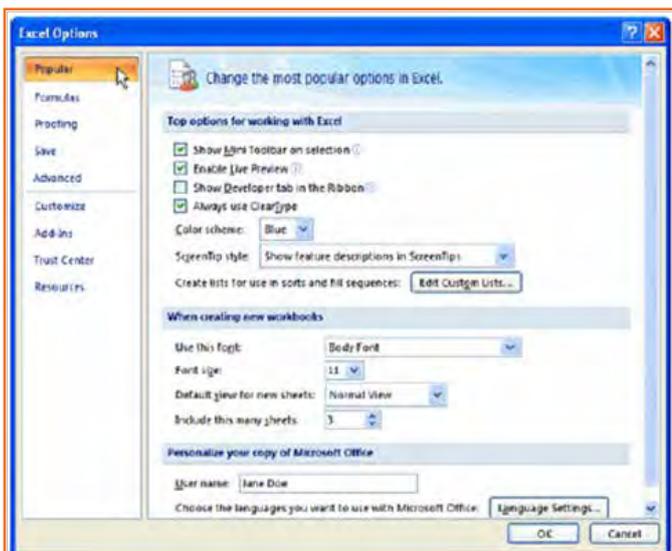


Fig.8.4.7: Default Excel Options

- **Step 1:** Click the Excel Options button. A dialog box will appear.
- **Step 2:** Select a category on the left to access different Excel options.
- **Step 3:** Modify any of the default settings.
- **Step 4:** Click OK.

You will have to be compelled to skills to insert text and numbers into excel workbooks to be ready to use it to calculate, analyze, and organize data. During this lesson, you will learn how to create a new workbook, insert and delete text, navigate a worksheet and save an excel workbook.

8.4.6 Create a New Blank Workbook

- **Step 1:** Left-click the *Microsoft Office Button*.
- **Step 2:** Select *New*. The New Workbook dialog box opens, and Blank Workbook is highlighted by default.
- **Step 3:** Click *Create*. A new, blank workbook appears in the window.



Fig.8.4.8: New Blank Workbook

8.4.7 Insert Text

- **Step 1:** Left-click a cell to select it. Each rectangle in the worksheet is called a cell. As you select a cell, the cell address appears in the Name Box.
- **Step 2:** Enter text into the cell using your keyboard. The text appears in the cell and in the formula bar.

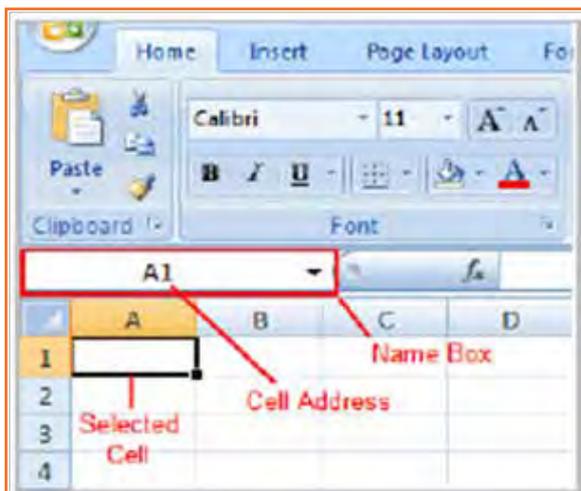


Fig.8.4.9(a): Different Areas on Worksheet

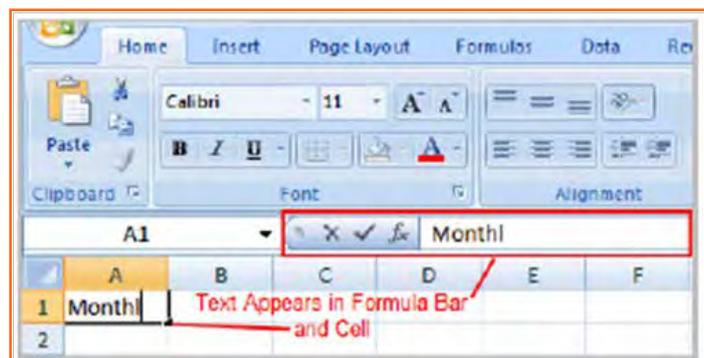


Fig.8.4.9(b): Different Areas on Worksheet

8.4.8 Cell Addresses

Each cell contains a name, or a cell address, based on the column and row it is in. For example, this cell is C3 since it is wherever column C and row 3 intersect.

You can also select multiple cells at the same time. A group of cells is known as a cell range. Instead of a single cell address, you will refer to a cell range using the cell addresses of the first and last cells in the cell range, separated by a colon. As an example, a cell range that included cells A1, A2, A3, A4, and A5 would be written as A1:A5.

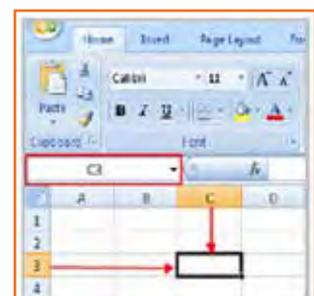


Fig.8.4.10: Cell Address

Edit or Delete Text

- **Step 1:** Select the cell.
- **Step 2:** Press the Backspace key on your keyboard to delete text and make a correction.
- **Step 3:** Press the Delete key to delete the entire contents of a cell.

You can also make changes to and delete text from the formula bar. Just select the cell and place your insertion point in the formula bar.

8.4.9 Move across a Worksheet Using the Keyboard

- **Step 1:** Press the Tab key to move to the right of the selected cell.
- **Step 2:** Press the Shift key and then the Tab key to move to the left of the selected cell.
- **Step 3:** Use the Page Up and Page Down keys to navigate the worksheet.
- **Step 4:** Use the arrow keys.

To Save the Workbook:

- **Step 1:** Left-click the Microsoft Office Button.
- **Step 2:** Select Save or Save As.
- **Step 3:** Save As allows you to name the file and choose a location to save the spreadsheet. Choose Save As if you'd like to save the file for the first time or if you'd like to save the file as a different name.
- Select Save if the file has already been named.

You can save a workbook in many ways, but the two commonest are as an excel workbook, that saves it with a 2007 file extension, and as an excel 97-2003 workbook, that saves the file in a compatible format therefore those who have earlier versions of excel can open the file.

When you open a new, blank workbook, the cells, columns, and rows are set to a default size. you do have the ability to alter the size of each, further as to insert new columns, rows, and cells as needed.

To Modify Column Width:

- **Step 1:** Position the cursor over the column line in the column heading and a double arrow will appear.
- **Step 2:** Left-click the mouse and drag the cursor to the right to increase the column width or to the left to decrease the column width.
- **Step 3:** Release the mouse button.

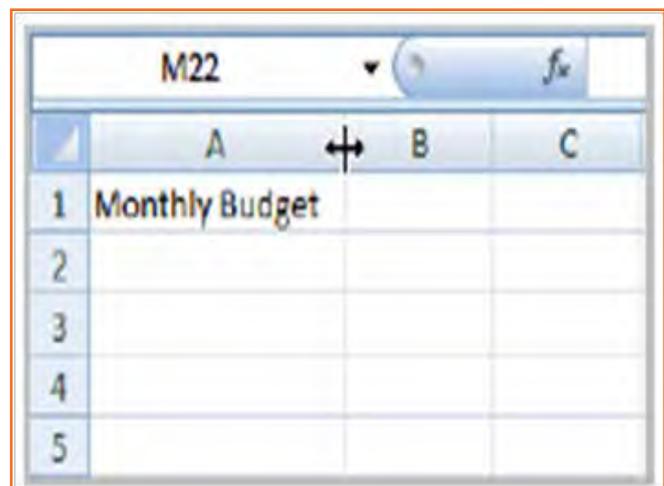


Fig.8.4.11: Modify Column Width

To Modify the Row Height:

- **Step 1:** Position the cursor over the row line you want to modify, and a double arrow will appear.
- **Step 2:** Left-click the mouse and drag the cursor upward to decrease the row height or downward to increase the row height.
- **Step 3:** Release the mouse button.

To Insert Rows:

- **Step 1:** Select the row below where you want the new row to appear.
- **Step 2:** Click the Insert command in the Cells group on the Home tab. The row will appear.
- **Step 3:** The new row always appears above the selected row.

Make sure that you choose the complete row below where you wish the new row to appear and not just the cell. If you select simply the cell and then click Insert, only a new cell can appear.

To Insert Columns:

- **Step 1:** Select the column to the right of where you want the column to appear.
- **Step 2:** Click the Insert command in the Cells group on the Home tab. The column will appear.

The new column continually appears to the left of the selected column. For example, if you wish to insert a column between September and October, choose the October column and click on the Insert command.

Make sure that you select the complete column to the right of where you want the new column to appear and not just the cell. If you choose simply the cell and then click Insert, only a new cell can appear.

To Delete Rows and Columns:

- **Step 1:** Select the row or column you'd like to delete.
- **Step 2:** Click the Delete command in the Cells group on the Home tab.

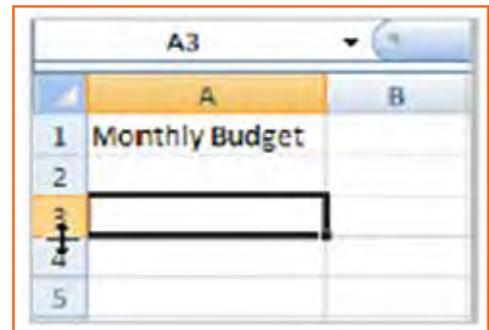


Fig.8.4.12: Modify the Row Height

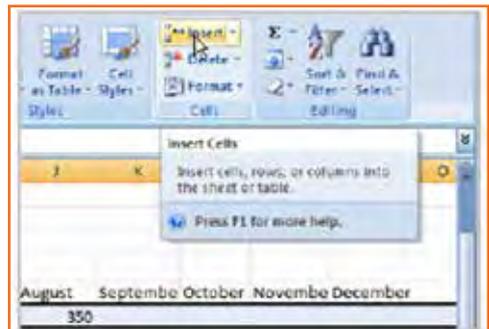


Fig.8.4.13: Insert Rows

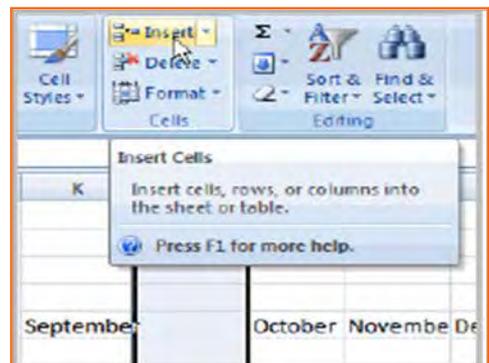


Fig.8.4.14: Insert Columns

8.4.10 Formatting

Once you have entered information into a spreadsheet, you will need to be able to format it.

To Format Text in Bold or Italics:

- **Step 1:** Left-click a cell to select it or drag your cursor over the text in the formula bar to select it.
- **Step 2:** Click the Bold or Italics command.

You can select entire columns and rows, or specific cells. To select the entire column, simply left-click the column heading, and the entire column can appear as selected. To select specific cells, simply left-click a cell and drag your mouse to select the opposite cells. Then, release the mouse button.

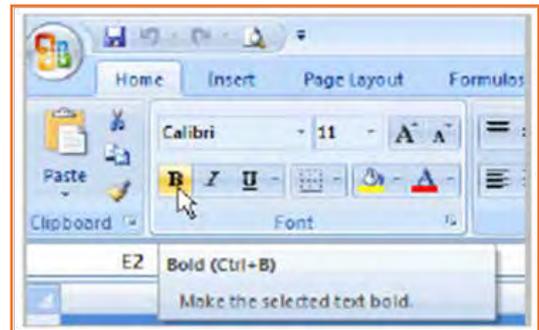


Fig.8.4.15: Format Text in Bold or Italics

To Format Text as Underlined:

- **Step 1:** Select the cell or cells you want to format.
- **Step 2:** Click the drop-down arrow next to the Underline command.
- **Step 3:** Select the Single Underline or Double Underline option.



Fig.8.4.16: Format Text as Underlined

To Change the Font Style:

- **Step 1:** Select the cell or cells you want to format.
- **Step 2:** Left-click the drop-down arrow next to the Font Style box on the Home tab.
- **Step 3:** Select a font style from the list.

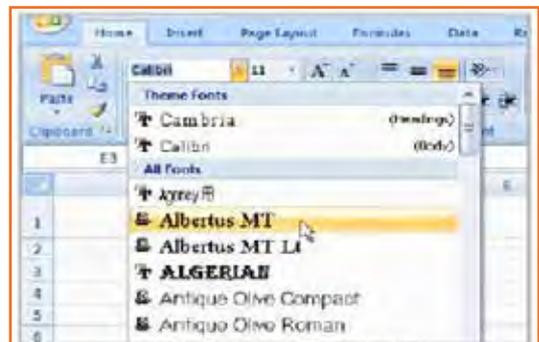


Fig.8.4.17: Change the Font Style

To Change the Font Size:

- **Step 1:** Select the cell or cells you want to format.
- **Step 2:** Left-click the drop-down arrow next to the Font Size box on the Home tab.
- **Step 3:** Select a font size from the list.

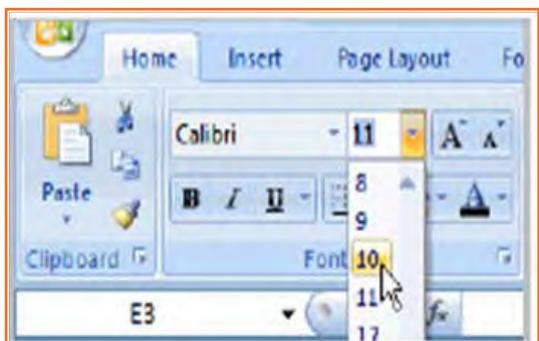


Fig.8.4.18: Change the Font Size

To Change the Text Color:

- **Step 1:** Select the cell or cells you want to format.
- **Step 2:** Left-click the drop-down arrow next to the Text Color command. A color palette will appear.
- **Step 3:** Select a color from the palette.

OR

- **Step 1:** Select More Colors. A dialog box will appear.
- **Step 2:** Select a color.
- **Step 3:** Click OK.

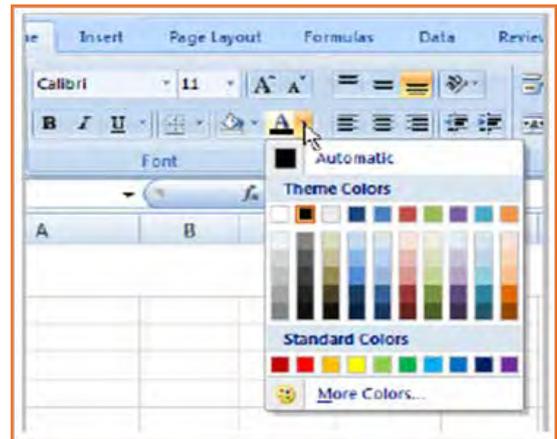


Fig.8.4.19: Change the Text Color

To Add a Border:

- **Step 1:** Select the cell or cells you want to format.
- **Step 2:** Click the drop-down arrow next to the Borders command on the Home tab. A menu will appear with border options.
- **Step 3:** Left-click an option from the list to select it.

You can change the line style and color of the border.

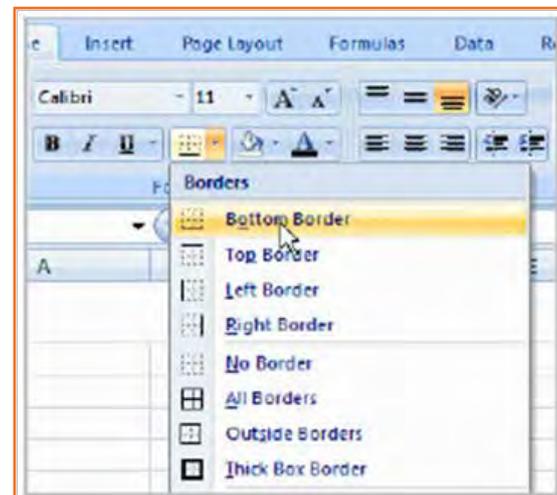


Fig.8.4.20: Add a Border

To Add a Fill Color:

- **Step 1:** Select the cell or cells you want to format.
- **Step 2:** Click the Fill command. A color palette will appear.
- **Step 3:** Select a color.

OR

- **Step 1:** Select More Colors. A dialog box will appear.
- **Step 2:** Select a color.
- **Step 3:** Click OK.

You can use the fill color feature to format columns and rows, and format a worksheet so that it is easier to read.



Fig.8.4.21: Add a Fill Color

To Format Numbers and Dates:

- **Step 1:** Select the cell or cells you want to format.
- **Step 2:** Left-click the drop-down arrow next to the Number Format box.
- **Step 3:** Select one of the options for formatting numbers.

By default, the numbers appear in the General category, which means there is no special formatting.

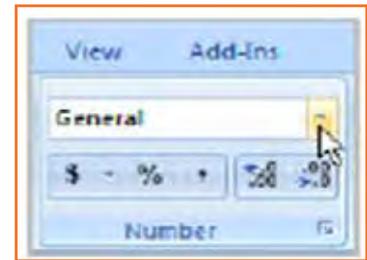


Fig.8.4.22: Format Numbers and Dates

8.4.11 Calculations and Analysis

Excel could be used to calculate and analyze numerical data; however, you need to know how to write formulas to maximize Excel's strength. A formula is an equation perform a calculation using cell values in the worksheet.

To Create a Simple Formula that Adds Two Numbers:

- **Step 1:** Click the cell where the formula will be defined (C5, for example).
- **Step 2:** Type the equals sign (=) to let Excel know a formula is being defined.
- **Step 3:** Type the first number to be added (e.g., 1500).
- **Step 4:** Type the addition sign (+) to let Excel know that an add operation is to be performed.
- **Step 5:** Type the second number to be added (e.g., 200).
- **Step 6:** Press Enter or click the Enter button on the Formula bar to complete the formula.

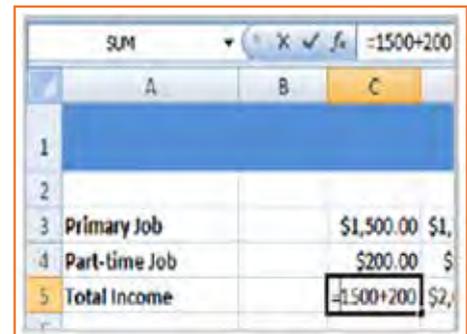


Fig.8.4.23(a): Creating Formulas

To Create a Simple Formula that Adds the Contents of Two Cells:

- **Step 1:** Click the cell where the answer will appear (C5, for example).
- **Step 2:** Type the equals sign (=) to let Excel know a formula is being defined.
- **Step 3:** Type the cell number that contains the first number to be added (C3, for example).
- **Step 4:** Type the addition sign (+) to let Excel know that an add operation is to be performed.
- **Step 5:** Type the cell address that contains the second number to be added (C4, for example).
- **Step 6:** Press Enter or click the Enter button on the Formula bar to complete the formula.

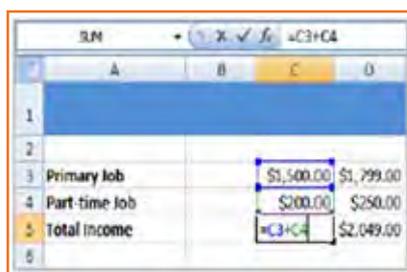


Fig.8.4.23(b): Creating Formulas

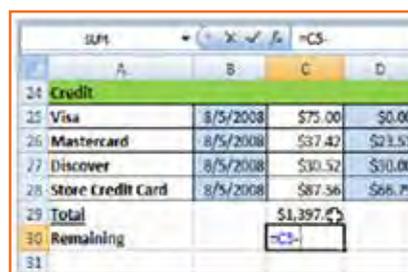


Fig.8.4.23(c): Creating Formulas

To Copy and Paste Cell Contents:

- **Step 1:** Select the cell or cells you wish to copy.
- **Step 2:** Click the Copy command in the Clipboard group on the Home tab. The border of the selected cells will change appearance.
- **Step 3:** Select the cell or cells where you want to paste the information.
- **Step 4:** Click the Paste command. The copied information will now appear in the new cells.

To select more than one adjoining cell, left-click one of the cells, drag the cursor until all the cells are selected, and release the mouse button.

The copied cell will stay selected until you perform your next task, or you can double-click the cell to deselect it.

To Cut and Paste Cell Contents:

- **Step 1:** Select the cell or cells you wish to cut.
- **Step 2:** Click the Cut command in the Clipboard group on the Home tab. The border of the selected cells will change appearance.
- **Step 3:** Select the cell or cells where you want to paste the information.
- **Step 4:** Click the Paste command. The cut information will be removed from the original cells and now appear in the new cells.

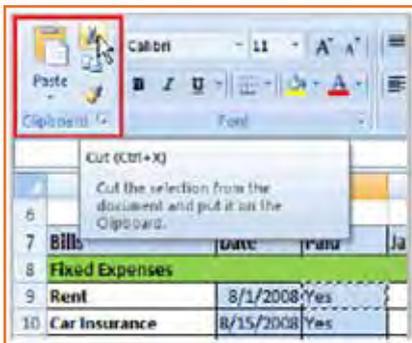


Fig.8.4.24(a): Cut and Paste Cell Contents

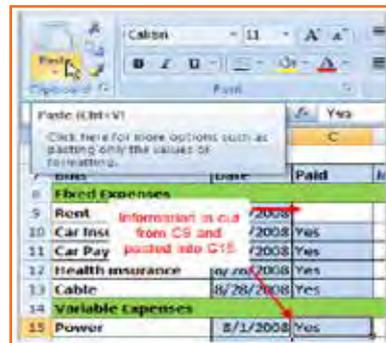


Fig.8.4.24(b): Cut and Paste Cell Contents

To View the Spreadsheet in Print Preview:

- **Step 1:** Left-click the Microsoft Office Button.
- **Step 2:** Select Print.
- **Step 3:** Select Print Preview. The spreadsheet will appear in Print Preview view.

Click the Close Print Preview button to return to the Normal View.

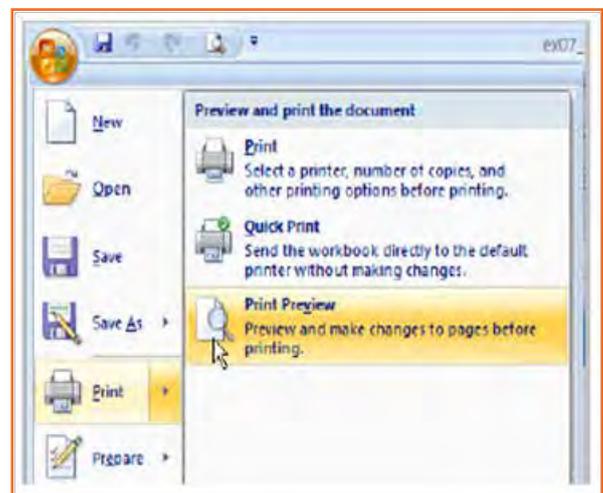


Fig.8.4.25(a): Print Preview Option

Exploring Print Preview:

If you are in Print Preview, you can use many of the same features that you can from the Ribbon; however, in Print Preview you can see how the spreadsheet will appear in hard form.

To Modify Margins, Column Width, or Row Height While in Print Preview:

- **Step 1:** Click the Print Preview command on the Quick Access toolbar, or select Print Preview from the Microsoft Office Button menu. The spreadsheet opens in print preview mode.
- **Step 2:** However your cursor over one of the black margin markers until a double arrow appears.
- **Step 3:** Left-click and drag the marker to the desired location. The change will be reflected in the spreadsheet.

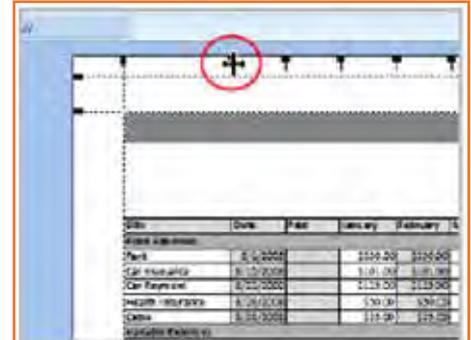


Fig.8.4.25(b): Print Preview Option

To Modify Margins:

- **Step 1:** Select the Page Layout tab.
- **Step 2:** Left-click the Margins command.
- **Step 3:** Choose one of the predefined settings or enter custom margins.

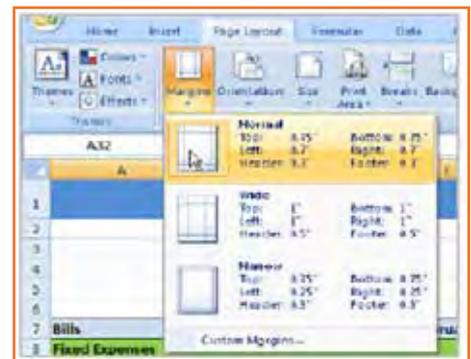


Fig.8.4.26: Modify Margins

8.4.12 Change Page Orientation

- **Step 1:** Select the Page Layout tab.
- **Step 2:** Left-click the Orientation command.
- **Step 3:** Select either Portrait or Landscape.

Portrait gets the page oriented vertically, while Landscape orients the page horizontally.

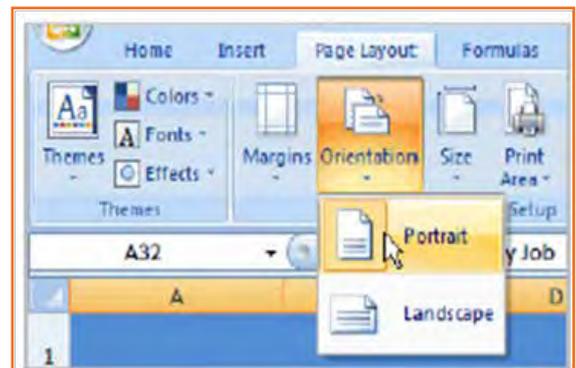


Fig.8.4.27: Page Orientation

To Change the Paper Size:

- **Step 1:** Select the Page Layout tab.
- **Step 2:** Click the Size command.
- **Step 3:** Select a size option from the list.

To Print from the Microsoft Office Button:

- Left-click the Microsoft Office Button.
- Select Print. The Print dialog box appears.
- Select a printer if you wish to use a printer other than the default setting.
- Click Properties to change any necessary settings.
- Choose if you want to print specific pages, the whole worksheet, a selection, the active sheet or the complete workbook.
- Select the number of copies you'd like to print.
- Click OK.

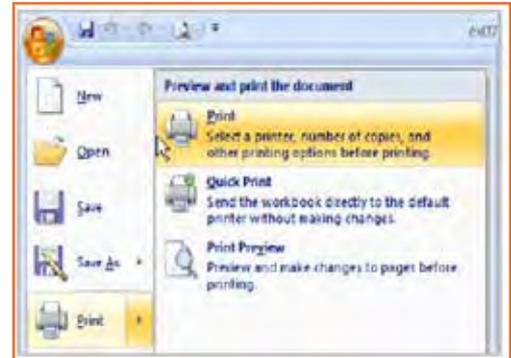


Fig.8.4.28: Print from the Microsoft Office Button

8.4.13 Excel's Different Functions

There are many different functions in Excel 2007. Some of the more common functions include:

Statistical Functions:

- SUM - Used to add a range of cells together.
- AVERAGE - This formula can calculate the average of a range of cells.
- COUNT - Used to count the number of chosen data in a range of cells.
- MAX - We can identify the largest number in a range of cells with it.
- MIN - Used to identify the smallest number in a range of cells.

Financial Functions:

- Interest Rates
- Loan Payments
- Depreciation Amounts

Date and Time functions:

- DATE - Converts a serial number to a day of the month.
- Day of Week.
- DAYS360.
- TIME - Returns the particular time.
- HOUR - Converts value to an hour.
- MINUTE - Converts value to a minute.
- TODAY - Returns value to today's date.
- MONTH - Converts value to a month.
- YEAR - Converts value to a year.

You don't have to memorize the functions but should have an idea of what each can do for you.

To Calculate the Sum of a Range of Data Using AutoSum:

- **Step 1:** Select the Formulas tab.
- **Step 2:** Locate the Function Library group. From here, you can access all the available functions.
- **Step 3:** Select the cell where you want the function to appear. In this example, select G42.
- **Step 4:** Select the drop-down arrow next to the AutoSum command.
- **Step 5:** Select Sum. A formula will appear in the selected cell, G42.
- **Step 6:** This formula, =SUM(G2:G41), is called a function. AutoSum command automatically selects the range of cells from G2 to G41, based on where you inserted the function. You can alter the cell range, if necessary.
- **Step 7:** Press the Enter key or Enter button on the formula bar. The total will appear.

To Edit a Function:

- **Step 1:** Select the cell where the function is defined.
- **Step 2:** Insert the cursor in the formula bar.
- **Step 3:** Edit the range by deleting and changing necessary cell numbers.
- **Step 4:** Click the Enter icon.

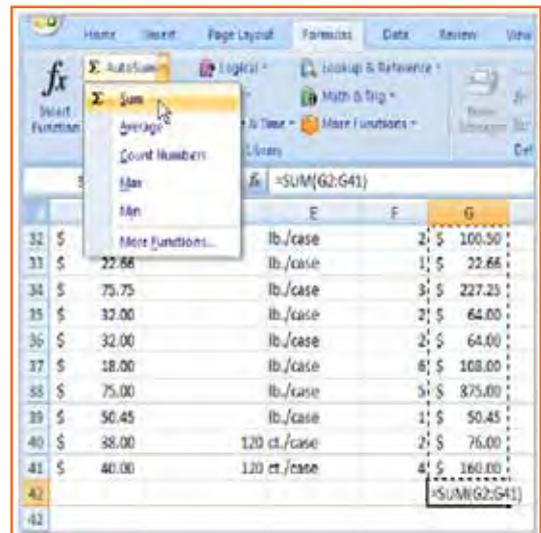


Fig.8.4.29: Using AutoSum

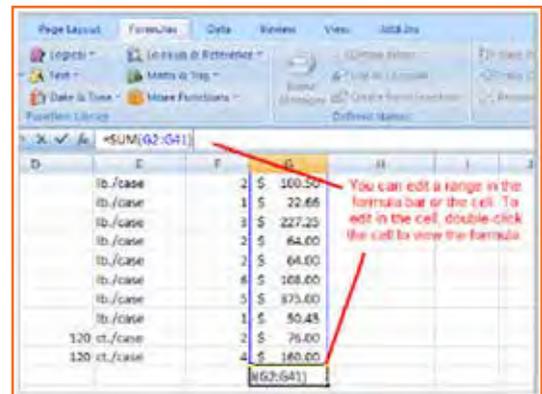


Fig.8.4.30: Edit a Function

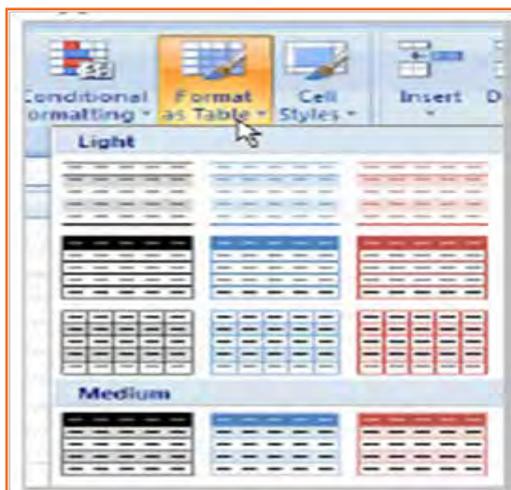


Fig.8.4.31: Format Information

To Format Information as a Table:

- **Step 1:** Select any cell that contains information.
- **Step 2:** Click the Format as Table command in the Styles group on the Home tab. A list of predefined tables will appear.
- **Step 3:** Left-click a table style to select it.
- **Step 4:** A dialog box will appear. Excel has automatically selected the cells for your table. The cells will appear selected in the spreadsheet, and the range will appear in the dialog box.

- **Step 5:** Change the range listed in the field, if necessary.
- **Step 6:** Verify the box is selected to indicate your table has headings, if it does. De-select this box if your table does not have column headings.
- **Step 7:** Click OK. The table will appear formatted in the style you chose.

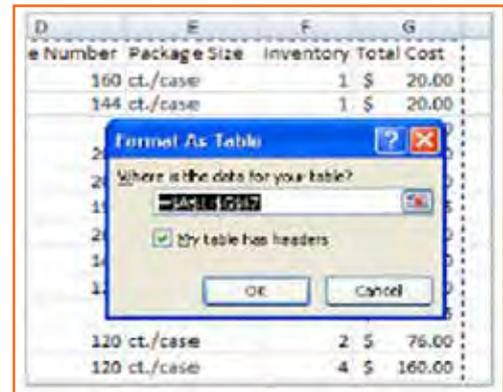


Fig.8.4.32: Format as Table

8.4.14 Aligning Text

Excel 2007 left-aligns text (labels) and right-aligns numbers (values). This makes data easier to read, but you do not have to use these defaults. Text and numbers can be defined as left-aligned, right-aligned, or centered in Excel.

To Align Text or Numbers in a Cell:

- **Step 1:** Select a cell or range of cells.
- **Step 2:** Click on either the Align Left, Center, or Align Right commands on the Home tab.
- **Step 3:** The text or numbers in the cell(s) take on the selected alignment treatment.

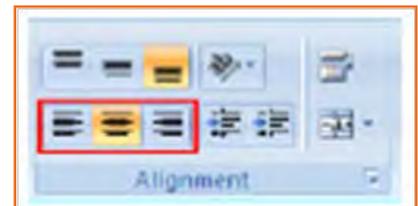


Fig.8.4.33: Align Text or Numbers

Left-click a column label to select the entire column or a row label to select an entire row.

Changing Vertical Cell Alignment:

You can also define vertical alignment of a cell. In Vertical alignment, information in a cell can be located at the top of the cell, middle of the cell, or bottom of the cell. The default is bottom.

To Change Vertical Alignment from the Alignment Group:

- **Step 1:** Select a cell or range of cells.
- **Step 2:** Click the Top Align, Center, or Bottom Align command.

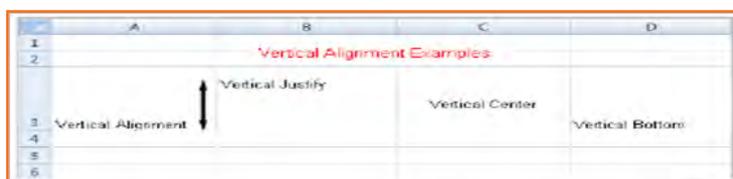


Fig.8.4.34: Vertical Cell Alignment

Changing Text Control:

- **Step 1:** Text Control allows you to control the way Excel 2007 presents information in a cell.
- **Step 2:** There are two common types of Text control: Wrapped Text and Merge Cells.

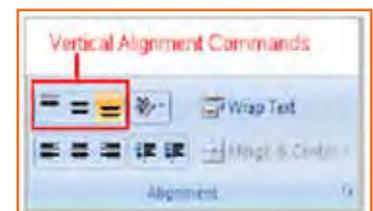


Fig.8.4.35: Text Control

- **Step 3:** The Wrapped Text wraps the contents of a cell across several lines if it's too large than the column width. It increases the height of the cell as well.
- **Step 4:** Merge Cells can also be applied by using the Merge and Center button on the Home tab.

To Change Text Control:

- **Step 1:** Select a cell or range of cells.
- **Step 2:** Select the Home tab.
- **Step 3:** Click the Wrap Text command or the Merge and Center command.

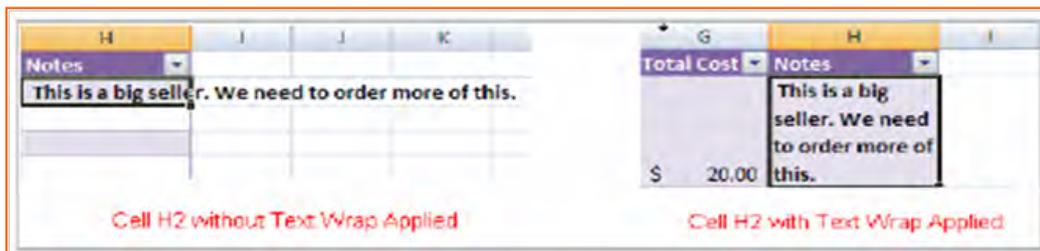


Fig.8.4.36: Text Control

To Name a Worksheet:

Right-click the sheet tab to select it.

- **Step 1:** Choose Rename from the menu that appears. The text is highlighted by a black box.
- **Step 2:** Type a new name for the worksheet.
- **Step 3:** Click off the tab. The worksheet now assumes the descriptive name defined.

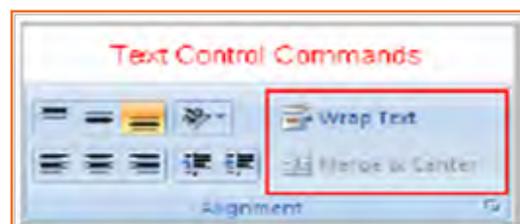


Fig.8.4.37: Wrap Text

To Insert a New Worksheet:

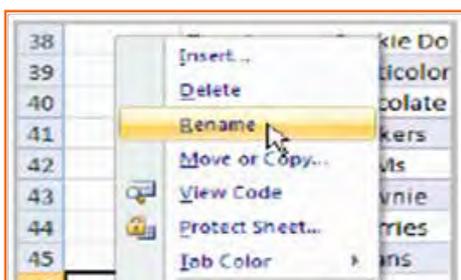


Fig.8.4.38(a): Name a Worksheet

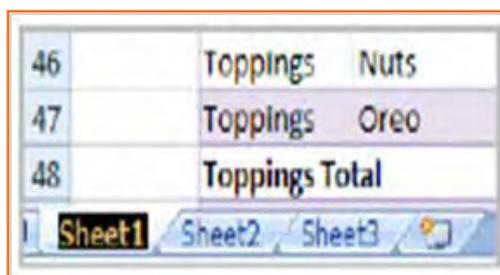


Fig.8.4.38(b): Name a Worksheet

- **Step 1:** Left-click on the Insert Worksheet icon. A new worksheet appears. It will be named Sheet 4, Sheet 5, or whatever the next sequential sheet number may be in the workbook.

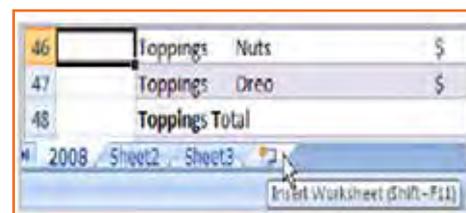


Fig.8.4.39: Insert a New Worksheet

To Delete One or More Worksheets:

- **Step 1:** Click on the sheet(s) you want to delete.
- **Step 2:** Right-click the sheet(s) and a menu appears.
- **Step 3:** Select Delete.

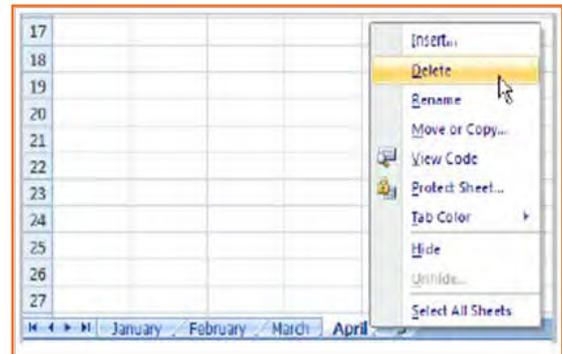


Fig.8.4.40: Delete One or More Worksheets

Exercise 

1. What are the things that MS Excel helps in?

.....

2. How does one Zoom out in MS Excel?

.....

3. The Save, Undo, and Redo commands appear by default in the Quick Access toolbar.

- a) True
- b) False

4. What can the Microsoft Button help with?

.....

5. Calculate the average range of cells is a statistical function in MS Excel?

- a) True
- b) False

6. What is a financial function in MS Excel?

- a) Adding the SUM of all cells
- b) Convert a serial number to a minute
- c) Calculate interest rates

UNIT 8.5: Internet Concepts

Unit Objectives

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

- Understand internet concepts.
- Recognise the different types of URLs.
- Use MS-Outlook.

8.5.1 URL Concepts

The full form of url is Uniform Resource Locator. It is the worldwide address of documents and other resources on the world wide web. The URL is divided into two different elements. The primary part of the URL is called a protocol identifier as it helps us distinguishing what protocol to use. The second part of the URL is called a resource name and it indicates the ip address or the domain name where the resource is located. The protocol identifier and the resource name are separated by a colon and two forward slashes it is more clearly understood by looking in to the following example: the two URLs below purpose two different files at the domain pcwebopedia.com. Here the primary one specifies an executable file that should be fetched using the FTP protocol; the second specifies a web page that should be fetched using the HTTP protocol:

1. `ftp://www.pcwebopedia.com/stuff.exe`
2. `http://www.pcwebopedia.com/index.html`

8.5.1.1 Different Kinds of URLs

There is a wide range of URLs, as well as different terms to describe what a URL looks like. Let's have a better understanding of various URLs and their types with an example:

- **Messy:** Such URL has many distorted and jumbled numbers, letters on it that makes slight organizational sense i.e.
`http://www.example.com/woeiruwoei909305820580.`
- **Dynamic:** Dynamic URLs are the end result of database queries that provide content output based on the result of that query. The URL ends up looking quite mangled, alias "messy", which usually consist of the characters like: ?, &, %, +, =, \$. Dynamic URLs are often found as part of consumer-driven websites: shopping, travel, or anything that requires changing answers for many different user queries.
- **Static:** A static URL is the opposite of a dynamic URL. The URL is "hard-wired" into the Web page's HTML coding. Static URL does not alter or adjust; it cannot be compromised; depending on what the user requests.
- **Obfuscated:** Obfuscated, or hidden, URLs are mostly used in phishing scams. Basically, a familiar URL is distorted in some way to make it seem legitimate. As soon as the user clicks on the obfuscated URL redirected to a malicious website.

There are a lot of clues and information that you can garner from a simple URL, including:

- What kind of server the Web page is hosted on.
- What kind of organization the Web page belongs to.
- Where the Web page is located in the world.
- The names of the directories on the website.

By carefully looking at the different parts of any Web address, you can quickly determine quite a bit of useful information. In addition, by simply deleting parts of the URL, you can learn more about the website than what might be actually publicly accessible. For example:

- **http://www.widget.com/blog/music/:** This points to a resource online, and the URL tells you that yes, indeed, it does point to an online resource. Let's go further back.
- **http://www.widget.com/blog/:** By moving backwards in the URL from right to left, we can see that we're now at the blog section of this publication.
- **http://www.widget.com:** The home page of the website.

Of course, this is a very simple example. However, by dissecting complex URLs one step at a time, quite a bit of information can be uncovered.

8.5.2 How to create Your E-mail account (Outlook)

You can create a new or additional Outlook account by following the same account creation wizard. You can follow the steps listed below to configure your Microsoft Outlook Express email client to work with your email account:

- **Step 1:** Open Outlook Express and select Tools E-mail Accounts from the main menu. The E-mail Accounts wizard will appear.
- **Step 2:** Click Add a new e-mail account. Click Next.
- **Step 3:** Select the server type. Most ISPs and webmail services use POP3 servers. Click Next.
- **Step 4:** Enter your Name.
- **Step 5:** Enter your E-mail Address.
- **Step 6:** Enter the incoming mail server and outgoing mail server information you obtained from your ISP or webmail service.
- **Step 7:** Enter your user name if it is different from the user name that automatically appears in the wizard form.
- **Step 8:** Enter your password.
- **Step 9:** Click Test Account Settings to test the information you entered in the wizard and confirm that it is valid.
- **Step 10:** Click Next.
- **Step 11:** Click Finish.

Note: If you do not have an Outlook email account, you can select Microsoft Office Outlook from your computer's Start menu. The wizard will open, and you can follow the steps above to create an Outlook account.

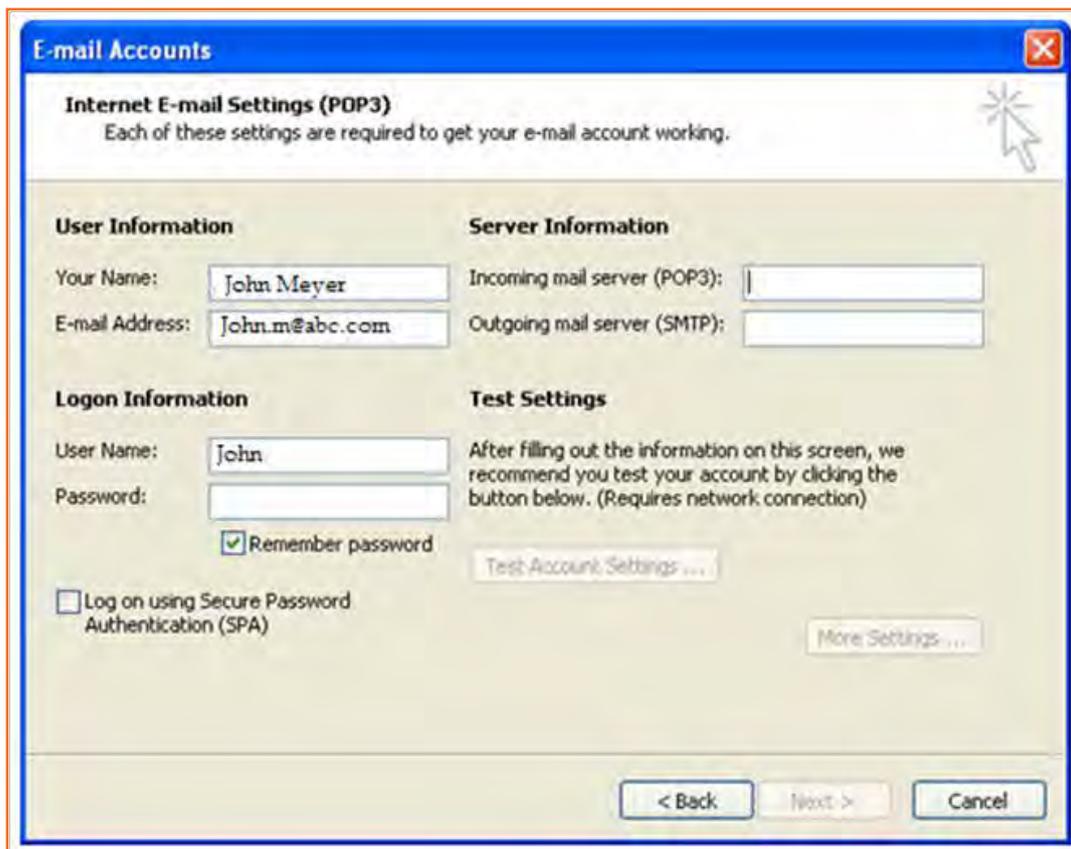


Fig.8.5.1: Creating E-mail Account in Outlook

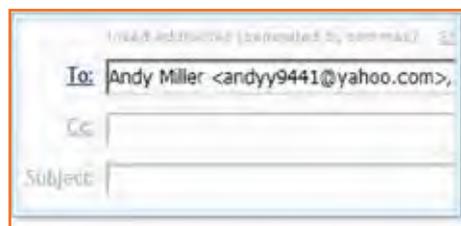
Congratulations you have successfully configured your e-mail account!!

8.5.3 Sending an Email

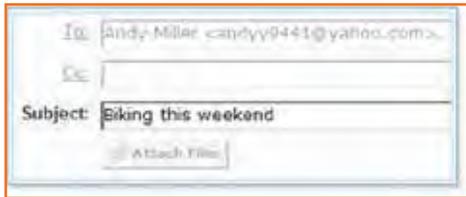
The following page will make it easy for you to understand how easily and swiftly you can send an E-mail, just follow these simple steps and refer to the each image given below.



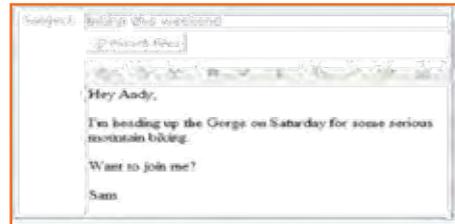
STEP 1: Open Outlook. Now click on Compose button.



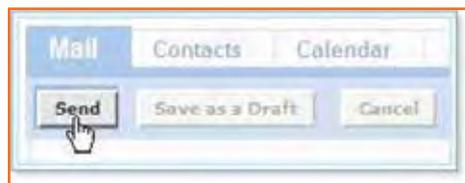
STEP 2: As you click on the Compose button, a new page would open.



STEP 3: In the To box, (refer to the image below) type the email address of the person you want to send an e-mail to.



STEP 4: Now, In the Subject box as shown in the image; type the subject of the message, a few words to give the receiver an idea of what the email is all about.



STEP 5: In the large box under the tools, compose the body of an email as shown in the image. Once the writing and addressing your email is done, click the Send button.

Mail has successfully sent your email to your wishing recipient.

8.5.4 Reading Emails

Outlook takes care of all email under mail folders. Initially, all of your incoming emails messages arrive in your Inbox folder (except suspected spam which goes directly into your Spam folder). To read an email message, open a mail folder and then click on email's subject.

- **Step 1:** Select the Inbox in the navigation pane.
- **Step 2:** If you see Inbox is in bold, it indicates that you have unread messages.
- **Step 3:** The number of unread messages is indicated by the number to the right of the word Inbox in parentheses.
- **Step 4:** Click a message in the inbox once, and Outlook will display it in the reading pane (if that feature is turned on).
- **Step 5:** You need to double-click a message, to open the message in a new window.

NOTE: Unread messages are display in bold text in order to make it easy for a reader to identify how many mails are new or still unread.

Now, to open and read an email, click on email's subject (bold or not) in the Subject column and you will be able to read your email.

8.5.2 Replying E-mails

Often, it is seen that once the mail is read, viewer looks for the option of reverting to that email to the sender or to add more recipient. Well! This can be done in two separate ways with Outlook i.e. there are two options as given below:

- **Reply:** It allows you to respond to the sender only.
- **Reply all:** Reply all, allows responding to the sender and everyone else who received the message. This includes all email addresses listed in the To box and the Cc box, except your own email address.
- Now, Open the your email and click the drop down arrow given at the Reply button, then opt for Reply to reply to the sender only or Reply All to reply to all recipients of the email message.

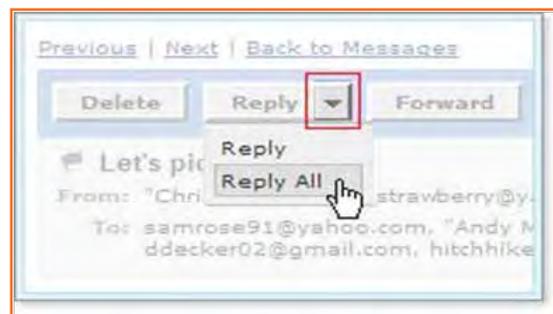


Fig.8.5.2: Replying E-mail

NOTE: To reply to the sender only, you can also click the Reply button and not the arrow.

- **Step 1:** Click Reply on the Standard toolbar while viewing the message you want to reply to. Outlook will create a pre-addressed reply form to the email address the original email came from.

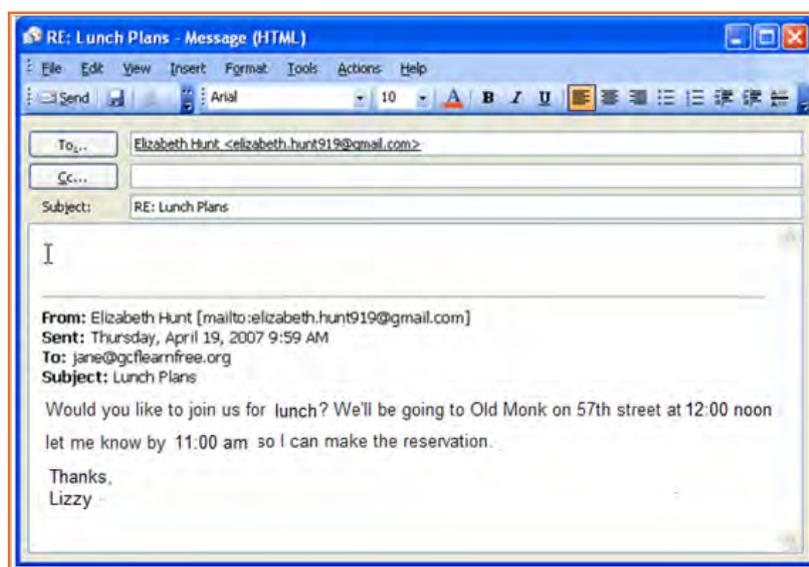


Fig.8.5.3: Composing Mail

- **Step 2:** Enter text into the body of the form.
- **Step 3:** Click the Send button when you're ready to send your email message.

Tip: Original email which you received from the sender will always be included when you are replying to the sender however, this original text, is editable, you can type your reply anywhere in the text box. In fact, some of the information or whole mail can be deleted in the original message. Different colors can be used (if required) to differentiate between your reply followed by the original text in the same image.

Exercise

1. What is the full form of URL?

.....
.....

2. The second part of the URL is called a resource name and it indicates the IP address or the domain name where the resource is located.

- a) True
- b) False

3. Choose a URL example from the below list

- a) Messy
- b) Straight
- c) Constant

4. Initially all mails arrive in the inbox in outlook?

- a) True
- b) False

5. 'Reply' allows you to reply ONLY to the sender?

- a) True
- b) False





9. Employability Skills

Unit 9.1 - Employability Skills – 30 Hours



Key Learning Outcomes

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

1. Explain employability skills.
2. Paraphrase constitutional values for citizen.
3. Become a professional in the 21st century.
4. Demonstrate the basics English skills.
5. Demonstrate the communication skills.
6. Recognise the essential digital skills.
7. Identify the diversity and inclusion.
8. Interpret financial and legal literacy.
9. Illustrate the career development and goal-setting.
10. Understand the customer service.
11. Get ready for apprenticeships and jobs.

UNIT 9.1: Employability Skills – 30 Hours

Unit Objectives

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

1. Explain employability skills.
2. Paraphrase constitutional values for citizen.
3. Become a professional in the 21st century.
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10. Understand the customer service.
11. Get ready for apprenticeships and jobs.

9.1.1 Employability Skills

To read the e-book on Employability Skills scan the QR Code below.



Employability Skills



10. Annexure- Resources



Module No.	Unit No.	Name of Subject	URL	QR Code
1. Introduction and Orientation	Unit 1.1 - Introduction to Apparel Industry	Apparel industry in India	https://youtu.be/tN5oLGSjepQ	
1. Introduction and Orientation	Unit 1.2 - Roles and Responsibilities of Store Keeper	Storekeeper Job Description	https://youtu.be/bEmIrfqwIVs	
2. Procedure for Issuing and Receipt of Materials in and out of the Store	Unit 2.1 - Procedure for Issuing and Receipt of Materials in and out of the Store	Material Storage	https://youtu.be/Dn6cJYkL0ws	
2. Procedure for Issuing and Receipt of Materials in and out of the Store	Unit 2.1 - Procedure for Issuing and Receipt of Materials in and out of the Store	Inventory System	https://youtu.be/u73dXAovxRk	
2. Procedure for Issuing and Receipt of Materials in and out of the Store	Unit 2.1 - Procedure for Issuing and Receipt of Materials in and out of the Store	Store Management	https://youtu.be/Xgforc5uKEM	
3. Housekeeping of Store Premises and Store Items	Unit 3.1 - Manage Housekeeping of Store Premises and Store Items	Safe system of work (SSW)	https://youtu.be/RQ09Y1znczY	
3. Housekeeping of Store Premises and Store Items	Unit 3.1 - Manage Housekeeping of Store Premises and Store Items	Material handling equipment	https://youtu.be/N733x0iLIHY	

4. Records Maintenance Related to Accounting, Storage and Preservation of Store Items	Unit 4.1 - Maintain Records Related to Accounting, Storage and Preservation of Store Items	Maintenance Record Keeping	https://youtu.be/_ASmUn2_kLM	
4. Records Maintenance Related to Accounting, Storage and Preservation of Store Items	Unit 4.1 - Maintain Records Related to Accounting, Storage and Preservation of Store Items	Data Collection	https://youtu.be/caUiRsg5M6k	
4. Records Maintenance Related to Accounting, Storage and Preservation of Store Items	Unit 4.1 - Maintain Records Related to Accounting, Storage and Preservation of Store Items	Production Reports for a Garment Factory	https://youtu.be/1n11f12GzbM	
4. Records Maintenance Related to Accounting, Storage and Preservation of Store Items	Unit 4.1 - Maintain Records Related to Accounting, Storage and Preservation of Store Items	Quality Documentation Hierarchy	https://youtu.be/z23iVctxVb0	
5. Health, Safety and Security in the Store Gender & PwD Sensitization	Unit 5.1 – Maintain Health, Safety and Security at Work Place	Health related threats in apparel industry and control on them	https://youtu.be/POIQ27GQZp0	
5. Health, Safety and Security in the Store Gender & PwD Sensitization	Unit 5.2 – First Aid & CPR	First aid	https://youtu.be/DQ7JPNgU8Wg	
5. Health, Safety and Security in the Store Gender & PwD Sensitization	Unit 5.3 – Sensitivity towards People with disability and Gender Equality	Gender sensitization	https://youtu.be/Wi1exdO1lig	



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