Handicrafts and Carpet
Sector Skill Council

Participant Handbook

Sector
Handicrafts and Carpet

Sub-Sector
Carpet

Occupation
Weaving

Reference ID: **HCS/Q 5412, Version 1.0**
NSQF Level 3

Handloom Weaver (Carpets)

Disclaimer

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

Shri Narendra Modi
Prime Minister of India

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Handicrafts and Carpet
Sector Skill Council

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HANDICRAFTS AND CARPET SECTOR SKILL COUNCIL

for

SKILLING CONTENT : PARTICIPANT HANDBOOK

Complying to National Occupational Standards of

Job Role/ Qualification Pack: "Handloom Weaver (Carpets)" QP No."HCS/Q 5412, NSQF Level 3"

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(Handicrafts and Carpet Sector Skill Council)

Acknowledgements

About this Book

This Participant Handbook is designed to enable training for the Handloom Weaver (Carpets) Qualification Pack (QP) with Ref. ID HCS/Q 5412. There are 5 National Occupational Standards (NOS) under this qualification pack. Each National Occupational (NOS) is covered across 7 Units in this book.

Key Learning Objectives for the every NOS mark the beginning of the Unit for that NOS. In Table of Contents, you will find the module names with their corresponding NOS code. The symbols used in this book are described below.

Symbols Used

Key Learning Outcomes	Steps	Time	Tips	Notes	Unit Objectives

Exercise

Table of Contents

1. Introduction

Unit 1.1 - Carpet sector in India

Unit 1.2 - Job role of a Handloom Weaver (Carpets)

Key Learning Outcomes

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

1. Discuss the Carpet sector in India, and its sub-sectors
2. Define the artwork that comes under Carpet looming.
3. Know the states that are more productive in carpet looming work.
4. Identify the products that are made by handloom.
5. Describe the work area of Handloom Weaver (Carpets).
6. Identify the opportunities for Handloom Weaver (Carpets).

UNIT 1.1: Carpet Sector in India

Unit Objectives

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

1. Discuss the Carpet sector in India, and its sub-sectors
2. Define the artwork that comes under carpet sector.
3. Know the areas that are more productive in carpet production.

1.1.1 Introduction to Carpet

A **carpet** is a textile floor covering typically consisting of an upper layer of pile attached to a backing. The pile was traditionally made from wool, but, since the 20th century, synthetic fibers such as polypropylene, nylon or polyester are often used, as these fibers are less expensive than wool.

Figure 1.1. 1Sample of Carpet

1.1.2 History of Carpets

The certainty of the origin of the carpets would always continue to be shrouded in mystery. However, it is definitely out of the debate that woven forms of floor coverings were present during the Neolithic Age (7000 BC). The very mysteries of how the carpet actually came into existence would always remain the same in the absence of the documentary evidence. However, according to Enza Milanesi' The Little Brown Guide to Carpets' there are two theories to ponder upon.

The first theory says that the carpets were invented to serve the practical purpose of the rough nomadic populations. They were thickly knotted to protect the people from adverse climatic conditions. This also served the purpose of them not to give up their valuable animals for their hides. Therefore, it also fulfilled their original intention of no direct contact with the ground. It is believed that such carpets came as rudimentary forms of floor coverings what we see today. Evolved since the early times, the previous forms of the decorated tents of the nomadic lifestyle were specimens, uniquely colored and decorated with the particular sorts of motifs and established beautification styles. In addition, they wove on the vertical loom that could be dismantled and transported easily.

The advocates of the second theory pronounce that the knotted carpets did born early. However, they evolved as artistic pieces with the settled people that were artistic and utilitarian both, in function. Forming as the permanent parts of homes, they became important during festive and traditional ceremonies, leading their way towards becoming an essential part of peoples' lives.

Interestingly, the knotted ones were woven on the horizontal looms, which developed from its vertical cousin. The Pazyryk Carpet was excavated from the tomb of the Shiite chief in the Pazyryk Valley in the Altai Mountains, Siberia, encased and thus, preserved in ice. It dates back to 5th century B.C. It is the oldest specimen found of the ancient weavings done in the world. Such is the refined artisanship of the carpet that it definitely confirms the overview that the carpets were woven as articles to decorate the dwellings, representing them to be more inviting.

1.1.3 Place of Origin

The gradual spread of the art of the knotted carpet, over the centuries, around the globe has proved to be a hindrance in solving the mystery of its origin. However, many different carpet fragments have unearthed during excavations around the world. Strong evidences collected from the Middle East region say that carpet weaving was extensively carried out there during the 2nd-3rd BC. Therefore, it is termed as the cradle of carpet weaving. People migrating to areas from Turkestan to the west, the Caucasus, Persia, Anatolia, to the east to China, and then later to **India**, extended this art form to the natives of these places. Moreover, this complete range of locations is known as the Oriental Carpet Belt. Marco Polo, the Venetian merchant and traveler, while travelling through Turkey said, "They weave the choicest and the most beautiful carpet in the world. They also weave silk fabrics of crimson and other colors, of great beauty and richness, and many other kinds of cloth." He added greatly to the fact that it all flourished in the Islamic culture that he perceived, during his world expedition.

1.1.4 Carpets in India

The history of Indian carpets entails that when Babur came to India, he was disappointed by lack of luxuries here. He missed the luxuries of Persia, which included the Persian carpet and thus Akbar laid the foundation of carpet weaving tradition in India, in 1580 AD at his palace in Agra. With their support he established carpet weavings centers at Agra, Delhi and Lahore to facilitate production of Persian styled carpets, which were inspired by designs of Kirman, Kashan, Esfahan, Heart and so on. Mughals not only used the Persian technique of carpet weaving, but were also influenced by

traditional designs and motifs from Persia. Mughal carpets were as obscure as their miniatures and usually depicted court life, animals and floral decorations. Mughal carpets were brightly coloured and the hand knotted silk carpets had 4224 knots per square inch. However, most famous type of Indian carpets was the pile carpet, which came to India in the reign of Akbar in 16th century. In 1580A.D. Akbar brought certain Persian carpet weavers to India and established them in India. The art grew and flourished here and it was modified as per the royal tastes and mixed with the Indian arts. The Persian carpets were thus re-created in Indian forms. These carpets spread to the whole subcontinent with each area having its own specialties.

Figure 1.1. 2Indian Carpet

Since the beginning, wool or silks have been the essential material of the knotted carpets. The wool may have a diversity of origins according to the type of carpet being made. Silk knots are also used in Kashmir region. The patterns of Indian carpets varied from vines and floral patterns, animal and bird figures and geometric and calligraphic patterns. Rugs from Akbar`s reign (1556-1605) used cotton warp and wool pile and a variety of color scheme had multiple shades of blues, greens, and other colors on a red and peach base. The patterns were a reworked copy of Persian style but later modified to Indian tastes.

Indian carpets during Jahangir`s reign (1605-27) were more superior. Materials like silk and pashmina were used that permitted greater number of knots to be included in the art works. Patterns of these Indian carpets resembled miniature paintings. Subtle gradations and shadings with yarns were themselves artistic. The patterns of these carpets were a reflection of manuscript paintings. The history of Indian Carpets show technically refined taste in both design and construction. The carpets had scrolling vines, flowering plants, and more naturalistic animals in pictorial or overall pattern.

During Shahjahan`s reign (1628-58) the art of Indian carpets had reached new heights. Warps and wefts of fine silk yarns incorporated as many as 2,000 knots per square inch. Silk or pashmina piles gave the carpets a velvety like texture. Yarn shading was as stylish as in Jahangir`s reign. Flowers were still the primary elements of design. During this era, the patterns were primarily floral all over with at times geometric or calligraphic trims. Chinese and European patterns also influenced the history of Indian carpets in their own way. Calligraphy influenced the carpet craft as it did the other

crafts in India. Though like all other crafts, carpet making also saw a downfall for some time, but the craft sustained in the traditional families.

Figure 1.1. 3Carpets with better quality

The Indian carpets are considered most technically skillful classical craft. The carpet weavers throughout the history of India have grown artistically and are renowned for their exquisite designs, elegance, attractive colors and workmanship. In 1958 there were 14 factories with 350 looms and 80 cottage units with 400 looms. According to a survey in India, there were about 3500 carpet weavers in 1974. By the end of eighties their total number reached about 48000 people. This remarkable expansion of the carpet industry is mainly due to the programme of massive training introduced and sponsored by the All-India Handicraft Board.

1.1.5 Carpet Belt in India

Below is the list of cities that fall in Carpet belt:

Uttar Pradesh

Agra

Agra is one of the earliest carpet producing centers in India. The weavars here produce Persian, Turkman and Aubussan Varieties of carpets

Aurai

Bhadohi

This belt produces the maximum number of carpets in India. It's carpets in various knots and counts are famous for their varied range and designs. This belt specializes in Woolen, Tufted, Tibetan Carpet and Durries. The carpet producing areas are spread over 1000sq. Kilometers and comprise of many villages and districts in and around Bhadohi

Gopiganj

Ghosla

Khamaria

Mirzapur

Besides producing regular Hand-Knotted and Hand-Tufted Carpets in Wool this belt specialises in manufacturing Cotton and Woollen Durries and Kilims.

Madhosingh

Shahjahanpur

Varanasi

Saharanpur

Sonbhadra

Jaunpur

Hatras

Gaziabad

Jammu & Kashmir

Anantnag

Baramullah

Pandipura

Badgam

Kupwara

Pattan

Kanihama

Jammu

Leh

Srinagar

Rajasthan

Bikaner

Jaipur

The carpet industry in this belt is well known. Soft back and hard back carpet are high sellers and Jaipur is also known for cotton and Artificial silk durries.

Tonk

Jodhpur and surrounding areas

Punjab

Amritsar

Ambala

Pathankot

Haryana

Panipat

Panipat is famed for the production of durries, Tufted carpets and a wide range of floor coverings including Shaggy Rugs.

Sonipat

Madhya Pradesh

Gwalior

Bihar

Danapur

Madhubani

Obra

Himachal Pradesh

Dharmshala

Manali

Mandi etc.

Gujrat

Baruch

Kerela

Karur

North East

Sikkim

Mizoram etc.

Andhra Pradesh

Elluru and Warangal

Karnataka

Bangalore

Pondicherry

Pondiherry

Orissa

Puri

Khurda

Nayagarh

Cuttack

Jagatsingpur

Dhenkanal

1.1.6 Carpet Types made in India

In India, there are seven types of carpets made by different carpet belts across the country. They are as follows.
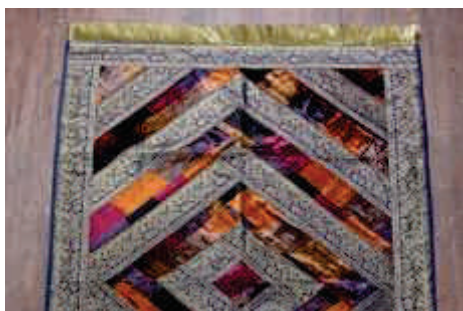
Staple / synthetic carpets

These carpets are made from synthetic fibers, unlike most other types of carpets produced in India. The purposes of these types of carpets are derived from its superior strength when compared to carpets made from natural fibers or yarn. These have various applications in textile industries, military purposes, industrial purposes and horticulture etc. Synthetic

Figure 1.1. 4Synthetic Carpets

carpets are not very good for human health in general.

Pure silk carpets
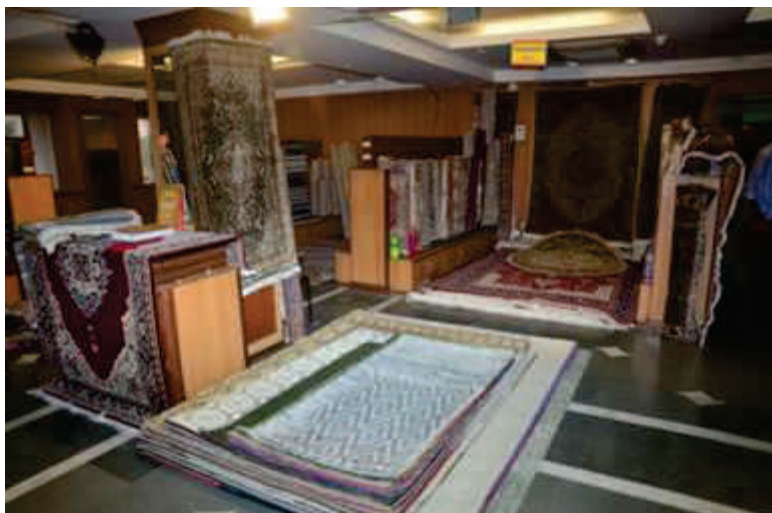
Figure 1.1. 5Pure Silk Carpets

Made completely from silks, these carpets have allured and captured the imaginations of man from time immemorial. In most carpet belts, manufacturing and weaving silk carpets is a family business where the secrets and techniques are transferred from one generation to the following ones. They are great for home décor furnishing purposes.

GABBE Woolen Carpets

Figure 1.1. 6GABBE Woolen Carpets

Primarily and largely produced in the Bhadohi-Mirzapur regions of Uttar Pradesh, GABBE Woolen Carpets follow indigenous and unique tradition of various tribal patterns which are very antique and elegant. The unique weaving and coloring techniques make these carpets one of the most sought

after and costliest carpets that is available in India as of now. Though exact compositions of the fibers are unknown, they are generally made of 25% cotton and 75% wool.

Tufted woolen carpets

Figure 1.1. 7Tufted Woolen Carpets

These types of carpets can be made by hand or by machine. Inexpert eyes cannot differentiate among the two. These types of rugs can be made pretty easily making it one of the largely produced and exported carpets in India. The carpets tend to vary in color, designs and the patterns that are used on them, to provide unique and wonderful feel wherever they are used for home décor furnishing. Tufted woolen carpets are also one of the best looking carpets out there.

Hand-made woolen durries
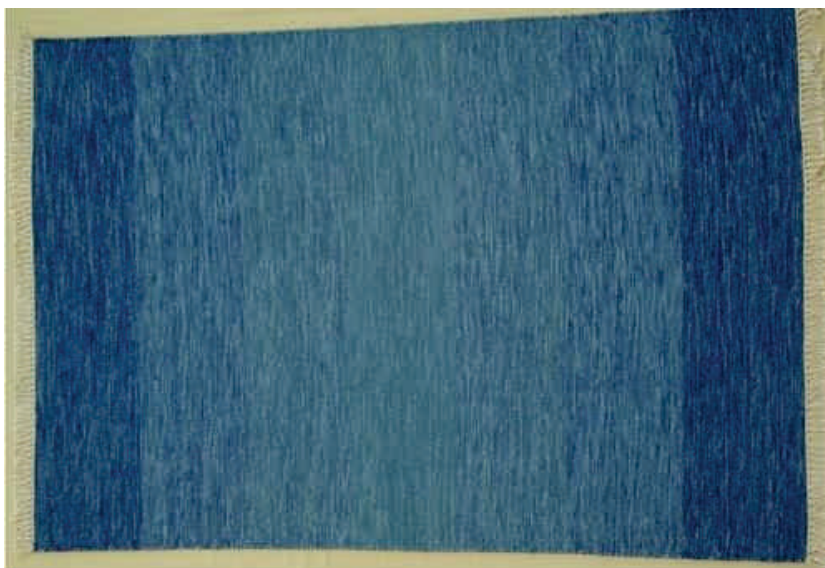
Figure 1.1. 8 Handmade Woolen Durries

These types of carpets are made from the finest wool making it look better and beautiful. In India, the tradition of making carpets by human hands results in highest quality and superfine feel. These can be made only by the finest carpet weavers in the inlands of India. These carpets are made in special designs and unique patterns according to the requirements of the clients. These can be bought from home furnishing stores in India and are renowned for its premium feel and durability.

Wool Chain Stitch Rugs

Figure 1.1. 9Wool Chain Stitch Rugs

These types of rugs are made by loosely twisting the yarn on cotton or linen based materials. Wool Chain Stitch rugs are very famous and they are featured in various museum and exhibits around the world. Rotating from the center, the rows of this type of rugs create solid and stylish patterns making a clear embossed feeling to add different textures.

Kilims Hand-woven Rugs

Figure 1.1. 10Kilims Hand-woven Rugs

The origin of Kilim Rugs has been traced as far back as 7000BC. Kilims are produced by tightly interweaving the warp and weft strands of the yarns to produce a flat surface with no pile. Weaves in most of the Kilims are "weft facing" i.e. the horizontal weft strands are pulled tightly downward so that they hide the vertical warp strands. A good quality Kilim rug today commands a high price.

Over the last few years, with increasing appreciation of the artistic weaves of Kilims by the discerning customers worldwide, they are increasingly collectors' item. These rugs are mostly either used for home décor or as prayer rugs. The prominent locations where they are made in India include Mirzapur, Panipat, Bhadohi and Agra.

Hand-knotted woolen carpets

Figure 1.1. 11Hand-knotted Woolen Carpets

Well-liked for its elegant style and unique craftsmanship, these type of carpets are adored all around the world. There are many carpet manufacturers who offer customized carpets for clients as they require.

Tips

Where can we get the carpets at low price?

Think about this. Where do you find the maximum production of carpets in India? So, Bhadohi is the city producing maximum carpets in India.

Notes

_____

_____

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_____

UNIT 1.2: Job Role of Handloom Weaver (Carpets)

Unit Objectives ◎

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

1. Understand the work area of Handloom Weaver.
2. Know the opportunities for Handloom Weaver

1.2.1 Job of Handloom Weaver

The hand loom weaver is a job role in weaving department. The responsibility of Hand operated Loom Weaver is to run manually operated looms (equipped with very little mechanization) efficiently so as to get maximum output with minimum defects. A loom weaver should be strong, hardworking, good eyesight, good eye-hand-leg coordination, motor skills and free from colour vision.

Figure 1.2. 1Handloom Weaver

Following are the tasks, he needs to do in the job:

1) Weaves rugs or woolen cloth, using hand loom

2) Draws warp yarn through loom parts to arrange warp for weaving specified pattern

3) Inserts bobbin of filling in shuttle depresses pedals to start loom

4) Observes cloth to detect weaving defects, like broken filling or warp

5) Pieces up broken warp ends

6) Pulls out broken or defective filling pushes shuttle through shed to insert new pick

1.2.2 Opportunities for Handloom Weaver

There are great opportunities of Handloom Weaver in India as well as in foreign countries like China, Japan, USA, UK, and many other countries. A properly trained handloom weaver can earn up to 1lakh rupee per month in UK. A Handloom Weaver has following benefits:

- Very Low cost of equipment so easily start business
- Exclusive woven mat have good domestic and export markets
- Versatility in changing designs and texture with minimum investment
- Possibility of more value addition in very small cost

A Handloom Weaver also gets job opportunities apart from easy entrepreneurship like, he can be:

- Handloom weaver for both local demand and foreign demand industries.

- Pattern designer in Handloom Weaving Industries.

Exercise

1. Which place/region in India is highest production state for carpets?

   _____

2. Write down the history of carpet production in India.

   _____

   _____

3. Write down a short note on place of origin of carpets.

   _____

4. Discuss the carpet types made in India.

   _____

   _____

_____

16

_____

_____

_____

_____

5.   What is the job of a handloom weaver and what are the opportunities?

_____

_____

_____

2. Loom Fabric

Unit 2.1 – Properties of Loom Fabric

Key Learning Outcomes

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

1. Know the type of fabrics for looming
2. Identify various fabric parameters.
3. Know various tests for identifying quality of fabric.
4. Select the right fabric for a requirement.

UNIT 2.1: Properties of Loom Fabric

Unit Objectives ⊚

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

1. Know the type of fabrics for looming
2. Identify various fabric parameters.
3. Know various tests for identifying quality of fabric.
4. Select the right fabric for a requirement.

2.1.1 Loom Fabric

Fabric is made from yarns, which in turn are made from fibers. Fibers and yarns are interlaced (woven), interlooped (knitted) or bonded together (nonwoven) to make fabrics. Each method of joining the yarns or fibers together creates a different type of fabric. Different fabric types are available for you to use in your design projects. They include:

• woven fabrics

• knitted fabrics

• nonwoven fabrics.

Fibres are the raw material used to make textile items, they are spun or twisted together to make yarns

Yarns are made from fibres from either natural or synthetic sources. They are interlaced, interlooped or bonded together to make fabrics

Fabrics are made from yarns. Different fabric types are produced by different methods of joining the yarns together
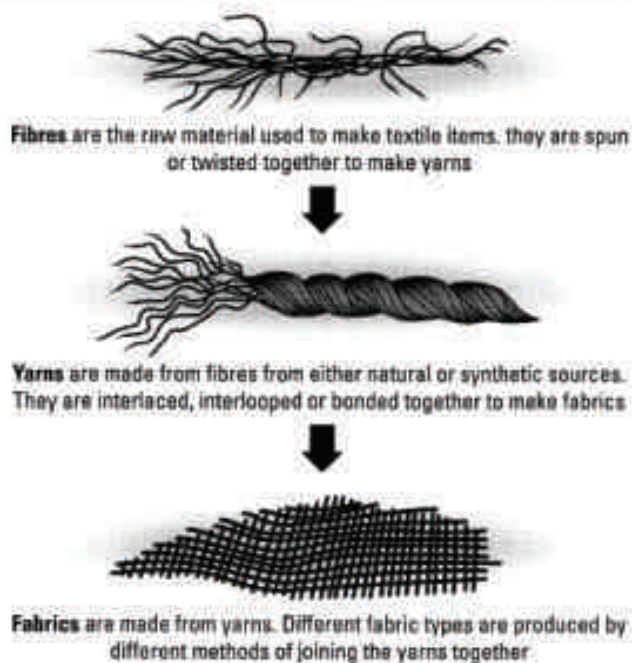
Methods of textile construction

Woven   Knitted   Nonwoven
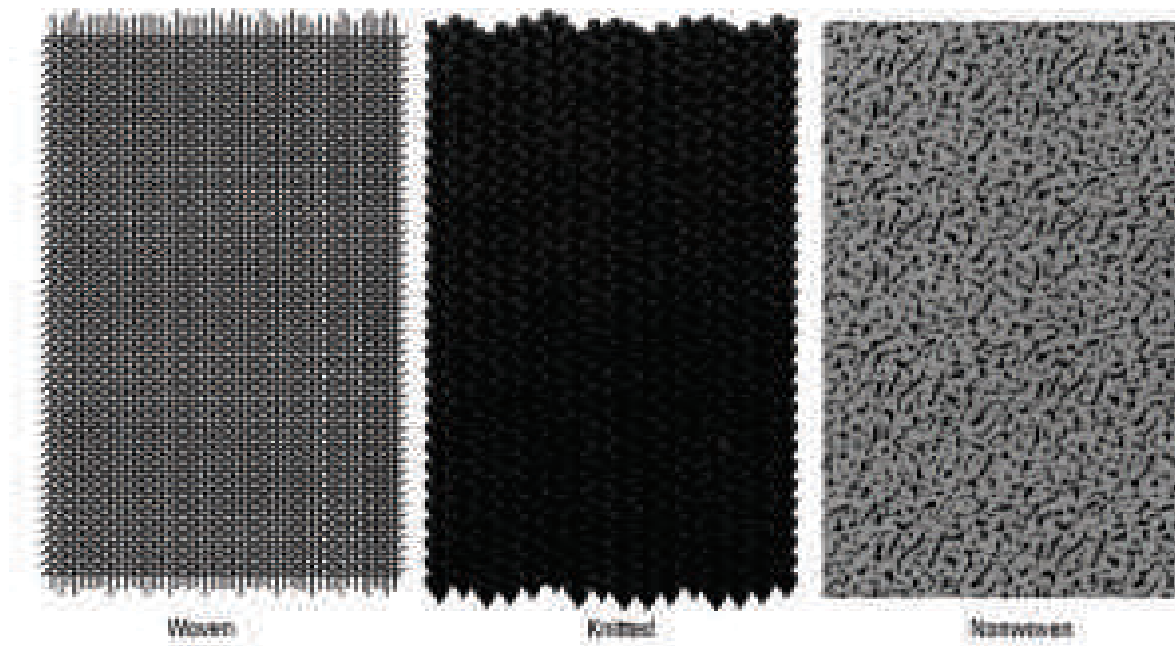
Woven fabrics

Woven fabric are produced via the method of weaving. Weaving is the interlacing of one or more yarns with the use of a loom. Usually, woven fabrics are strong fabrics.

To weave yarns collectively, the loom is first installed with yarns running lengthwise, from the top to the bottom of the loom. Those are called warp yarns. A second yarn is then threaded to and fro, over and beneath warp yarns, to make cloth. That is known as the weft yarn .

All through the weaving system, the weft yarn is taken over and beneath the warp yarns with a 'trip'. For every row being woven, selected warp yarns are either lifted or decreased, creating a passage for the commute to pass via with the weft yarn.

Whilst the go back and forth completes passing thru the gap furnished, from one facet to the alternative, the position of the warp yarns is again changed and the weft is returned through in the return path. This technique is constantly repeated till the fabric is produced.

The weft yarn turning and returning to make the next row creates a sturdy part at the material, referred to as the selvedge. it's miles the strongest part of the material; it will not fray like a reduce edge.

A variety of weave types may be used to create fabrics with different textures and appearances. these weaves consist of plain, twill, basket or hopsack, satin and sateen. the resulting fabric fluctuate relying at the number of warp yarns the weft yarn goes over at a time, and in what combos.

2.1.2 Fabric Parameters

These may also be termed as the structural properties of fabrics, these are as follows:

1. Warp and weft densities

2. Warp and weft yarn counts

3. Weave

4. Crimp

5. Weight

6. Thickness

7. Cover

8. Fabric width and piece length

1. Warp density: Number of warp ends per unit length of fabric - spacing between warp threads.
Units: ends per cm (e.p.c.) or ends per inch (e.p.i.).
It is determined by reed number and denting

Balance of Cloth: The proportion of warp yarns to filling yarns (picks) is called the balance of a cloth.

- ☐ If the number of warps and the number of fillings to the inch are nearly the same (not more than ten yarns difference), a cloth is said to have good balance.

- ☐ The gingham (a stripe cotton cloth) whose count is 60 x 50 would be considered a fair-balanced cloth.

- ☐ Gauze with a count of 28 x 24 also has a good balance.

- ☐ A sheeting with 61 warp ends and 40 picks (61 x 40) has poor balance because there are too many ends and too few picks.

- ☐ Even though the sheeting is woven in the plain weave, ordinarily a strong construction, there are so few picks that the ends will slip over them very easily, causing a shredded effect.

- ☐ Good balance is very important in cloths that have to stand hard wear and many washings. Sheets, pillow slips, and towels for glasses and dishes, for instance, should have good balance.

Yarn Count: It is very difficult to determine the yarn diameter by a direct measurement and it is more common to express the coarseness of the yarn in terms of its weight per unit length, hence in terms of the yarn count.

> Low thread count: 20 /inch –tobacco cloth
> High thread count: 350/inch – typewriter ribbon

2. Weft density: Number of picks per unit length of fabric - spacing between weft threads.
Units: picks per cm (p.p.c) or picks per inch (p.p.i.).
It is determined by the rate of fabric take up during weaving.

Count of Cloth: The closeness or looseness of the weave is measured by the count of the cloth. This is determined by the number of picks and ends (filling and warps) to the square inch.

- If the count of the cloth is 80 warps (ends) and 80 fillings (picks) to the inch, the count is expressed as 80 x 80, or 80 square.

- If there are 60 warps and 50 fillings to the inch, the count is expressed as 60 x 50 Number of picks per unit length of fabric - spacing between weft threads.

- The count of surgical gauze is approximately 28 x 24. In comparison of the two counts, a 96 x 88 cloth is considered the higher-count cloth because it has more ends and picks (warps and fillings) to the square inch than has surgical gauze.

3. Weave: The fabric weave or design is the manner in which the warp and weft threads are interlaced. In practice, the weaves of most fabrics are designed in such a way that the weave pattern of a small area is repeated over the whole area of the fabric. The weave pattern within the small area, called the **weave repeat**, is usually referred to as weave.

Simple weaves with small repeats are by far the most common. There are important differences between these three basic weaves, namely, **plain weave**, **twill** and **satin**.

PLAIN WEAVE

Picks

TWILL WEAVE

Warps

SATIN & SATEEN WEAVES

Warp Float

Flat View of 2/2 R.H.Twill Weave

Weft (Filling) Float
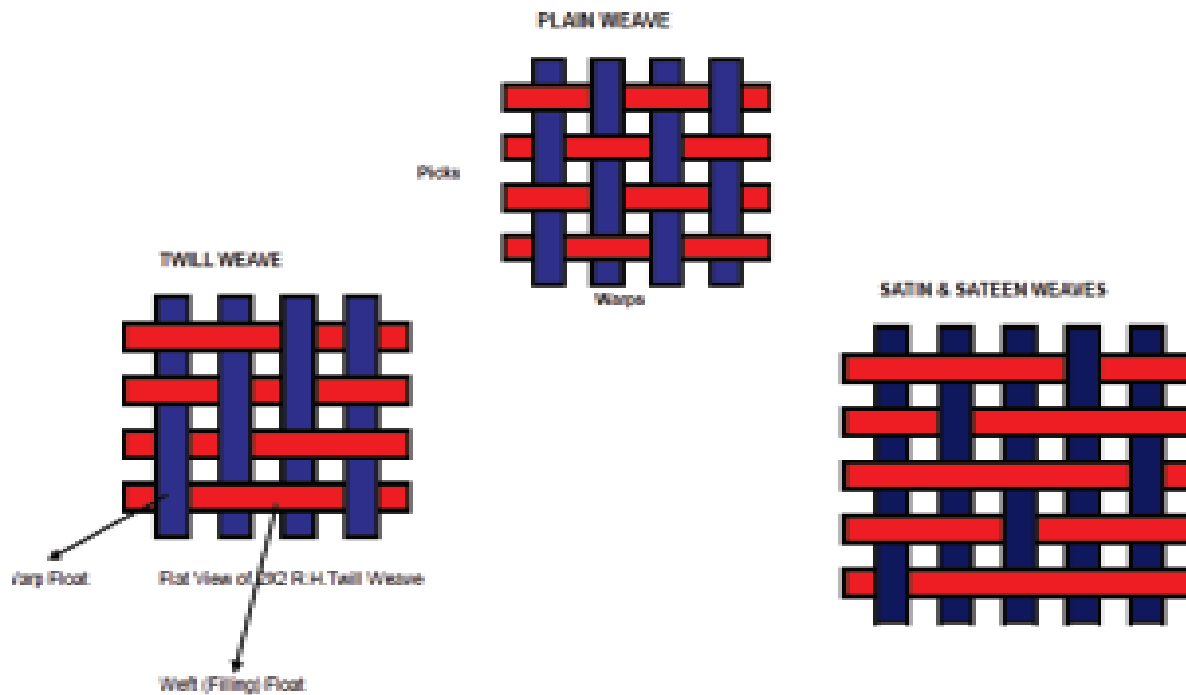
4. Crimp: When warp and weft yarns interlace in fabric they follow a wavy or corrugated path. Crimp is a measure of this waviness/corrugation in yarns.

Percentage crimp is defined as the mean difference between the straightened thread length and the distance between the ends of the thread while in the cloth, expressed as a percentage. It is expressed as:

C=(l-p)/p*100%
where, c = crimp, l = uncrimped length, and p = crimped length.

$$\text{Crimp (c)} = \frac{(Ly - Lf)}{Lf} \qquad \text{Crimp\% (c\%)} = \frac{(Ly - Lf)}{Lf} \times 100$$

5. Weight: The fabric weight is expressed in grams per square meter (W/m^2) or in grams per meter of the fabric with full width (W/m).

It is difficult to compare fabrics if the widths are not reasonably similar and for this reason, weight per square meter would be a more rational method because differences in width would not affect comparison.

The range of weights in woven fabric varies from as little as 15 g per square meter for chiffon to 600 g or more per square meter for heavy coating fabrics.

- [ ] suits- 350 to 500 and g/m2

- [ ] Canvas and sacking cloth may be 1,000 or even 1,500 g/m2.

Expressed in GSM; Grams per Square Meter

W_c = total length of yarn in 1square meter x mass per unit length of yarn.

Total weight per square m = W1+W2 gm^{-2} and

Weight per piece =(W1+W2)x piece length x piece width g.

6. Thickness: Fabric thickness is measured in mm. It can be measured using Fabric Thickness Gauge

7. Fabric Cover: The cover defines the area of 1 cm² of a fabric which is actually covered by warp and weft yarns. It is a useful and practical indication of fabric's permeability to light, air, gasses, liquids and solid particles.

Significance of Fabric Cover: Construction of a similar (of same cover) fabric to a cloth with different construction parameters (yarn size, fiber etc.)

Fabric cover is related to fabric properties (such as passage of air and light). Thus designers can construct fabrics with predetermined properties for certain end use.

$$\text{Warp cover } (k1) = \frac{n1\sqrt{n1}}{10} \qquad (k2) = \frac{n2\sqrt{n2}}{10}$$

$$\text{Total Cover factor } kc = k1 + k2$$

8. Fabric width and piece length: Fabric width is usually expressed in cm. It varies from 30 cm upwards. Narrow fabrics like ribbons, tapes and braids are made by a special section of weaving industry. Certain types of fabrics are associated with specific widths.

- [ ] Shirtings & dress fabrics 90-114 cm etc.

- [ ] Worsteds and other suitings -150 cm

- [ ] Bed sheetings 2-3 m, etc.

The piece length defines the piece of fabric cut to a particular length.

Properties of Fabrics: Some of the **Mechanical Properties** of Fabrics are as follows:

☐ **Tensile Strength**- It implies the behavior of the fabric under different loads applied.

☐ **Extensibility**- It is the ability of the fabric to extend under load.

☐ **Tear Strength**- A hole has been made in the fabric because it has been pulled sharply.

a. Strength: tensile, tear, bursting

Durable & high performance

High tensile strength fabric

Low tear strength

High Sett

High yarn strength

High inter-fibre friction

Longer fibre

Harsh hand feel

High twist

High fibre strength

Unstable structure

More expensive e.g. Pima cotton
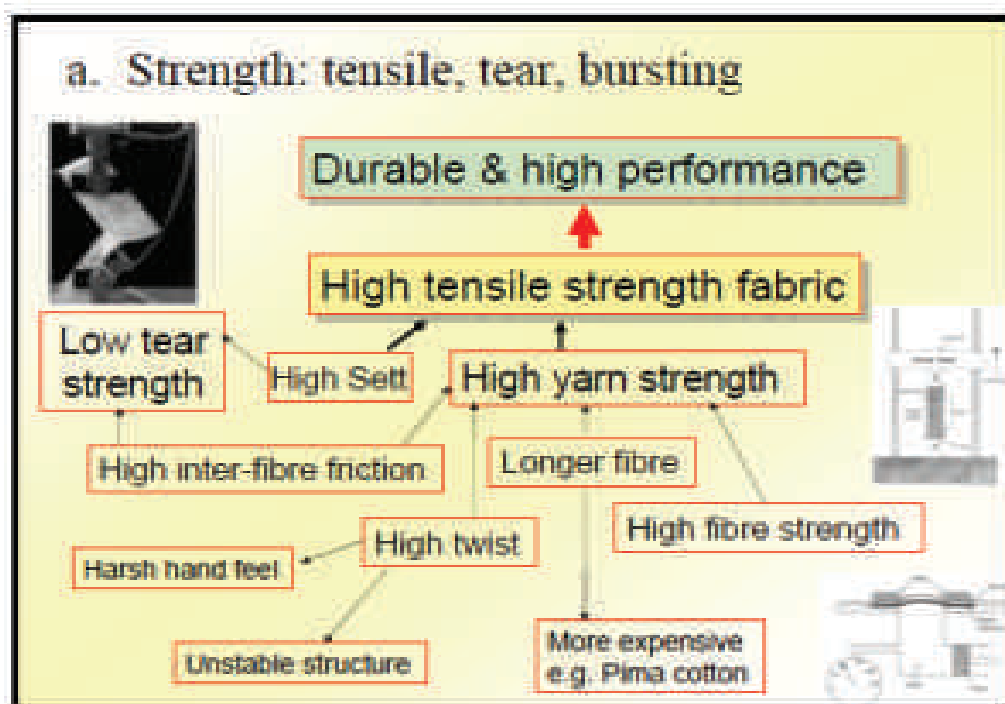
☐ **Abrasion Resistance**- Resistance of the fabric against the surface friction.

b. Abrasion resistance: flat abrasion, flex abrasion, edge abrasion

Before abrasion

Flat abraded area

Edge abraded area
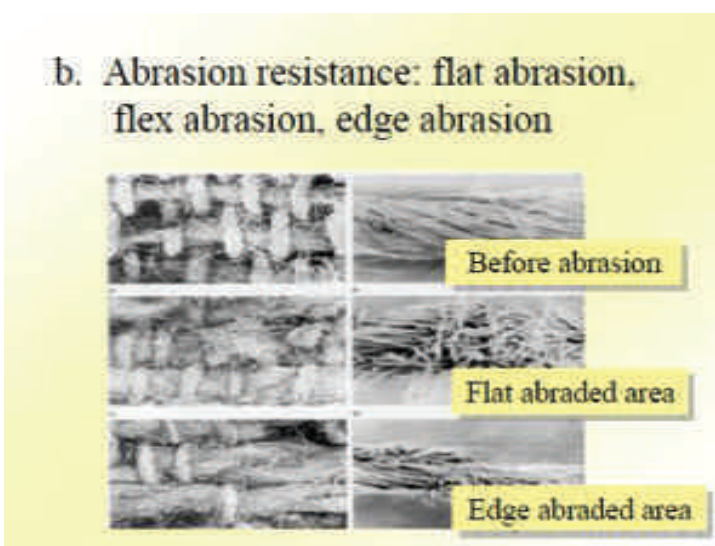
☐ **Crease Resistance**- Creases are irregular lines that appear on cloth when it has been crushed.

☐ **Pilling Resistance**- Hairs on the surface of a fabric tend to collect into little balls (pills) and if the fibers are strong, these balls do not break off; this spoils the appearance of the fabric.
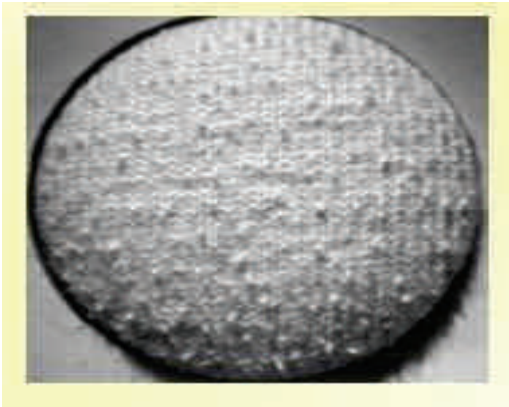
Sensory Properties

Drape: The shape or the way in which the fabric hangs down in folds (i.e. curtains hanging way; the appearance of a skirt or the hanging of cloth over the edge of table).

Handle: Sum of the total sensations, when a textile fabric is handled by touching, flexing of fingers, smoothing, and so on**.** There are three methods of perception which are as follows:

☐ Sight only (visual perception),

☐ Touch only (tactile perception) and sight and touch together.

☐ The judgment of roughness, smoothness, harshness, pliability, thickness etc.

Permeability: It is the property by the virtue of which fabric allow the passage of air and water through its surface. An impenetrable barrier against wind and water while maintaining breathability is considered as a good permeable fabric.
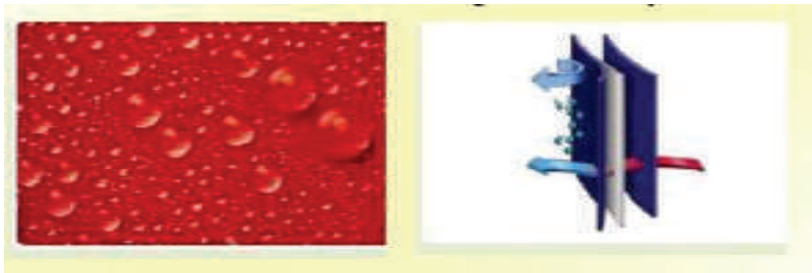
Thermal Resistance: If air is confined in small spaces, then convection is also minimized, and the air is "dead". The higher the volume of dead air within a textile structure, the better the insulation value of the textile.

Wool is a good fiber for insulation because its natural crimp maintains a high volume of dead air.

Finer fibers have more surface area, which results in more dead air space between fibers. An example is the effective use of micro-fibers in coats for use in cold climates.

Water Repellence and Water Proof: Perspiration in vapour form, body is relatively comfortable. When this vapour cannot escape, the vapour condenses to **sweat**, increasing discomfort. Under these conditions, the contribution of textile fabrics to comfort depends on their ability to carry away the water vapour.
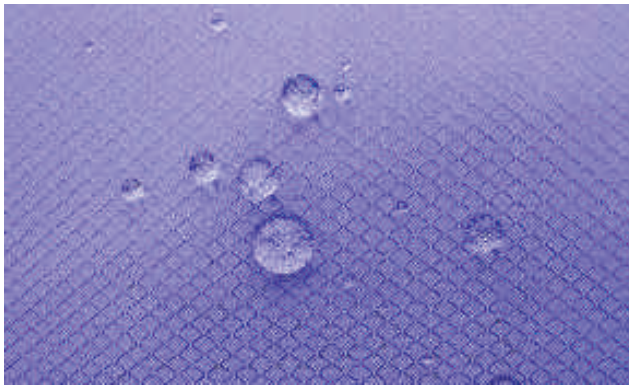
Fabric Parameters
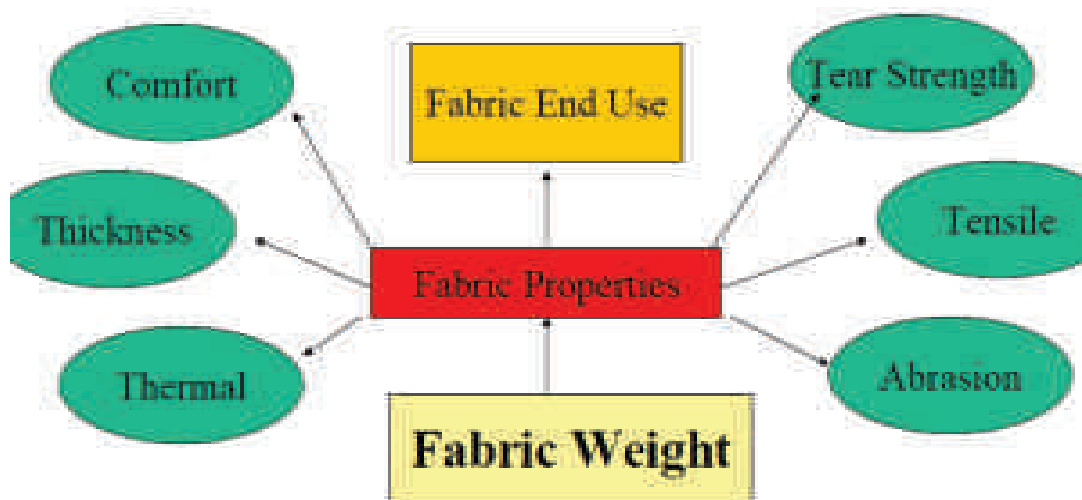
Fabric Weight Affects Fabric Properties / End Use

Notes

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Exercise

1. Discuss the terms Fiber, Yarn and Fabric in relation to textile.

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2. What are the major types of fabrics and how they are produced?

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3. What is warp and weft density of a fabric?

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4. What is the yarn count?

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5. Discuss about different type of weaves.

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6. What is the crimp and how it is expresses?

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7. Discuss about fabric weight and its effect on quality.

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8. Discuss various mechanical properties of fabric.

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3. Pre-Looming Operation

Unit 3.1 – Hand Operated Loom and Functioning

Unit 3.2 – Preparing Yarn for Weaving

Key Learning Outcomes

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

1. Know the functions of hand loom
2. Identify various parts of hand loom.
3. Know how looming works.
4. Prepare yarn for weaving.

UNIT 3.1: Hand Operated Loom and Functioning

Unit Objectives

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

1. Know the functions of hand loom
2. Identify various parts of hand loom.
3. Know how looming works.

3.1.1 Introduction to Handloom

A handloom is a simple tool used for weaving. In a wooden vertical-shaft looms, the heddles are constant in place inside the shaft. The warp threads bypass alternately via a heddle, and thru an area among the heddles (the shed), so that raising the shaft increases half the threads (those passing thru the heddles), and lowering the shaft lowers the identical threads — the threads passing via the areas among the heddles stay in region.

Figure 3.1. 1A Simple Handloom

The history of the earliest hand looms is sketchy. Archeologists have found evidence of weaving dating back to the eighth millennium B.C. in regions of Mesopotamia and Turkey. While excavating a 19th century B.C. Egyptian tomb, others unearthed a model of a weaver's workshop. It was complete with a horizontal loom, warping devices, and other weaving tools.

Most historians believe warp-weighted looms were the first to be used. The weaver suspended the warp yarns from a tree branch and some weavers tied the dangling warp to rocks or logs to pull them tight. This crude setup evolved into a free-standing vertical loom that some weavers use in modern times. Many other early looms, such as the back strap hand loom, are also still used in undeveloped areas where electricity is not available.

It is interesting to know that Yarn spun by hand is known as "hand spun yarn" and yarn spun by machines is called "mill spun yarn". Fabrics woven out of hand spun yarn on handlooms are called *"khadi",* while mill spun yarn woven on handlooms is called *"handloom"*fabrics.

3.1.2 Parts of Handloom

Various important parts of handloom are given in Figure 3.1. 2.
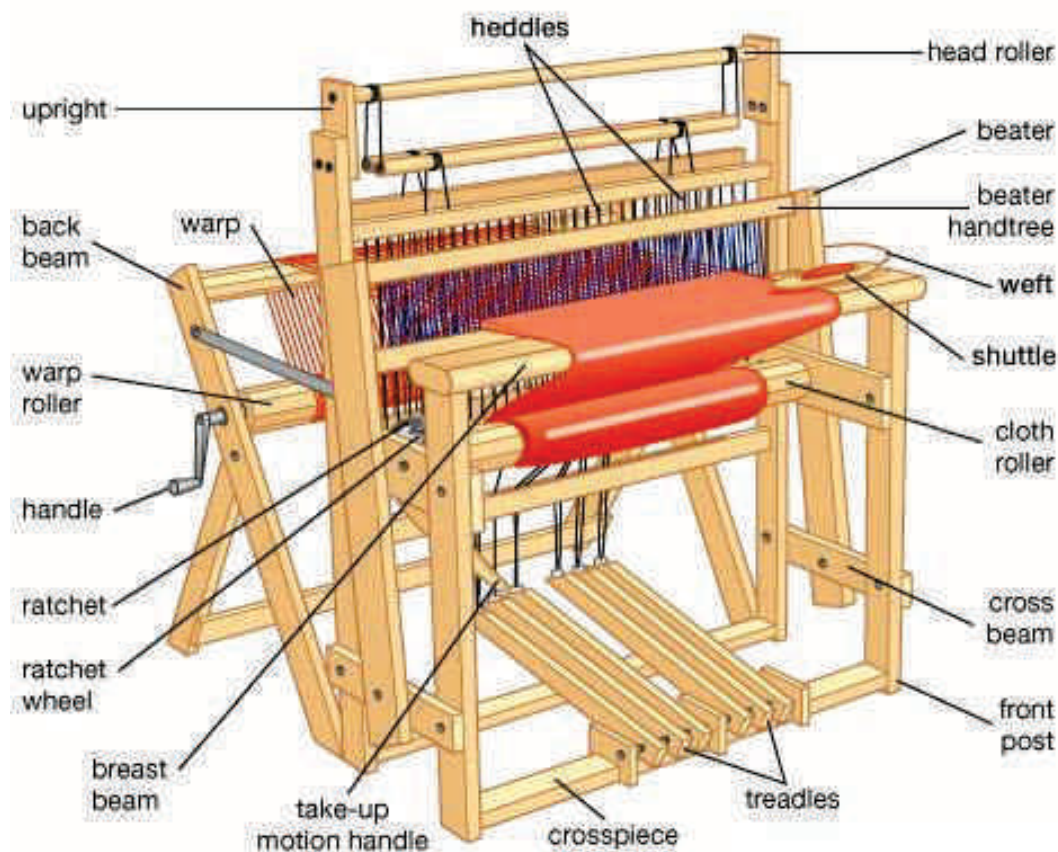
Figure 3.1. 2Parts of Handloom

Reed: A reed is part of a loom, and resembles a comb; refer to Figure 3.1. 3. It is used to push the weft yarn securely into place as it is woven, it also separates the warp threads and holds them in their positions, keeping them untangled, and guides the shuttle as it moves across the loom. It consists of a frame with lots of vertical slits.

Figure 3.1. 3Reed

Heddle: A heddle is an integral part of a loom. Each thread in the warp passes through a heddle, which is used to separate the warp threads for the passage of the weft; refer to Figure 3.1. 4. The typical heddle is made of cord or wire, and is suspended on a shaft of a loom. Each heddle has an eye in the center where the warp is threaded through. As there is one heddle for each thread of the warp, there can be near a thousand heddles used for fine or wide warps.
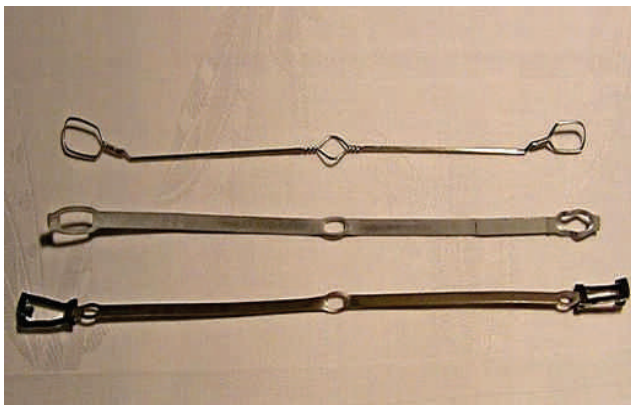
Figure 3.1. 4Heddle

Shuttle: A Shuttle is a tool designed to neatly and compactly store or a holder that carries the thread across the loom weft yarn while weaving; refer to Figure 3.1. 5. Shuttles are thrown or passed back and forth through the shed, between the yarn threads of the warp in order to weave in the weft.

The simplest shuttles, known as "stick shuttles", are made from a flat, narrow piece of wood with notches on the ends to hold the weft yarn. More complicated shuttles incorporate bobbins.

Figure 3.1. 5Shuttle

Beater: Swinging frame holding the removable reed, used to beat the weft in place ; refer to Figure 3.1. 6.

Figure 3.1. 6Beater

Lease and Beam Sticks: Flat, thin, smooth, wooden sticks which are inserted into the cross (or lease) in the warp to keep the correct order of threads are called Lease Sticks ; refer to Figure 3.1. 7.

Sticks which are placed onto the warp beam as the warp is wound on are called Beam Sticks.

Figure 3.1. 7Lease and Beam Stick

Threading Hook: This is a small tool with a thin narrow hook, used to pull the warp ends through the heddle eyes; refer to Figure 3.1. 8.

Figure 3.1. 8Threading Hook

Equipment that must be bought separately:

Boat Shuttle: A shuttle which looks like a boat and is hollowed out to hold a bobbin or quill of weft thread; refer to Figure 3.1. 9.

Figure 3.1. 9Boat Shuttle

Bobbin: Spool for a boat shuttle, on which weft thread is wound; refer to Figure 3.1. 10.

Figure 3.1. 10Bobbin

Bobbin Winder: A tool for winding bobbins or spools either by hand or electric power; refer to Figure 3.1. 11.
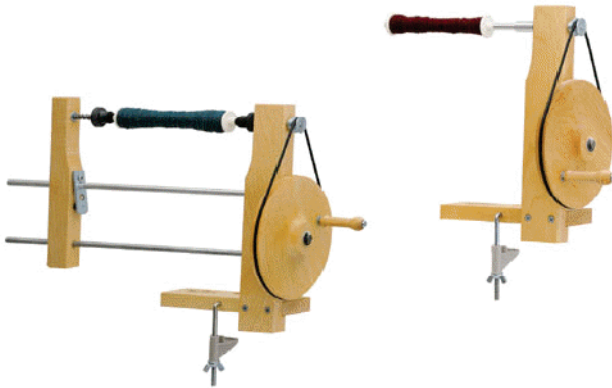
Figure 3.1. 11Bobbin Winder

Slaying Hook: A small flat tool with a hook used to pull the warp ends through the reed; refer to Figure 3.1. 12.
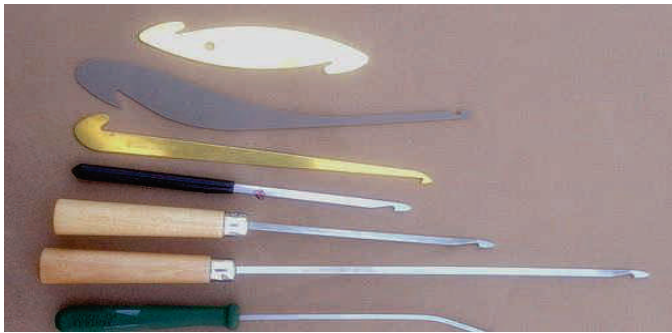
Figure 3.1. 12Slaying Hook

Temple (stretcher): Adjustable wooden or metal bar with sharp points placed on the woven web to keep the width constant and the sett the same across the web; refer to Figure 3.1. 13.
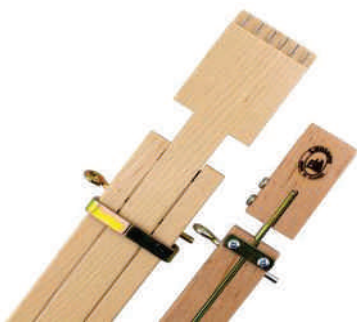
Figure 3.1. 13Temple(Stretcher)

Warping Board: This is a frame with wooden pegs, used to measure short warps; refer to Figure 3.1. 14.
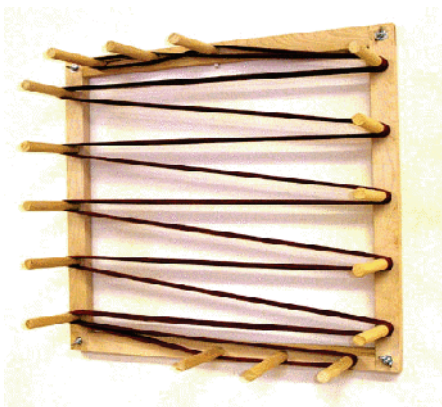
Figure 3.1. 14Warping Board

3.1.3 How Looming Works?

Weaving is done by intersecting the longitudinal threads, the **warp**, i.e. "that which is thrown across", with the transverse threads, the **weft**, i.e. "that which is woven".

The major components of the loom are the warp beam, heddles, harnesses or shafts (as few as two, four is common, sixteen not unheard of), shuttle, reed and take up roll. In the loom, yarn processing includes shedding, picking, battening and taking-up operations. These are the principal motions.

☐ **Warping**. Tie or tape the end of your warp yarn (a pleasant robust, non-elastic cotton is pleasant) on the groove in one corner — any nook will do — after which convey the yarn to the corresponding groove at the opposite cease of the loom. Pulling it fine and taut, catch it around the back of the groove, wrapping the yarn into the adjacent groove. then again, carry the yarn to the corresponding groove on the other aspect, seize it around the returned and into the subsequent groove, and so on. You don't should use the full width of the loom. If you want to do a smaller weaving, you could warp simplest as many grooves as you like, centering them on the loom. To tie off the warp, you may see within the picture above that we simply wound it across the top of the first and 2d notches at the start and the quit to keep it secure at the same time as i weave. so that it will permit it to pop off later after I'm equipped to cast off the weaving from the loom.
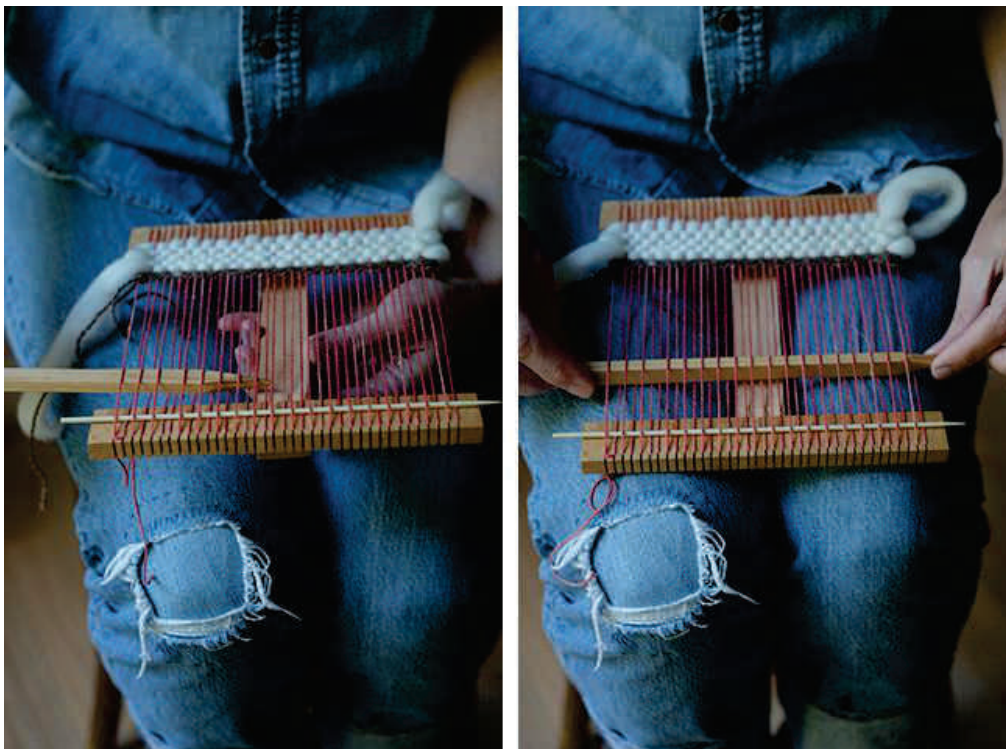
Figure 3.1. 15Warping

☐ **Shedding**. Shedding is the raising of part of the warp yarn to shape a shed (the vertical area between the raised and unraised warp yarns), via which the filling yarn, carried by means of the go back and forth, can be inserted. At the modern loom, easy and tricky losing operations are finished robotically by way of the heddle or heald frame, additionally called a harness. That is a rectangular body to which a series of wires, called heddles or healds, are connected. The yarns are exceeded through the eye holes of the heddles, which dangle vertically from the harnesses. The weave pattern determines which harness controls which warp yarns, and the wide variety of harnesses used relies upon on the complexity of the weave. Two not unusual methods of controlling the heddles are dobbies and a jacquard head.
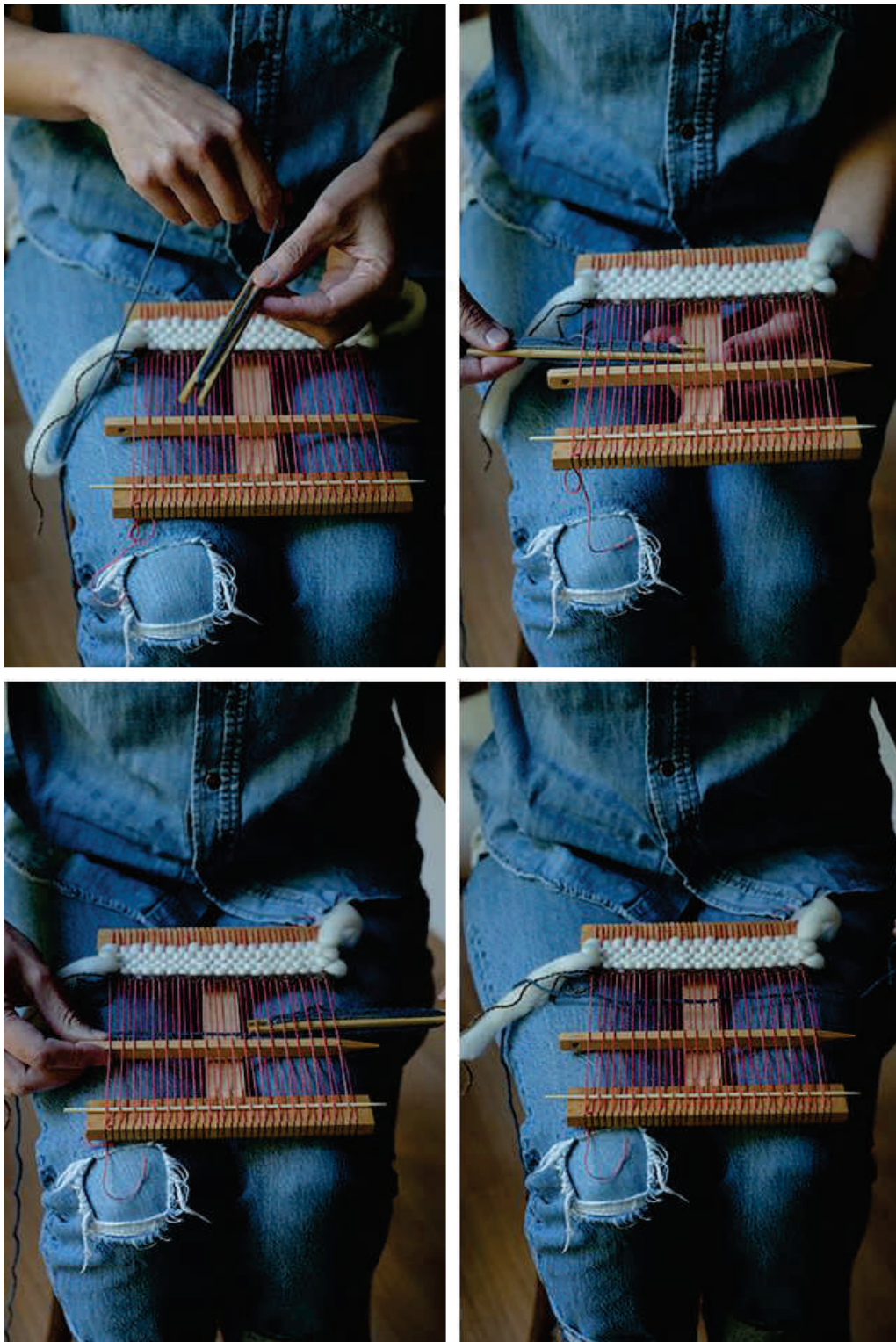
Figure 3.1. 16Shedding

☐ **Picking**. As the harnesses improve the heddles or healds, which boost the warp yarns, the shed is created. The filling yarn is inserted through the shed with the aid of a small provider tool called a go back and forth. The go back and forth is commonly pointed at every cease to allow passage via the shed. in a traditional trip loom, the filling yarn is wound onto a quill, which in turn is mounted in the shuttle. The filling yarn emerges via a hollow within the

shuttle as it movements throughout the loom. An unmarried crossing of the travel from one side of the loom to the other is known as a pick. As the trip actions backward and forward throughout the shed, it weaves an part, or selvage, on every side of the material to prevent the material from raveling.
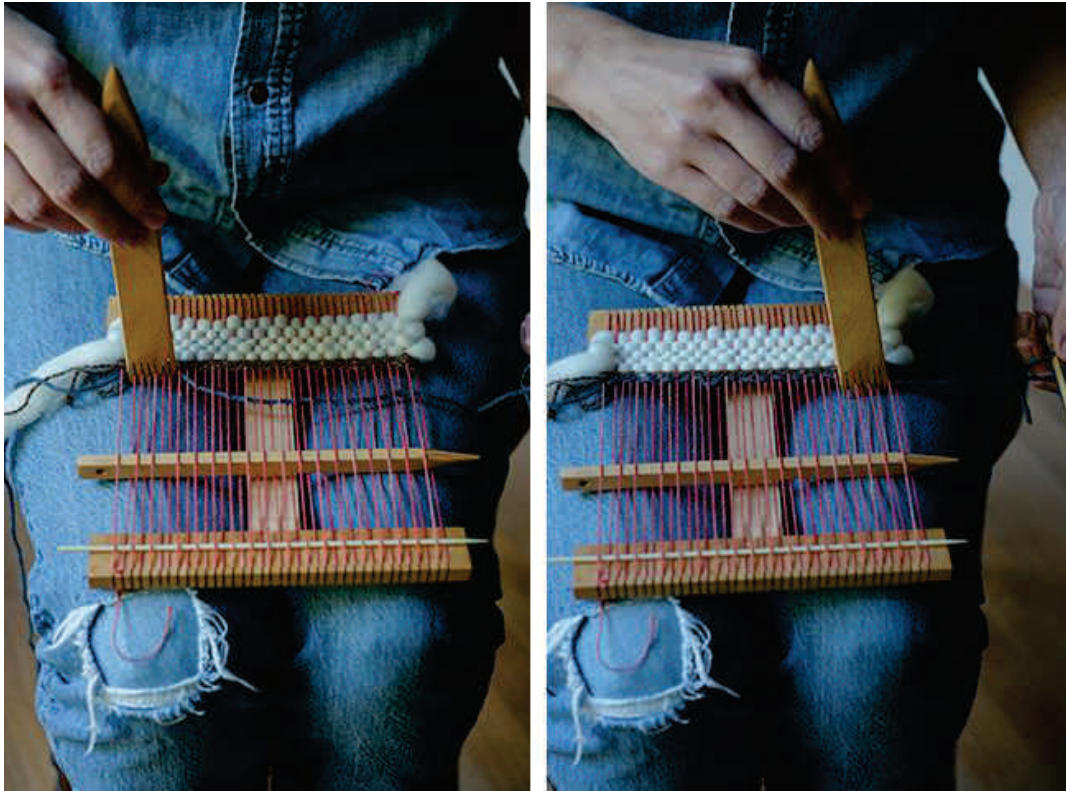
Figure 3.1. 17Picking

☐ **Battening**. Between the heddles and the takeup roll, the warp threads pass through some other body referred to as the reed (which resembles a comb). The portion of the fabric that has already been shaped but not but rolled up on the takeup roll is known as the fell. After the trip moves across the loom laying down the fill yarn, the weaver uses the reed to press (or batten) each filling yarn in opposition to the fell. Traditional travel looms can perform at speeds of about one hundred fifty to a hundred and sixty picks in keeping with minute.

Figure 3.1. 18Battening

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UNIT 3.2: Preparing Yarn for Weaving

Unit Objectives 🎯

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

1. Identify the process of preparing yarn for weaving
2. Describe the process of sizing yarn required for weaving.

3.2.1 Preparing Yarn for Weaving

Manufacturing of woven fabric involves various steps as shown in below figure.
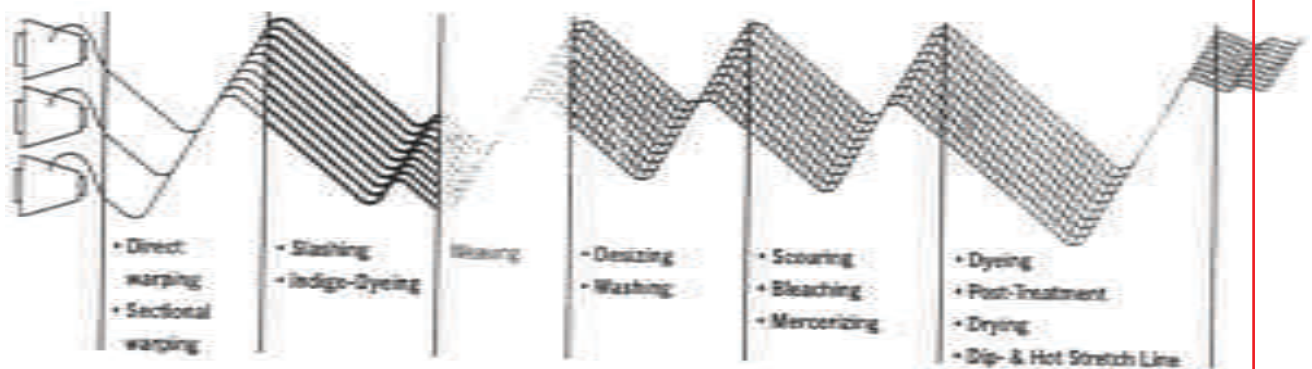
Yarn preparation for weaving mainly involves two steps:

☐ Warping
☐ Sizing

These operations in these steps are given next:

Warping. The twist is comprised of cotton strings (yarn) organized length-wise, extended on the loom towards the weaver. To make the twist, yarn is twisted to the required length on a warping wheel.

Figure 3.2. 1 Warping

Sizing. The prepared warp is treated with starch and oil to accomplish stiffness and smoothness enough to withstand the rigour of weaving, a process known as *sizing*. Sizing is done by hand for *pit loom* weaving, for which the warp is stretched along its length on a bamboo frame. Natural st arch is used, made from local staples like rice or millets, sprayed onto the stretched warp, then brushed with a *sizing brush* to spread it evenly and ensure that each thread is coated.

For *frame loom* weaving, a hand-operated arrangement of bobbins with a d rum performs a combined warping and sizing process. In this setup, brushing of yarn is eliminated.

Figure 3.2. 2Sizing of Yarn

Exercise

1. What is a handloom and what does it do?

_____

_____

2. Write down any 10 parts of handloom and check how many of your parts match with your colleague.

   _____

   _____

3. What is the function of Reed in handloom?

   _____

4. What is the function of heddle in handloom?

   _____

5. What is the function of shuttle in handloom?

   _____

6. What is the function of beater in handloom?

   _____

7. What is the function of temple in handloom?

   _____

8. What is the function of temple in handloom?

   _____

9. Write down the steps of how looming is done.

   _____

   _____

10. Why is battening done in hand looming?

   _____

11. Discuss the steps of preparing yarn for looming?

   _____

   _____

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4. Looming and Post-Looming Operation

Unit 4.1 – Performing Looming Operations

Unit 4.2 – Performing Post-Looming Operations

Key Learning Outcomes

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

1. Identify various components of hand operated loom
2. Describe the functioning of hand operated loom.
3. Identify the operations to be performed after looming.
4. Describe the tools and procedures of trimming, rolling and inspection of bamboo mats.

Unit 4.1: Performing Looming Operations

Unit Objectives 🎯

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

1. Identify various components of hand operated loom
2. Describe the functioning of hand operated loom.
3. Describe the process of Weft preparation
4. Identify the different type of weaves

4.1.1 Operations in Looming

Warp Preparation

Before weaving, yarns (intended for warp) must pass through such operations as spooling, wrapping and slashing to prepare them to withstand the strain of weaving process.

Spooling: Yarn is wound on large spools, or cones which are placed on a rack called a creel from this yarns are wound on warp beam, which is similar to huge spool.

Figure 4.1. 1 Spooling

Starching: These yarns are unwound to be put through a slashing or sizing bath. The slasher machine covers every yarn with a coating to prevent breaking during weaving process.

Warping: The sized yarns are then wound on a final warp beam and are ready for the loom. The warp beam prepared now is then mounted on looms.
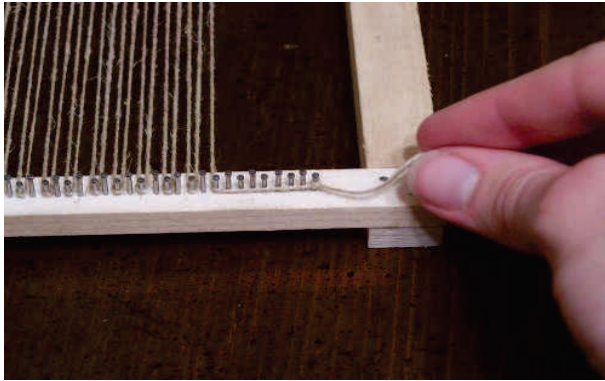
Figure 4.1. 2Warping

Before the invention of conventional loom, back strap loom was in existence. Later, the conventional loom replaced the back-strap loom which is now-a-days not in use. The above given preparatory procedures were not followed in the back-strap loom since the fabric was prepared manually. On conventional loom, the warp beam is mounted at the back and warp yarns are conveyed to a cylinder called cloth roll, which is at the front of the loom and on which fabric is rolled as it is constructed.
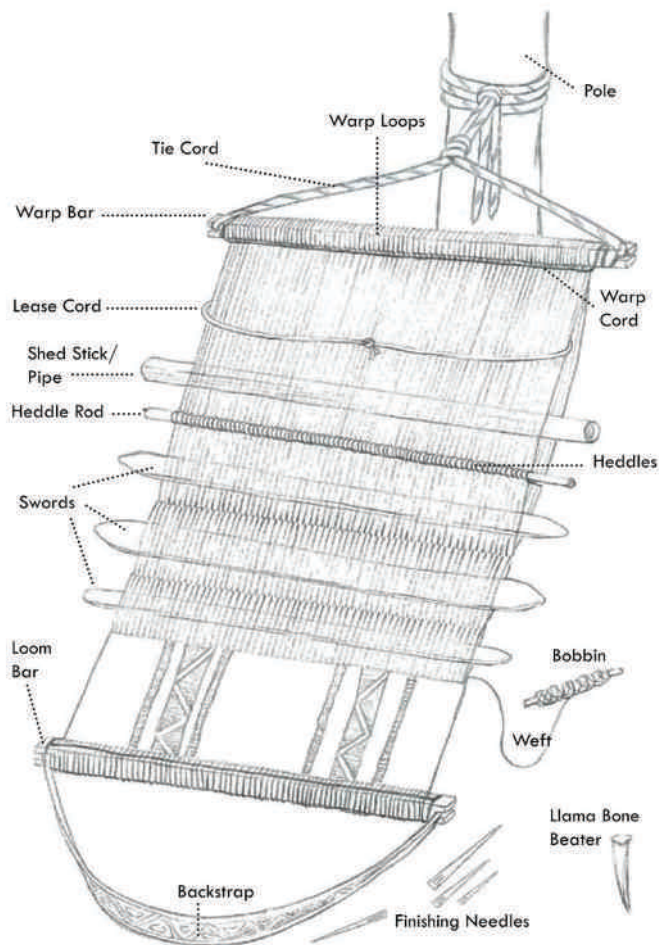
Figure 4.1. 3 Conventional Loom

The warp beam holds the length-wise yarns and is located at the back of the loom. This beam is controlled so that it releases yarn to the loom as it is needed. The Heddles are wires or metal strips with an eye located in the center through which the warp ends are threaded. The harness is the frame that holds the Heddles in position. Each loom has at least two harness. A majority of looms for regular fabrics have four to twelve harness and some looms may have as many as thirty-two. Harness can be raised or lowered to produce the shed through which the filling yarn is passed and thus controls the pattern of weave. The shuttle move back and forth in the shed created, passing the filling yarns between the warp yarns. The reed is a comb like device that helps to pack the filling yarns into position in the woven fabric.

The opening in the reed through which the warp yarns are threaded are called Dents. This maintain the warp yarns in a systematic relation and prevents yarns from tangling during weaving process. The cloth beam is located at the front of the loom and holds the completed fabric.

Weft Preparations

Making bobbin or quill for boat shuttle:

1. Cut a piece of paper 6 inches long by 3 1/2 inches wide.

☐ Heavy brown wrapping paper makes good bobbins.

2. Round the corners.

☐ The corners of the paper will not protrude and winding is easier.

3. Wind paper lengthwise around a small lead pencil to secure correct diameter.

☐ Paper is wound lengthwise to give a longer bobbin for holding larger supply of yarn.

☐ Bobbin must turn freely in shuttle.

☐ It is advisable to cut several bobbin papers for future use, as most weavers find it desirable to wind several bobbins at one time.

MAKING BOBBIN FOR BOAT SHUTTLE

Figure 4.1. 4 Bobbin

Winding bobbin for boat shuttle:

1. Fasten skein reel to table.

☐ Skein reel holds hank of yarn as it is unwound and transferred to bobbins. The skein reel is similar to that used by knitters.

☐ Yarn is often supplied on cones or spools and can be wound directly onto bobbins.

2. Place skein of yarn on skein reel.

3. Fasten bobbin winder near skein reel on table.

□ It is advisable to have skein reel and bobbin winder near each other so that both may be easily reached.

4. Take loose end of yarn on skein reel and fasten to paper bobbin with single knot.

5. Place paper bobbin on bobbin winder.

□ Bobbin should be pushed onto shaft of winder until it will turn with shaft, when the winder is operated.

6. Turn handle of bobbin with right hand, winding yam on bobbin.

7. Hold yarn with left hand, guiding thread back and forth on bobbin at even tension, building up each end first.

□ The ends of bobbin should be built up first to enable weaver to put more yardage on bobbin and prevent yam from sliding off ends.

□ The yarn should not be carried too close to ends of bobbin as thread may slip off ends.

8. Fill center on bobbin.

9. Turn winder until bobbin is full.

□ The bobbin should not be overloaded as it must turn freely when placed in shuttle.
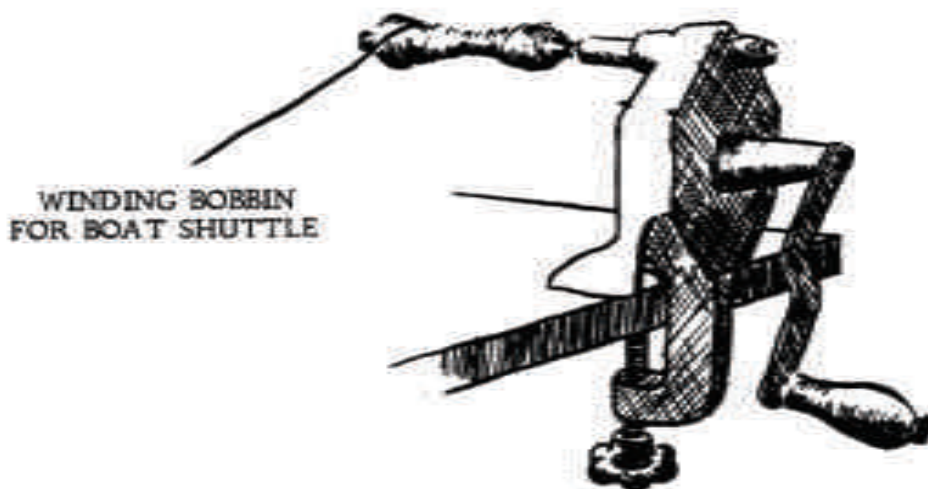
Figure 4.1. 5 Winding Bobbin

Threading boat shuttle

1. Unfasten rod or wire from shuttle.

□ The make of boat shuttle will determine whether the wire or rod may be hinged at one end while the other end is held by a small catch. To place bobbin in the shuttle, the rod must be pulled out at one end.

☐ Another type of shuttle has the rod held in place by a compression spring which is concealed in one end of the shuttle. To remove this rod, push the rod against the spring and withdraw completely from shuttle.

2. Place a bobbin, wound with weft yarn, on the wire or rod.

☐ It is easier to weave with boat shuttles than with flat shuttles.

3. Replace rod in shuttle so that thread unwinds from underside of bobbin.

☐ It is advisable to have a number of shuttles on hand in case the weaver desires to use several colors of material in the weft.

4. Thread end of yarn through slot or hole in the side of the boat shuttle.

5. Pull about 12 inches of yarn through slot.

BOAT SHUTTLE

Figure 4.1. 6 Boat Shuttle

Winding flat shuttle

1. Place yarn in skein reel as is done to wind bobbin.

☐ Flat shuttle should be at least 1 inch longer than width of warp placed on the loom.

2. Take loose end of yarn in right hand and flat shuttle in left hand.

3. Make loop in end of yarn and slip over one prong at end of shuttle to hold yarn in place.

4. Wind yarn lengthwise and over end through the notches in shuttle until full.

☐ Wind yarn lengthwise and over end through the notches in shuttle until full.

5. Break yarn when shuttle is full.

6. Fill several shuttles so that they will be ready when needed.

FLAT SHUTTLE
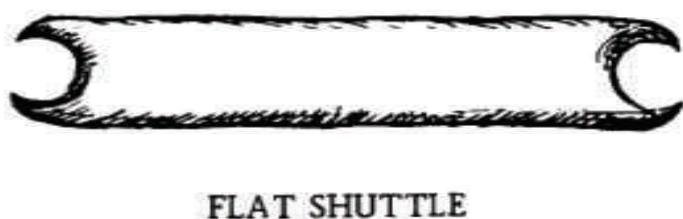
Looming

There are basically 5 types of operations which are common in each type of looming.

1. Shedding: It is raising and lowering of warp yarns by the harness to make an opening for the weft yarns to pass through. The raising of the alternate warp yams formed an inverted V opening or shed, through which the filling yarn was inserted, on the modern looms, shedding operations are performed automatically by the harness.
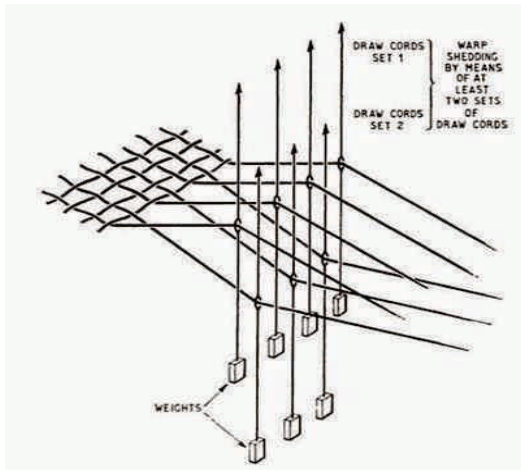
Figure 4.1. 7 Shredding

2. Harness: it is a rectangular frame, to which a series of wires called Heddles are attached. As each warp yam comes from the warp beam, it must pass through an opening like "eye of a needle" in the middle of the heddle. The operation of drawing each warp yarn through appropriate heddle eye is known as "drawing in".
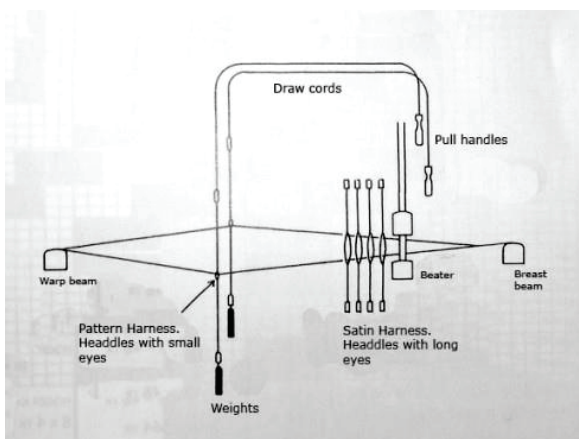
Figure 4.1. 8 Harness

3. Picking: It is the actual process of placing the weft yarns in the shed. This is done using a device known as 'shuttle'. It has a metal strip in which bobbin or pin is inserted.

As the harnesses raise the heddles which in turn raise the warp yarns, the filling yarn is inserted through the shed by a carrier device. A single crossing of the filling from one side of the loom to the other is called a pick.
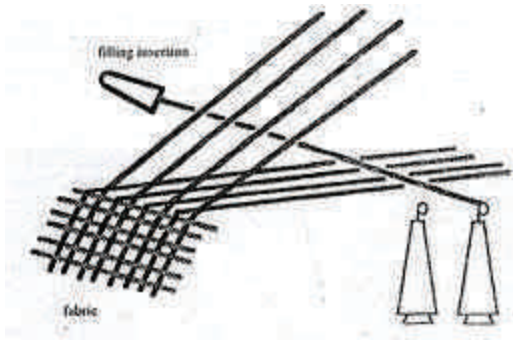
Figure 4.1. 9 Picking

4. Beating Up: Sometimes called beating in or beating up, consists of evenly packing the filling yarns into position in the fabric. It gives a compact construction to the fabric.

All warp yams pass through heddles eyes and through openings in another frame that resembles a comb and is called a Reed. With each picking operation, the reed automatically beats each filling yarn against the portion of the fabric that has already been formed. It gives the fabric a firm and compact construction.
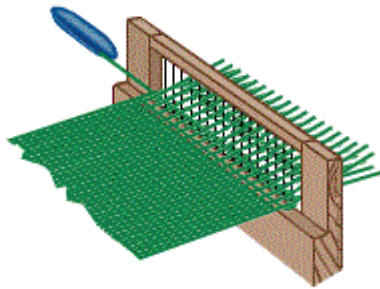
Figure 4.1. 10 Beating

5. Taking up and letting off: It involves taking up the newly manufactured fabric onto the cloth beam and letting off or releasing yarn from the warp beam. The operation maintains uniform distance and tension from warp beam to harness to completed cloth.

Weaving the Fabric: Throwing the shuttle from right to left and from left to right through the shed is the most pleasant operation in hand weaving; it is also the simplest. Rhythm and speed come with practice. While weaving is more thrilling than setting up the loom, a real craftsman must be able to do both.

4.1.2 Some Other basic weaving operations:

Removing harnesses and beater from loom

Remove beater from loom

☐ The removal of beater gives free access over breast beam and rear beam to the warp beam. 1f this is difficult, remove only top of beater and reed.

Observe how harnesses are fastened

□   Harnesses must be replaced in same way so it is important to know how they are fastened in loom.

Remove harnesses, by unfastenin cord or chain

□   This makes it easier to add heddles to the required number for width and pattern used.

Number each harness as removed, the front harness being #1

□   The term "beaming" is commonly used for the process of winding the warp thread onto warp beam, a large roller placed in back of loom.

Place beater and harnesses to one side until warp is on loom

□   The step of beaming is a very important one in preparatory work. Careless beaming may be cause for serious trouble all through actual weaving.

Remove front breast beam if a large loom

□   It is easier on the back.

Placing warp beam stick in loops of warp

Place chained warp on table. First lease stick takes place of Peg #2. Second of Peg #3.

□   It is more convenient to work on flat surface, as a table.

Slide warp beam stick or rod through end loops of warp.

□   The warp beam stick is a heavy, smooth, flat stick or rod with hole in each end.

Secure warp beam stick in place with a cord passed through holes in each end of stick or rod, and over warp.

□   The passing of a cord through holes in end of warp beam stick and over warp removes all danger of losing any warp threads.

□   A good fabric cannot be woven on a poor warp, so this is an important procedure.

Draw cord taut and tie.

□   A cord tied at each end of stick prevents warp from coming off.

Spread end loops of warp to full width on warp beam stick.

Bring warp rod over back beam towards the front of the loom. Secure warp to beam by cords or tapes which are fastened to beam.
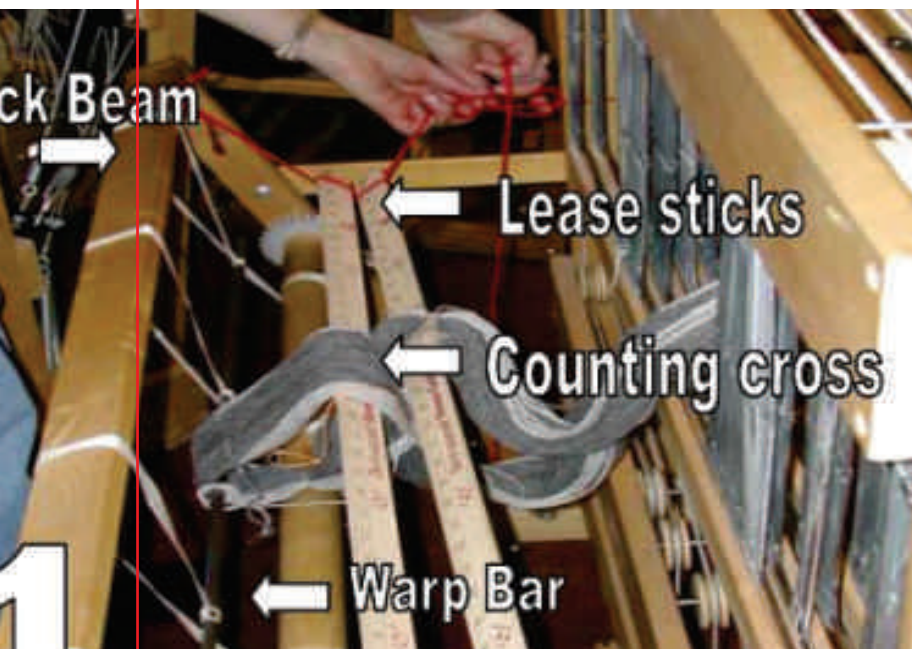
Placing shed or lease sticks in warp

Place a lease stick through the first cross already marked in the warp by a string or cord.

- First cross is marked by a cord or colored string. Lease stick is smooth, flat, wooden stick, long as the loom's Width, with hole in each end.

Run a cord through hole in one end of lease stick, fasten end.

- It is impossible to part the warp properly on the loom if lease is lost.

- Lease sticks are put in warp to take the place of pegs #2 and #3 on board to keep the cross. In illustration on page 6 called "the cross" pegs #2 and #3 hold the cross.

Draw cord over outside of warp through hole in other end of stick.

- Strings used for marking have now been replaced by sticks and warp beam rod.

Draw taut and secure cord firmly.

- The crosses must be properly made and kept there to insure orderly threading, a clean shed, and good weaving.

Place second lease stick in second cross of warp. Secure this lease stick as directed for first stick.

Remove cords or strings originally placed in warp.

Use cords or string to tie the ends.

Spacing warp in raddle

Spread warp evenly to its full width in raddle.

☐ The raddle assists in even distribution of warp threads.

☐ The spacing in raddle or warp spreader, must be as even as possible. Warp threads must be spread in the same order as they appear on the lease sticks.

Winding warp on warp beam

☐ Hold warp at tension in front of loom, while another person turns crank handle on the warp beam with slow even motion, holding warp at as even a tension as possible.

☐ Wind wrapping paper, corrugated paper (the kind with plain paper on one side only) or laths on beam, or a combination of the first two, with the warp.

☐ Keep lease sticks gliding through warp to its entire length.

☐ Wind warp on beam until the free ends of the warp are just long enough to go through the eyes of the heddles and hang down about six inches when harnesses are in place.

Replacing beater and harnesses

- ☐ Replace harnesses in original positions.
- ☐ Replace beater in original position. Do not put in reed or top of beater.

Remove the
Lease sticks

Threading the warp through the reed

- ☐ Find center of reed and measure to the right of center 1/2 the width of the warp.
- ☐ Thread the first loop of warp through the reed at this point.
- ☐ Skip a dent and thread the next loop through the reed.
- ☐ Work from right to left.
- ☐ Repeat until each loop is threaded through reed.

Adjusting tension of all warp threads of apron

☐ Tighten warp. Test the tension of complete warp after tie -in is completed

☐ Readjust tension of groups of threads where needed.

☐ Re-tie all groups of threads that are loose or too tight.

☐ Continue readjustment until all warp threads are at as even tension as possible.

Placing extra thread in warp on a plain warp beam

☐ Secure an empty spool similar to a linen thread spool.

☐ Measure a warp thread the length of the warp used on the loom.

☐ Tie the end of the thread to the spool.

☐ Wind all of warp thread evenly on spool.

☐ Fasten end of thread so it will not come off spool.

☐ Allow spool to hang over back beam of loom where thread is to be replaced. Wrap spool once around back beam to secure proper tension.

- ☐ Take off enough warp to thread loom.
- ☐ Pass warp thread through skipped heddle.
- ☐ Make the correction, then continue with the next operation.
- ☐ Re-tie the sections which are causing the irregularities. It may be necessary to unweave the heading first.
- ☐ Finish the heading by cutting the heavy weft yarn at the edge of the fabric after all mistakes have been corrected
- ☐ Some mistakes in threading do not show up until first twill pattern is woven. Check after starting pattern. Above directions may be used to correct such mistakes.

Changing bobbins

- ☐ Weave weft as far as it will go in the shed.
- ☐ Pull end up through the warp.
- ☐ Thread shuttle with a new bobbin.
- ☐ Throw the shuttle through the shed to finish the row.
- ☐ Allow ends of the new and old weft to overlap under 8 to 14 warp threads.
- ☐ Bring ends up through the warp.
- ☐ Cut off the ends after weaving 4 or S more rows.
- ☐ Where it shows, make the joining near selvage edge.
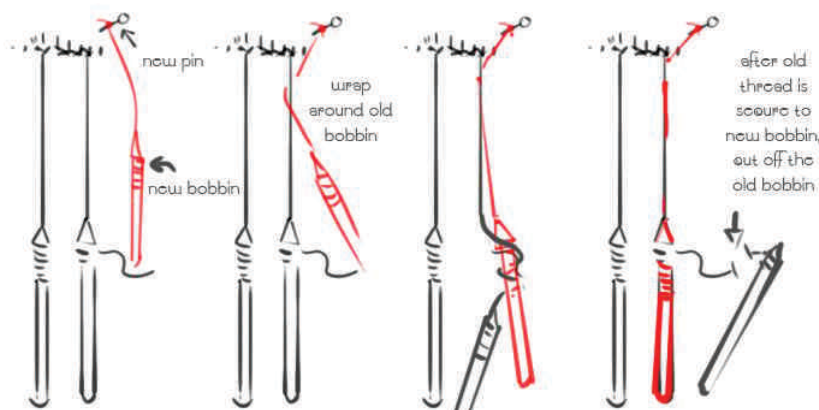
Cutting warp

- ☐ Take tension off warp by un-fastening ratchet on warp beam.
- ☐ Cut through complete warp about 1 inch beyond end of weaving.

Weaving is a major method of fabric construction. The technique probably became known before spinning. Spinning developed when people discovered that the raw material could be improved before they were woven. In the course of time, rude looms were made, which were simple and

hand-operated, fabrics produced on such looms are also known as hand loom fabrics where everything is done by hands. The modern power loom used in the textile industry today essentially performs the same operation as the simple hand operated loom. The fabric produced on power looms is made comparatively faster and has few defects in comparison to hand looms.

Based on the picking operations looms are divided into various categories. The two major ones are based upon the method of filling insertion. Looms that uses shuttle are called conventional shuttle or fly shuttle looms. Shuttle looms have very compact selvedge. It is the oldest and versatile method of weaving so most different kinds of fabrics can be obtained. Very large wooden shuttle is used and every time it passes through warp yarns it causes abrasion and the productivity may go down because of the low strength of yarns. The broken yarns show fabric defects. Shuttle looms are very noisy and PPM (Picks per Minute— how many wefts laid in one minute) is 110 to 225.

On the other hand looms that uses other devices to bring the filling yarn through the shed are called shuttle less looms. The source of the yarn for shuttle less looms are cones placed at the sides of the loom. Shuttle-less looms gives very high productivity at the same time they are less noisy when compared to shuttle-looms. They also have high productivity and fewer fabric faults.

There are different types of looms other than conventional looms:

1. Single Projectile on Missile Loom   2. Multiple Projectile System

3. Rapier Loom   4. Jet Looms

Shuttle looms: The conventional loom utilizes a shuttle that contains a bobbin of tilling yarn which emerges through a hole in the side. Shuttle loom is the oldest kind of loom but versatile and effective.

Disadvantages: Shuttles causes abrasion on the warp yarns and sometimes causes warp breaks.

- Function slowly (110 to 225 picks per minute)
- Shuttle looms are noisy.

Shuttle less looms: Shuttle less looms uses a different method of picking, which provides specific characteristics and applications.

Missile or Projectile looms: The picking action is accomplished by a series of small bullet like projectiles which grip the filling Yam and carry it through the shed and return empty. All the filling inserted from one side of the loom and A special tucking device is used to hold the filling in place at the edges of cloth to form selvedge.

Speed: upto 300ppm and less noisy than shuttle looms.

Rapier looms: These looms are competitors to the missile looms. There are two types of rapier looms.

Long and single rapier that carries the weft across the width from one side of the loom to another

Double rapier that is one on each side of the loom. One rapier feeds the filling yarn halfway through the shed of warp yarns to the arm on the other side, which reaches in and takes it across the rest of the way.

Speed: 200 to 260ppm at the same noise level of projectile loom

Water jet looms: A pre measured length of filling yarn is carried across the loom by a jet of water. Can produce superior quality of fabrics. Suitable for non-absorbent fibres like synthetic fibres.

Speed: 600ppm, at noise levels lower than missile and rapier

Air jet looms: These looms use a jet of air to propel the filling yarn through the shed. Require uniform filling yarns. They are suitable for use with medium weight yarns than very light and very heavy yarns.

Speed: 600ppm, at noise levels lower than missile and rapier

Selvedges: A selvedge is defined as length-wise edge of the fabric. Found on both ends of the fabric usually ¼ to ½ inches broad.

Main purpose of selvedge is to hold warps and wefts together. It prevents fabric from raveling. In machine loom a separate operation is required to finish the edges. Selvedge is usually much more compact than rest of the fabric. There are more warp yarns in the area of selvedge.

1. Mostly ply is used for selvedge.

2. Twist is more in selvedge.

3. Suppose body fabric is in a weak weave then the selvedge is stronger than the rest of the fabric.

4. Selvedge will depend on end use of fabric secondly on economy of production.
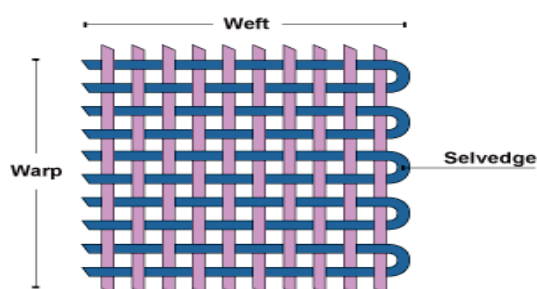
Plain selvages: simple plain weave, same size yarns, threads more compactly packed. Fairly durable and firm.

Tape selvages: basket weave for flatter edges, made of heavier yarns or ply yarns for greater strength.

Split selvages: made by weaving narrow width fabrics twice its ordinary width with two selvages in the center.

Fused selvages: for fabrics of thermoplastic fibers. The fabric is fused to seal at the edges. This technique is sometimes used to split wider fabrics in to narrow width fabrics.

Leno selvage: used on shuttle less looms. Uses a narrow leno weave at the edges which locks the cut ends along the edges.

Tucked selvage: used on shuttle less looms. A special device is used to tuck and hold the cut ends in to the fabric weave.

3.1.3 Basic Weave Structures

The manner in which groups of warp yarns are raised by the harness to permit the insertion of the filling yarn determines the pattern of the weave, and in large measure the kind of fabric produced. Weave patterns can create varying degrees of durability in fabrics, adding to their usefulness and also to their appearance.

There are three basic weaves. They are plain weave, twill weave and satin weave. All other weaves are a variation or a combination of these weaves. Basket weave and Rib weave are two variations of plain weave. In the same manner twill weave can also have number of variations, e.g., warp faced twill, weft faced twill, even twill, uneven twill, pointed twill, herring bone twill, gabardine, corkscrew and so on.

Graph paper (or pointed paper) is used to show the weaves or the order in which the yarns interlace in a fabric. It is used by textile designers to portray their designs or to analyse fabric weaves. Each vertical row of squares represents a warp yarn and each horizontal row of squares represents a filling yarn. A warp yarn crossing over a filling usually shown by marking in the square called a 'raiser'. A blank square over the warp called 'sinker'.

The weave diagram does not show the number of yarns per inch between warp and filling. The yarn size and type are also not indicated. The completed design shows the interlacing from the face side of the cloth. Most weaves are analysed from the face side.

Plain weave: A plain weave is a weave where each filling passes alternately over and under each warp in a square pattern. The interlacing is opposite in neighboring cells. The repeat is over two ends and two picks.

Properties of Plain weave:

1. Both sides are reversible until fabric is painted or printed from right side.

2. Fabrics have high abrasion resistance.

3. No yarn slippage.

4. There is no distinct design unless yarns have contrasting colors or thickness.

5. Easily produced; maximum yardage; inexpensive. Medium to dull lusture.

6. Adaptable for printing and other finishing process.

7. More durable. No floats. Medium drapability to very good drapability.

8. In old notation method, denoted by 'P'. Examples: Batiste, Cheese cloth, Cretonne, Percale, voile.
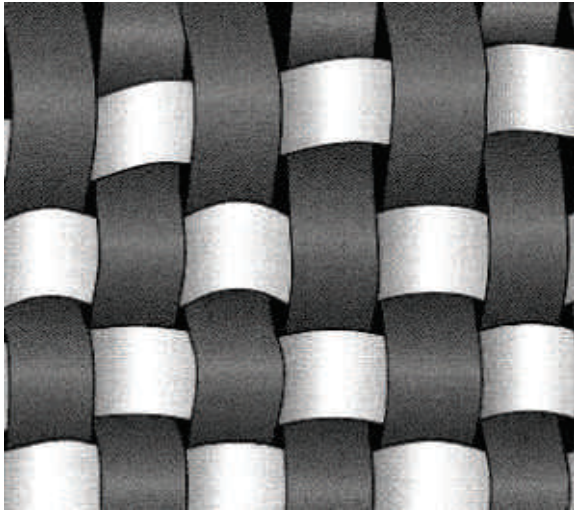
The two main variations of plain weave are:

Basket weave: Two or more yarns are taken as one set and are interlaced in plain weave pattern. Such weave creates interesting textures, but are not very stable.
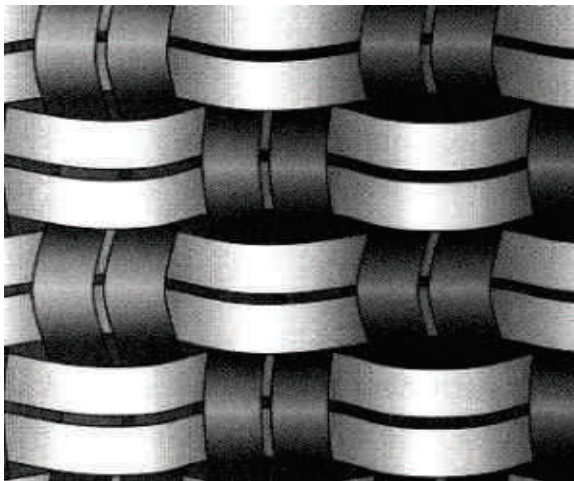
Rib Weave: A rib effect is produced by using several yarns as one or a thick yarn in either warp or weft direction which create ridge like effect.

Rib
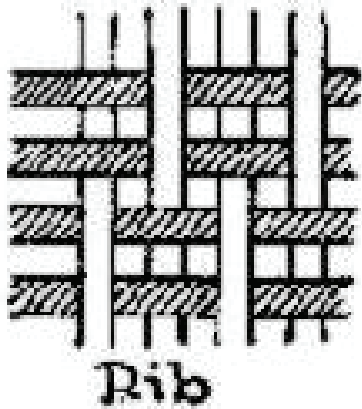
Twill Weave: A weave characterized by diagonal lines on the face of the fabric. The weft or warp yarns interlace with more than one warp yarn but never more than 4 warp yarns. On each successive line weft moves the design one step to the right or the left forming the diagonal. Whatever the direction of the diagonal on the face of the fabric the direction is opposite on reverse. The diagonal can vary from a low 14° angle called reclining twill to a 75° angle called a step twill. The most common is 45° and is regular or medium twill, steeper the twill stronger the fabric is likely to be. A 2 x 1 twill weave will be one where warp will go over 2 warp and under 1 weft. Suppose you have 4/2 weave, then it means that you will have 4 +2 =6 harnesses, (i.e) the repeat will have 6 boxes horizontally and 6 boxes vertically.

Properties of Twill weave:

1. Twill weave is one of the strongest weave.

2. It has fairly good drape.

3. More tightly woven.

4. A twill weave does not get dirt easily but once it gets dirt it becomes really difficult to clean them.

5. It has good wrinkle resistance.

6. Finer yarns with high twist are used in construction of twill weaves.

7. Denim is an uneven warp faced twill weave fabrics. Wefts are in white and warps are in blue so denim is blue on one side and white from the other side.

8. Other variations of twill weave include: Pointed twill, Herring bone, Gabardine, Corkscrew twill and so on.
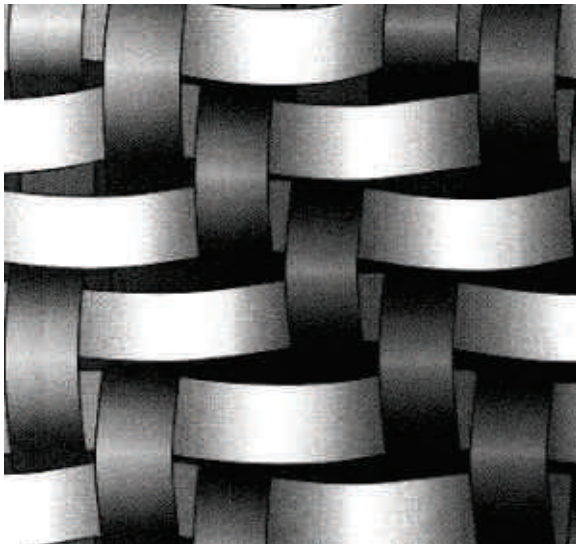
Satin weave: A satin weave is a weave where four (or more) shaft with warp floats in interrupted diagonal. Interlacing are never adjacent to one another. Satin repeat over at least 5 ends and 5 picks but the warp ends interlace only once per repeat.

Properties of Satin weave:

1. Right and wrong sides look quite different.

2. Very low abrasion resistance.

3. It has interrupted diagonal discernible with magnifying glass.

4. It is more expensive. Excellent lusture.

5. Less durable.

6. Excellent Drapability.

7. Denoted by 'S'. Examples: Satin, Slipper satin, Creepe back satin.
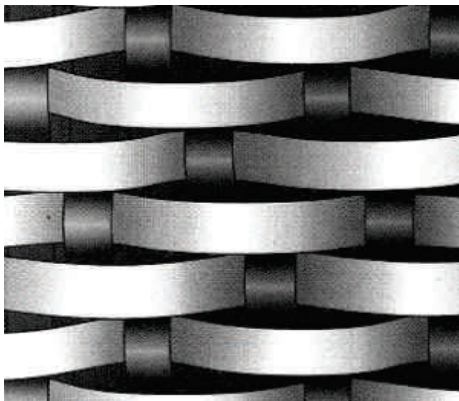
Sateen weave: Sateen weave is the same as satin weave, but in reverse: the weft yarn goes over one warp yarn, and then underneath three or four warp yarns. The right side of the fabric is dull and the wrong side is shiny. Fabrics made from sateen weave are used for suit and dress linings and eveningwear.
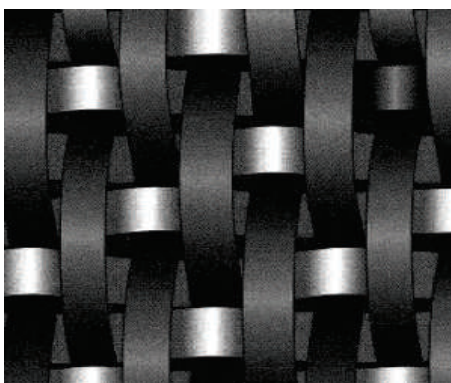
Surface figured weaves: Many decorative and patterned fabrics can be made by inserting extra warp and/or filling yarns during the fabric construction process. When extra warp yarns are used, they are wound on to an additional warp beam and threaded into separate heddles so that they can be controlled-depending on the complexity of the pattern, either by the dobby or the Jacquard attachment. Looms used for such constructions must have numerous harnesses or individual yarn control, in order to have sufficient warp control for the design to be formed.

Controls for such fabrics permit great design flexibility, the use of several colors in the filling direction as well as the warp which may be strung with several different colors of yarn etc an d the use of various types of yarns provides methods for producing figure weaves in selected or spot areas of a fabric. The main types of fabric made through the use of additional yarns are lappet, swivel and spot.

a. Lappet weave: Lappet is a fabric in which figure is achieved by introducing extra warp threads into a base fabric that is normally plain.
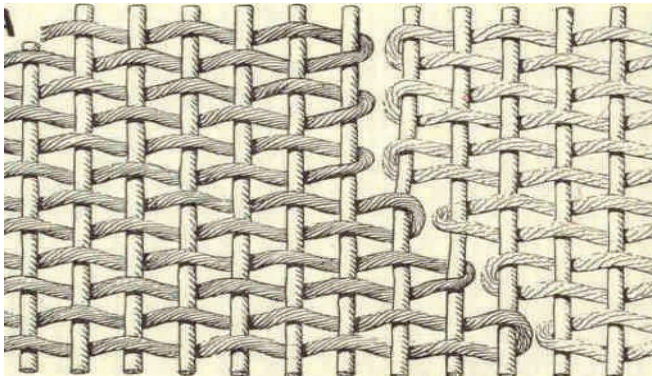
b. Swivel weave: A fabric in which figure is achieved by the introduction of additional weft threads into a base fabric to produce spot effects.

c. Spot weave: Spot designs can be made with either warp or extra filling yarns. The yarns are inserted the entire length or width of the fabric in predetermined areas.
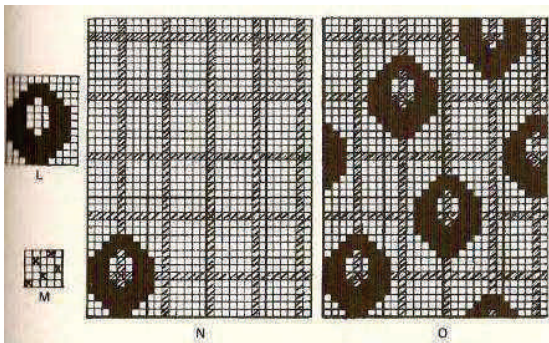
d. Leno weave: The leno weave may be called the doup weave or the gauze weave.
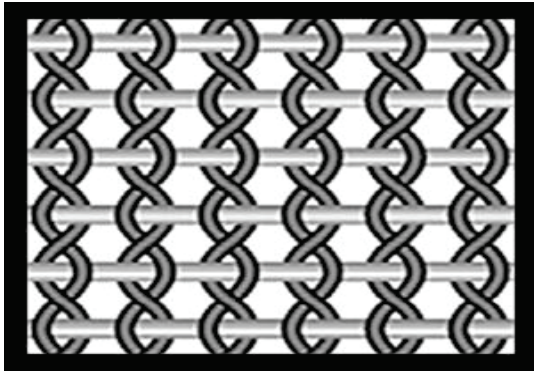
e. Pile weave: The word pile comes from the Latin word for hair or fur. To obtain the hair like or fur like surface, woven pile fabrics are made with three sets of yarns -a regular set of warp yarns (called warp ground yarns), a regular set of filling yarns (called filling ground yarns) and an extra set of either warp or filling yarns to form the pile surface (called pile yarns).

f. Double-cloth weave: Double weaves are those in which at least two sets of filling yarns and two sets of warp yarns are interlaced so that the interlacing moves between the sets at various points.
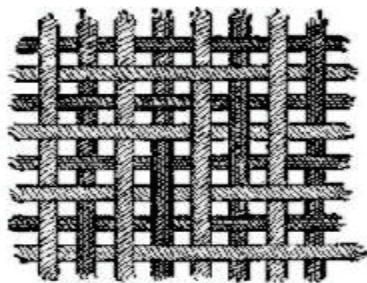
g. Dobby weave: Dobby weave is a patterned weave used to construct designs that cannot be produced by the plain, twill or satin weaves. Dobby fabrics have small figures, such as dots, Geometric designs and small floral patterns, woven into the fabric. These decorative weaves are made with small patterns that repeat frequently.
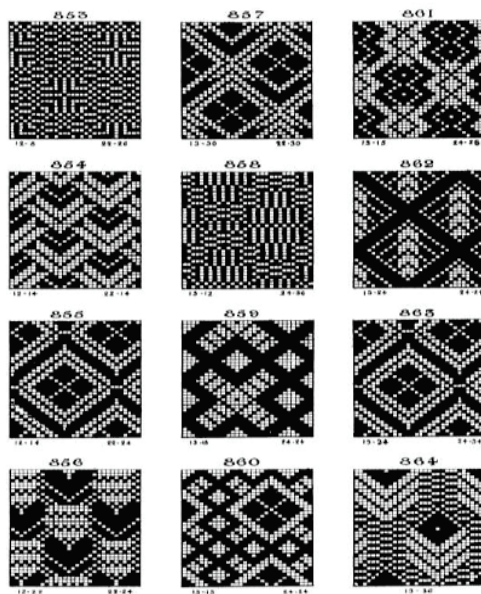
h. Jacquard attachment: Jacquard fabrics, frequently called Jacquard weaves, are large figured designs that depend on considerable flexibility in the control of the warp yarns to form sheds for placing filling yarns in the fabric.
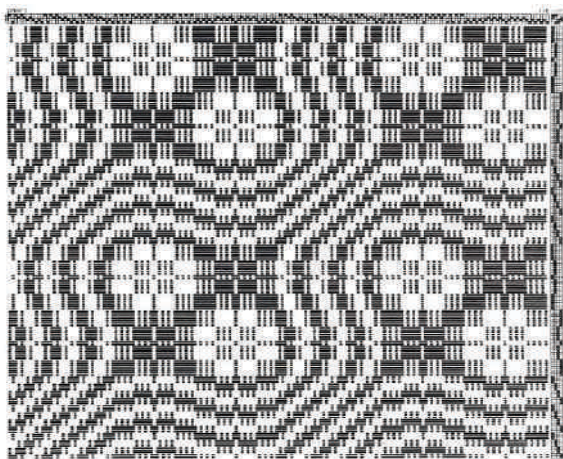
Identifying the right side of the fabric: It is necessary to identify the face or right side of the fabric for cutting and sewing purposes. When the cloth is on a bolt, usually the fabric is folded or rolled with right side of the fabric inside to keep it clean.

☐ More lustrous and shinier side is right side.

☐ Print more distinct on right side of the fabric.

☐ Napped or fuzzier surface is face (textural effects on right side)

☐ Slub yams tend to be more outstanding on the right side

Woven fabric defects

Yarn defects:

☐ Slubs caused by uneven spinning

☐   Broken or missing end or pick

☐   Mixed end or pick with variation in size, twist, number of plies or colour

Weave defects and cause :

☐   A slack yarn or tight end or pick due to insufficient tension

☐   Uneven space between ends due to miss draw

☐   Miss pick due to improper weaving

☐   Reed marks due to improper drawing of warp through the reed

☐   Filling bars due to the variation in battening

☐   Tight selvedge due to excess tension in the warp

☐   Streaks caused by loom start and stop motions

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UNIT 4.2: Post-Looming Operations

Unit Objectives

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

1. Know various operations to be performed after looming carpets.
2. Understand the tools and procedures of trimming, rolling and inspection of carpets.

4.2.1 Operations after looming

Dyeing Yarns

Maximum carpets are dyed after tufting, yet once in a while the yarns are dyed first. The methods encompass placing 500-1,000 pound (227-455 kg) of fiber into pressurized vats through which treated dyes are circulated, or passing the fiber continuously through the bathtub, or passing skeins of yarn thru the vat of dye. The yarn can also be placed on forms, and the heated dyes can then be compelled underneath strain from in the paperwork to shade the yarn. Another approach passes the yarn via printing rollers, whilst but another entails knitting the yarn onto a shape this is then printed with dyes earlier than the yarn is unraveled. All yarn that has been dyed is then steamed, washed, and dried.

Figure 4.2. 1Dyeing by Machine

You can manually dry the yarn if there is not enough lot size by using color in a bucket and sinking the yarn in it.
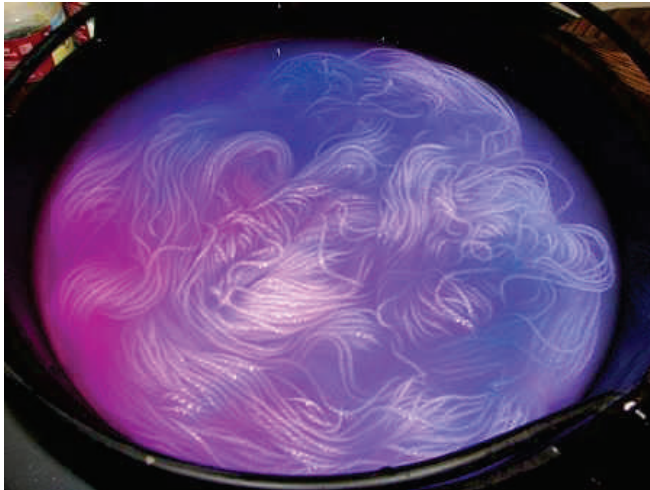
Figure 4.2. 2Dyeing Manually

Tufting Carpets

the yarn is put on a creel (a bar with skewers) behind the tufting device, then fed right into a nylon tube that ends in the tufting needle. The needle pierces the primary backing and pushes the yarn down into a loop. Photoelectric sensors manage how deeply the needles plunge into the backing, so the height of the loops may be controlled. A looper, or flat hook, seizes and releases the loop of yarn at the same time as the needle pulls again up; the backing is shifted ahead and the needle once more pierces the backing in addition on. To make cut pile, a looper going through the alternative course is equipped with a knife that acts like a couple of scissors, snipping the loop. This technique is carried out by several hundred needles (up to 1,200 across the 12 foot [3.7 ml width), and several hundred rows of stitches are accomplished in keeping with minute. One tufting device can as a result produce numerous hundred rectangular yards of carpet a day.

Figure 4.2. 3Tufted Carpets

Dyeing the Tufted Carpets

☐   For strong color carpeting, carpet of several trendy roll lengths is sewn collectively to make a non-stop roll, which is then fed into a vat. The vat is full of water, that's first heated before dyes and chemical substances are jumbled together. The mixture is then slowly brought to a boil and cooked for 4 hours. Some other method of creating stable coloration carpet is to stitch several rows together to make one continuous roll, that is then fed underneath rods

that bleed the color into the pile. after dyeing, the carpet is then steamed to restore the shade, excess shade is washed off, and the carpet is dried and placed on a roll.

Figure 4.2. 4Solid Dyeing of Tufted Carpet

☐ To make printed carpet of numerous designs, white carpet passes below monitors wherein holes within the favored pattern have been reduce. the desired shade is squeegeed thru the holes within the display screen, and the carpet is advanced 36 inches (91 cm) to a different screen that applies a brand-new color in an exclusive design via the display. up to eight colorations may be carried out with this approach.
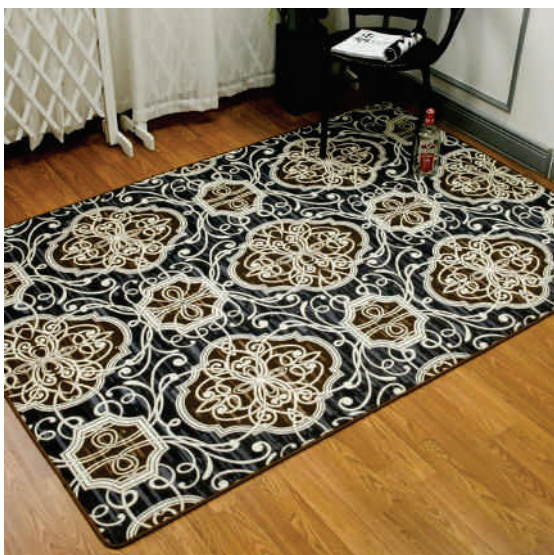
Figure 4.2. 5Printed Carpet

☐ Another technique of dyeing published carpet is to pass it beneath embossed cylinders which have raised quantities in a layout, which press coloration into the carpet. every cylinder presents a distinctive layout for a specific color. After dyeing, the printed carpet is

steamed, extra dyes are washed off, and the carpet is then dried and placed onto rolls to go to the completing branch.

Figure 4.2. 6Embossed Carpet

Finishing Carpets

☐ The ends of the dyed carpet are first sewn together to form a continuous belt. This belt is then rolled under a dispenser that spreads a coating of latex onto the bottom of the carpet. At the same time, a strong secondary backing is also coated with latex. Both of these are then rolled onto a marriage roller, which forms them into a sandwich and seals them together. The carpet is then placed in an oven to cure the latex.

☐ The completed carpet is then steamed, brushed, vacuumed, and run through a machine that clips off any tufts that rise above its uniform surface. The carpet is then rolled into 120 foot (37 m) lengths that are then packaged in strong plastic and shipped to either the carpet manufacturer's inventory warehouse or to a retail carpet store.

Work area safety and security

Once you have completed your work then you should make sure the work area is safe and secure for others. You should notice the following points:

1. **Understand the risks.** Once you know the particular hazards of your job or workplace, you can take steps to reduce your risk of work-related injury or illness.

2. **Reduce workplace stress.** Common causes include long hours, heavy workload, job insecurity and conflicts with coworkers or bosses. Stress can lead to depression, sleeping difficulties and problems with concentration.

3. **Take regular breaks.** Staying fresh and alert will help you avoid injury or burnout. Schedule the most difficult tasks of each day for times when your concentration is best, such as first thing in the morning.

4. **Avoid stooping or twisting.** Use ergonomically designed furniture and equipment, and rearrange your work area so that everything you need is within easy reach.

5. **Use mechanical aids whenever possible.** Instead of trying to lift or carry a heavy object, use a wheelbarrow, conveyor belt, crane or forklift.

6. **Protect your back.** If you do need to pick up and carry heavy loads, keep the load close to your body and lift with your thigh muscles.

7. **Wear protective equipment to suit the task.** If worn correctly, gear such as earplugs, earmuffs, hard hat, safety goggles, gloves or full-face mask can dramatically reduce your risk of injury.

8. **Stay sober.** Alcohol and drugs are a contributing factor in around three per cent of workplace fatalities.

9. **Talk over any concerns.** Your employer or human resources manager need to be informed about hazards and risks. Your employer is legally obliged to ensure a safe working environment.

10. **Know your rights.** Organisations such as WorkSafe Victoria or unions can offer information and advice on workplace safety issues.

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Exercise

1. Write down the steps for warp preparation.

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2. Write down the steps for Weft Preparation.

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3. Write down steps for winding bobbin on boat shuttle.

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4. Write down steps for threading boat shuttle.

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5. Write down steps for winding flat shuttle.

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6. Write down five basic steps of looming?

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7. Write down steps for placing warp beam stick in loops of warp.

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8. Write down steps for placing shed or lease sticks in warp.

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9. Discuss different type of weaves and their benefits.

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10. Discuss the post looming operations for carpets.

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5. Work Area Management

Unit 5.1 – Work Area Management

Key Learning Outcomes

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

1. Understand the importance of managing workplace.
2. Perform various tasks to manage workplace

Unit 5.1: Work Area Management

Unit Objectives

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

1. Describe the importance of managing work area properly.
2. Describe the benefits of work area management.
3. Describe how to build a good housekeeping plan
4. Identify the elements of housekeeping

5.1.1 Reasons to Manage Workplace

A clean workplace means more than just having a sparkling, fresh building. A clean workplace also ensures the safety and health of employees and visitors. In 2012 alone, nearly 3 million nonfatal workplace injuries and illnesses were reported by private industry employers. Workplace injuries can be prevented by taking action to ensure a clean, safe work environment.

Here are six reasons why a clean workplace also means a safe workplace:

1. **Clean, dry floors to prevent slips and falls.**

Maintaining clean, dry floors is essential for the prevention of slips and falls in the workplace. Different categories of floor cleaners serve different purposes. For example, alkaline cleaners are good for cleaning restaurant floors while acidic cleaners remove rust, scale, and oxides from floors. However, some products may contain chemicals that can be detrimental to your flooring, so be sure to talk with a cleaning professional about what is best for your facility. In addition, keep your floors dry by using absorbent materials, such as floor mats, in functional locations to remove moisture and soil from the bottom of shoes.

Figure 5.1 1 Using Mop on floor

2. **Disinfectants prevent the spread of germs and illness, including the flu.**

Germs can easily spread throughout a workplace, particularly during flu season—but disinfecting surfaces and objects with EPA-registered, hospital-grade disinfectants can stop germs in their tracks.

Figure 5.1 2 Applying Disinfectants on work area

3. **Proper air filtration lowers employee exposure to hazardous substances.**

You may not see them, however dusts associated vapors are venturous substances that may produce an unsafe atmosphere for workers. Building ventilation is one necessary step you should think about for reducing transmission mechanism of metabolic process infections and maintaining the health and productivity of staff. Frequently exchange HVAC system filters to prevents them from turning into saturated, that could lead on to potential microbe growth and odour considerations.

Vacuum cleaners fitted with HEPA filters can also capture fine particles. Maintaining humidness around thirty to fifty % through the employment of a dehumidifier is additionally necessary in eliminating air pollutants and promoting clean air within the geographical point.

Figure 5.1 3 Air Filtration

4. **Clean light fixtures improve lighting efficiency.**

Dirty lighting fixtures will scale back essential light-weight levels, creating it troublesome and unsafe for workers to complete their daily tasks. Clean lighting fixtures considerably improve lighting potency within the work. Well-lit stairways and aisles also are vital in preventing accidents and maintaining a secure work atmosphere.

Figure 5.1 4 Cleaning Light bulbs

5. **Green cleaning products are safer for both your employees and the environment.**

Not all cleaning products are the same, and some are held to a higher standard than others. Products with third-party certifications, such as Green Seal or GREENGUARD, must meet specific standards and guidelines, which ensures they're safer for both people and the environment. Also

make sure you maintain and review Material Safety Data Sheets (MSDS) for proper handling and storage of the products used in your facility.

6. **Proper disposal of waste and recyclable materials keeps work areas clutter-free.**

Allowing trash to pile up not only produces clutter, but it also presents a breeding ground for pests that pose a threat to your work environment. Placing "no-touch" wastebaskets in key locations throughout your facility ensures materials are disposed of and reduces the spread of germs. Recycling materials using clearly labeled waste receptacles also makes for a more sustainable environment.

5.1.2 Benefits of Managing Workplace Properly

Effective workplace management results in:

☐   reduced handling to ease the flow of materials

•   fewer tripping and slippy accidents in clutter-free and spill-free work areas

•   decreased hearth hazards

•   lower employee exposures to risky substances (e.g. dusts, vapours)

•   better management of tools and materials, together with inventory and provides

- better sanitary conditions resulting in improved health

- more effective use of area

- reduced property injury by rising preventive maintenance

- less janitorial work

- improved morale

- improved productivity (tools and materials are simple to find)
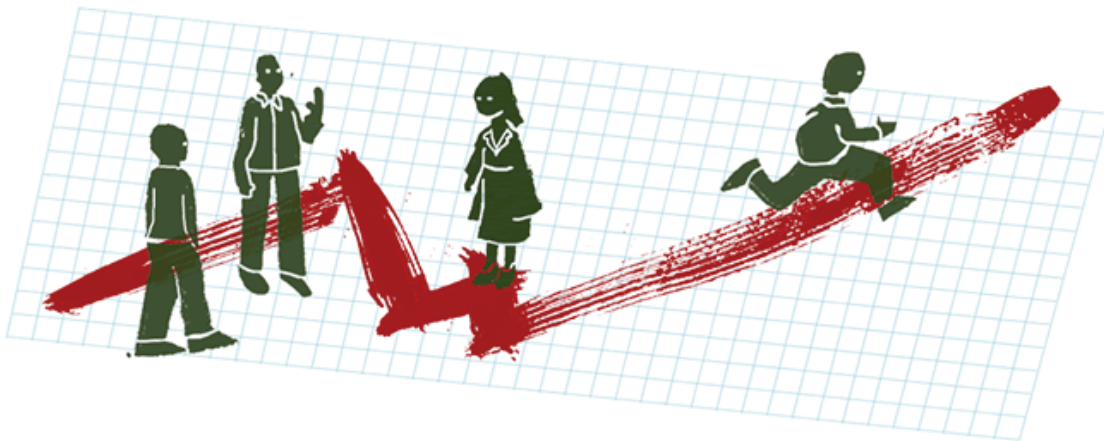
5.1.3 Planning Good Housekeeping program

A good housekeeping program plans and manages the orderly storage and movement of materials from purpose of entry to exit. It includes a fabric flow commit to guarantee smallest handling. The set up conjointly ensures that employment areas don't seem to be used as storage areas by having employees move materials to and from work areas. A part of the set up might embrace finance in further bins and a lot of frequent disposal.

The costs of this investment could be offset by the elimination of repeated handling of the same material and more effective use of the workers' time. Often, ineffective or too little storage designing leads to materials being handled and hold on in venturesome ways. Knowing the set-up layout and therefore the movement of materials throughout the geographical point will facilitate plan work procedures.

Worker training is an essential part of any good housekeeping program. Workers need to know how to work safely with the products they use. They also need to know how to protect other workers such as by posting signs (e.g., "Wet - Slippery Floor") and reporting any unusual conditions.

Housekeeping request is "kept up" not "accomplished." Cleaning and association must be done routinely, not exactly toward the finish of the move. Coordinating housekeeping into employments can help guarantee this is finished. A decent housekeeping program recognizes and relegates obligations regarding the accompanying:

•   clean up amid the move

•   day-to-day tidy up

•   waste transfer

•   removal of unused materials

•   inspection to guarantee tidy up is finished

Keep in mind off the beaten path places, for example, racks, storm cellars, sheds, and engine compartments that would some way or another be ignored. The precise course of action of operations, devices, gear and supplies is a vital piece of a decent housekeeping program.

The final addition to any housekeeping program is inspection. It is the only way to check for deficiencies in the program so that changes can be made.

5.1.4 Elements of House Keeping

Dust and Dirt Removal

In a few employments, fenced in areas and fumes ventilation frameworks may neglect to gather tidy, soil and chips enough. Vacuum cleaners are appropriate for expelling light tidy and earth. Modern models have extraordinary fittings for cleaning dividers, roofs, edges, hardware, and other difficult to-achieve places where tidy and earth may amass.

Figure 5.1 5 Performing Housekeeping

Unique reason vacuums are helpful for evacuating dangerous substances. For instance, vacuum cleaners fitted with HEPA (high effectiveness particulate air) channels might be utilized to catch fine particles of asbestos or fibre glass.

Hosing (wetting) floors or utilizing clearing mixes before clearing decreases the measure of airborne clean. The tidy and grime that gather in places like racks, channelling, conductors, light installations, reflectors, windows, pantries and lockers may require manual cleaning.

Compacted air ought not be utilized for evacuating dust, earth or chips from hardware or work surfaces.

Employee Facilities

Worker offices should be sufficient, spotless and all around kept up. Lockers are vital for putting away representatives' close to home effects. Washroom offices require cleaning once or more each move. They additionally need a decent supply of cleanser, towels in addition to disinfectants, if necessary.

If laborers are utilizing perilous materials, worker offices ought to give unique precautionary measures, for example, showers, washing offices and change rooms. A few offices may require two locker rooms with showers between. Utilizing such twofold locker rooms enables specialists to shower off work environment contaminants and keeps them from sullying their "road garments" by keeping their work garments isolated from the apparel that they wear home.

Figure 5.1 6 Protection clothes for workshop

Smoking, consumption of alcohol or eating at the work territory got to be restricted wherever toxic materials are being used. The consumption zone should be independent from the work region and got to be cleansed at every shift.

Surfaces

Floors: Poor floor conditions are a leading cause of accidents. Cleaning up spilled oil and other liquids at once is important. Allowing chips, shavings and dust accumulated can also cause accidents. Trapping chips, shavings and dust before they reach the floor or cleaning them up regularly can prevent their accumulation. Areas that cannot be cleaned continuously, such as entrance ways, should have anti-slip flooring. Keeping floors in good order also means replacing any worn, ripped, or damaged flooring that poses a tripping hazard.

Walls: Light-coloured walls reflect light while dirty or dark-coloured walls absorb light. Contrasting colours warn of physical hazards and mark obstructions such as pillars. Paint can highlight railings, guards and other safety equipment, but should never be used as a substitute for guarding. The program should outline the regulations and standards for colours.

Maintain Light Fixtures

Dirty light fixtures reduce essential light levels. Clean light fixtures can improve lighting efficiency significantly.

Aisles and Stairways

Paths must be sufficient to suit individuals and vehicles serenely and securely. Walkway space considers the development of individuals, items and materials. Cautioning signs and mirrors can enhance locate lines in dazzle corners. Orchestrating passageways legitimately urges individuals to utilize them with the goal that they don't take alternate routes through risky territories.

Keeping paths and stairways clear is vital. They ought not be utilized for brief "flood" or "bottleneck" stockpiling. Stairways and walkways likewise require sufficient lighting.

Spill Control

The best way of spills management is to prevent them before they happen. Frequently cleanup and maintaining machines and instrumentality is a way. Another is to use drip pans and guards wherever attainable spills may occur. Once spills do occur, it's necessary to wash them up straightaway. Absorbent materials are helpful for wiping up greasy, oily or different liquid spills. Used absorbents should be disposed of properly and safely.

Tools and Equipment

Tool housework is extremely necessary, whether within the tool space, on the rack, within the yard, or on the bench. Tools need appropriate fixtures with marked locations to supply orderly arrangement, each within the tool space and close to the work bench. Returning them promptly when use reduces the possibility of being misplaced or lost. staff ought to often examine, clean and repair all tools and take any broken or worn tools out of service.

Figure 5.1 7 Placing tools in Toolbox

Maintenance

The maintenance of buildings and instrumentation could also be the foremost vital part of fine housekeeping. Maintenance involves keeping buildings, instrumentation and machinery in safe, economical operating order and in sensible repair. This includes maintaining healthful facilities and often painting and improvement walls. Broken windows, broken doors, defective plumbing and broken floor surfaces will create a geographic point look neglected; these conditions will cause accidents and influence work practices. So, it's vital to interchange or fix broken or broken things as quickly as potential. a decent maintenance program provides for the scrutiny, maintenance, repairs and repair of tools, equipment, machines and processes.

Waste Disposal

The regular assortment, grading and sorting of scrap contribute to sensible work practices. It conjointly makes it attainable to separate materials which will be recycled from those getting to waste disposal facilities.

Allowing material to make au fait the ground wastes time and energy since beyond regular time is needed for cleanup it up. putting scrap containers close to wherever the waste is created encourages orderly waste disposal and makes assortment easier. All waste receptacles ought to be clearly tagged (e.g., useful glass, plastic, rubbish, etc.).

Storage

Great association of put away materials is basic for conquering material stockpiling issues whether on a brief or changeless premise. There will likewise be less strain wounds if the measure of dealing with is decreased, particularly if less manual materials movement is required. The area of the stockpiles ought not meddle with work but rather they should in any case be promptly accessible when required. Put away materials ought to permit no less than one meter (or around three feet) of clear space under sprinkler heads.

Stacking containers and drums on a firm establishment and cross tying them where important, diminishes the possibility of their development. Put away materials ought not block walkways, stairs, exits, fire gear, crisis eyewash wellsprings, crisis showers, or medical aid stations. All stockpiling ranges ought to be plainly checked.

Figure 5.1 8 Cabinet for dangerous items

Flammable, combustible, toxic and other hazardous materials should be stored in approved containers in designated areas that are appropriate for the different hazards that they pose. Storage of materials should meet all requirements specified in the fire codes and the regulations of environmental and occupational health and safety agencies in your jurisdiction.

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Exercise

1. Discuss some important reasons to manage workplace properly.

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2. What are the benefits of managing workplace?

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3. What are the factors for planning good housekeeping program?

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4. Discuss the main elements of house keeping?

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6. Health and Safety

Unit 6.1 – Safety, Health, and Hygiene

Unit 6.2 – First Aid

Key Learning Outcomes

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

1. State some common reasons of accidents at site.
2. State common accidents and prevention techniques
3. State ways to stay healthy and hygienic (personal hygiene)
4. First-Aid for emergency

Unit 6.1: Safety, Health, and Hygiene

Unit Objectives

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

1. State some common reasons of accidents at site.
2. State common accidents and prevention techniques
3. State ways to stay healthy and hygienic (personal hygiene)

6.1.1 General Safety Rules:

Work intelligently.

☐ Substitute safer materials when possible.

☐ Choose water-based products over solvent-based products.

☐ Choose products that do not create dusts and mists.

☐ Never hold brushes or tools in your mouth, tip brushes with your lips, etc.

☐ Never eat, drink, or smoke in studios.

☐ Store tools properly; keep them in good condition.

☐ Read the labels on your materials. You cannot tell the toxicity of materials by the absence or presence of a particular smell.

☐ Never use materials in unintended ways. For example, don't use standard paint for skin-painting.

Keep studio space neat and orderly.

☐ Keep floors clean and free of slippery spots.

☐ Keep extension cords, hoses and other tripping hazards off the floor when unused; keep traffic ways clear.

☐ Minimize the area in which hazardous substances are used.

☐ Keep art studios separate from living areas and clean yourself before entering living areas.

Ensure appropriate ventilation.

☐ The mouth, nose, and skin can absorb hazardous materials. Ensure ventilation provides fresh air activity to decrease exposures to dusts, fumes, gases, mists, and vapours. Adequate ventilation means that clean air is flowing toward the artist and contaminated air is flowing away. Blowing air around with a fan without a source of clean air is not adequate ventilation, and can actually increase exposures to harmful substances.

☐ Prevent the accumulation of flammable vapours or spray mists to limit fire hazards with proper ventilation.

Have proper protective gear and cleaning supplies available.

☐ Wear special work clothes and keep separate from other clothing, even during clothes washing.

☐ Keep cleaning supplies accessible.

☐ Clean up spills immediately, even small spills, and dispose of waste chemical and clean-up materials properly.

☐ Contain flammable spills with activated charcoal, diatomaceous earth, or deodorant-free cat litter.

☐ In the event of an accidental exposure call the National Poison Control Center Hotline or the number for the nearest certified Poison Control Centre.

Wash hands and other exposed body parts after working, and before eating or using the bathroom.

☐ Avoid using toluene, turpentine, kerosene, or other solvents to clean your skin.

☐ Use soap and water or baby oil or a skin cleanser.

☐ Wash under fingernails. Keep nails trim and do not bite nails.

Maintain your health and fitness.

☐ Recognize your physical, emotional, and mental limits.

o Alertness decreases with hunger and fatigue.

o Anger, sadness, hurrying and frustration increase chances of accidents and mistakes.

☐ Have regular health check-ups.

☐ Make sure your health care provider is familiar with the art and craft materials you use, your level of exposure, and your studio environment.

6.1.2 What is an Accident?

An **accident** is a specific, unpredictable, unusual and unintended external action which occurs in a particular time and place, with no apparent and deliberate cause but with marked effects.

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                    │  Types of Accidents │
                    └─────────────────────┘
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    │   Physical    │ │     Activity     │ │   Vehicle    │
    │Collision or fall│ │Accidents during the│ │ Bike Accident│
    │  or Electrical │ │execution of Work │ │ Car Accident │
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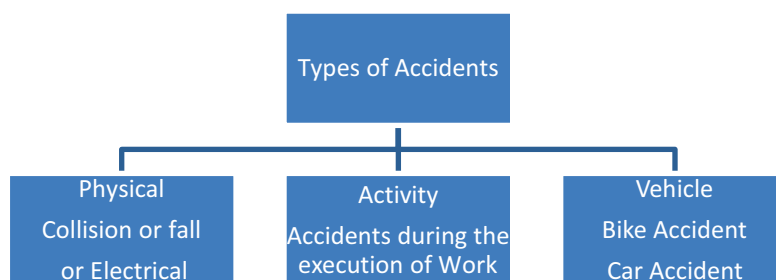
Frequently occurring accidents/hazards on Workshop

Some of the more frequently encountered hazards include:

☐ Electrical hazards

☐ Hazard due to scissors and needle

☐ Falling object hazards

☐ Equipment failure

☐ Fire Hazard

6.1.3 What is a Fire Extinguisher?

Fire extinguishers are a fire protection device used to extinguish or control small fires.
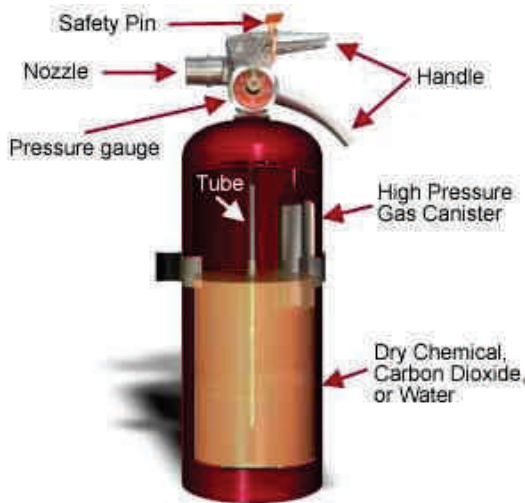
Figure 6.1 1 Fire Extinguisher

How does a fire Extinguisher Work?

Fire extinguishers contain carbon dioxide, which is the chemical that creates the pressure over the extinguishing agent. Once the lever is pushed, Carbon dioxide will push the agent and project it through the hose.

Types of Fire Extinguishers:

Fire extinguishers are classified based on the type of burning material

Figure 6.1 2 Classification of Fire Extinguisher

General method to operate a Fire Extinguisher

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Pull the Pin at the top of the extinguisher. The pin releases a locking mechanism and will allow you to discharge the extinguisher.

Aim at the base of the fire, not the flames. This is important - in order to put out the fire, you must extinguish the fuel.

Squeeze the lever slowly. This will release the extinguishing agent in the extinguisher. If the handle is released, the discharge will stop.

Sweep from side to side. Using a sweeping motion, move the fire extinguisher back and forth until the fire is completely out. Operate the extinguisher from a safe distance, several feet away, and then move towards the fire once it starts to diminish. Be sure to read the instructions on your fire extinguisher - different fire extinguishers recommend operating them from different distances. Remember: Aim at the base of the fire, not at the flames!!!!

6.1.4 What is Health?

Traditionally, health is defined as the absence of illness. WHO defines health in this positive way:

> Health is a state of complete physical, mental and social well-being – and not merely the absence of disease or infirmity.

Maintaining clean environment at work:

- ☐ Designate storage space for everything.
- ☐ Provide sufficient housekeeping tools, including brooms, clean rags, and spill absorbers.
- ☐ Define areas for scrap storage and schedule regular collection, removal, and disposal.
- ☐ Assign clean-up responsibilities and make sure work sites are cleaned and cleared before quitting time.

Hygiene – It is a set of practices performed for preservation of health. It is maintained in personal, home, food and workplace.

Personal Hygiene - The cornerstone of hygiene. The body is the source and entry point of many illnesses. Appropriate personal hygiene can prevent all sorts of diseases

Hygiene at home – When you spend your time at home you may as well maintain hygiene as the air you breathe can affect your breath.

Food - Whether in the home, in industry or in catering, food hygiene should be second nature at this time when new food risks are sharply on the increase

Instilling hygiene rules and basics - These should rapidly become second nature and act as a safeguard for the health of the population at large. Setting an example, repetition and education are most important in successfully applying personal, domestic, food or pet hygiene. Likewise, vaccination is an invaluable preventive measure, and should be undertaken at the appropriate time, and booster schedule adhered to.

Each of us has a contribution to make to health, and this starts with basic day-to-day ground rules for hygiene.

Effective hygiene should be instilled in us from a young age so that it becomes second nature.
Hygiene is essentially a healthy attitude towards life in general, including a balanced diet, a well ordered lifestyle, balanced sleeping patterns and avoiding smoking, alcohol and drugs. Living hygienically is the first step towards a healthier society

Unit 6.2: First Aid

Unit Objectives

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

1. Know the common components of First Aid Kit.
2. Emergency procedures of First Aid in different situations

6.2.1 First Aid and First Aid Kit

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, or promote recovery.

Components of First Aid kit

Kits vary in contents but most kits have the following items:

- Band-aids / Adhesive bandages
- Gauze pads and tape
- Scissors, cold pack
- Wound bandage / compress
- Eye pads / eye wash solution
- First aid / burn cream
- Antibiotic ointment
- Face shield or barrier mask for providing CPR
- Forceps / tweezers
- Disposable thermometers
- First aid instruction booklet

Common Procedures for First Aid in various situations

Adult / Child Choking: Severe Airway Blockage

Quickly ask, "are you choking?"

☐ If the victim nods yes, or is unable to talk, speak, or cough – act quickly.

☐ Stand behind the victim.

☐ Make a fist and place the thumb side of that hand against the victim's abdomen, just above the navel and below the ribs. Grasp fist with the other hand.

☐ Quickly thrust inward and upward into the abdomen.

☐ Repeat thrusts until object is expelled or victim becomes unresponsive.

Victim is unresponsive:

☐ If needed, help the victim to the ground and alert EMS / call 911.

☐ Begin chest thrusts as you would with CPR. Each time the airway is opened look for the object in the victim's throat and if you can see it, remove it – being careful not to lodge the object further into the victim's throat.

☐ Continue chest thrusts until EMS / Paramedics arrive, or the victim shows signs of breathing /responsiveness.

Minor Wounds

Signs and Symptoms:

☐ Break, cut or opening in the skin

☐ Bleeding – may be minor, moderate or severe

☐ Bruising and pain

☐ Infection

☐ Progressing shock

First Aid:

- ☐ If bleeding, apply direct pressure with a clean cloth or absorbent pad.
- ☐ Wash area with antibacterial soap and clean until there appears to be no foreign matter in the wound.
- ☐ Cover area with an adhesive bandage or gauze wrap.

Bruising

It is caused by broken blood vessels leaking blood under the skin. Bruising can be minimal or large and severe.

Signs and Symptoms:

- ☐ Pain and swelling
- ☐ Discoloration: new bruising will be dark purple / older bruising will fade to greenish yellow

First Aid:

- ☐ Apply ice to injury to reduce pain, bleeding and swelling.
- ☐ To prevent frost bite to the injured area, place a thin towel or cloth between the skin and ice. Limit ice application to 20 minutes on, 20 off.

Shock

Shock develops when not enough blood flows to the vital organs of the body. Victims with shock may stop responding.
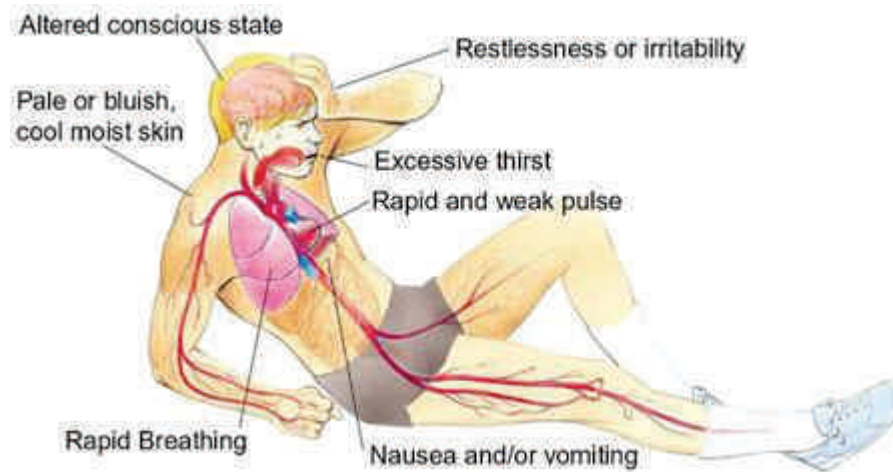
Signs and Symptoms:

- Dizziness, faint or weak feeling
- Rapid, shallow breathing
- Anxiety, restlessness, agitation, or confusion
- Cool and clammy to the touch
- Pale or grayish skin
- Thirst
- Nausea or vomiting

First Aid:

- Help person lie on their back.
- Keep victim lying flat with feet slightly elevated if possible.
- Cover person to keep him/her warm, but prevent overheating.
- Ensure an open airway for victim and adequate breathing.
- Monitor victim and administer CPR if necessary.

Burns
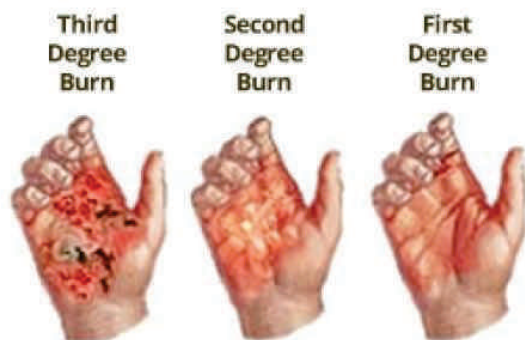
Signs and Symptoms:

- Pain, Redness
- Swelling, Blisters

First Aid:

- Expose the burn.
- Cool burns with cold water and continue until pain lessens.
- After cooling, cover with a dry, sterile bandage or clean dressing.
- Protect from friction /pressure
- DO NOT pop blisters or apply any ointment or other substance.

Bites and Stings First Aid

General Signs and Symptoms

- ☐ Redness
- ☐ Swelling
- ☐ Pain
- ☐ Itching
- ☐ Nausea
- ☐ Problems breathing

First Aid

- ☐ Remove jewellery and constrictive clothing
- ☐ Wash the area with soap and clean water
- ☐ Cover the area with an adhesive bandage or gauze wrap
- ☐ Apply ice if needed to reduce pain and swelling

Heat Exhaustion First Aid

TREATING HEAT EXHAUSTION
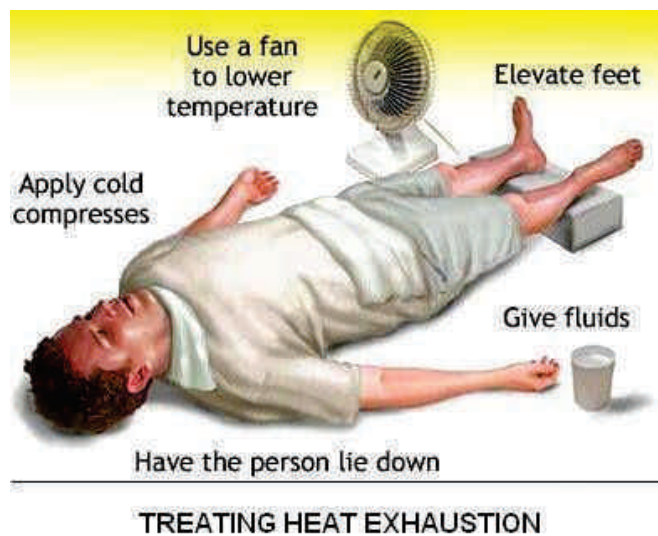
Signs and Symptoms:

- ☐ Cool, moist skin with goose bumps when in the heat
- ☐ Heavy sweating
- ☐ Faintness
- ☐ Dizziness
- ☐ Fatigue
- ☐ Weak, rapid pulse
- ☐ Low blood pressure upon standing
- ☐ Muscle cramps
- ☐ Nausea
- ☐ Headache

First Aid:

- ☐ Stop all activity and rest.
- ☐ Move to a cooler place.
- ☐ Drink cool water or sports drinks.
- ☐ Contact your doctor if your signs or symptoms worsen or if they don't improve within one hour. Seek immediate medical attention if your body temperature reaches 104°F (40°C) or higher.

6.2.2 Personal Protective Equipment (PPE)

Personal protective equipment (**PPE**) refers to **protective** clothing, helmets, goggles, or other garments or **equipment** designed to protect the wearer's body from injury or infection. The hazards addressed by **protective equipment** include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.

Exercise

1. Discuss some general safety rules for working in the workshop.

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2. What is PPE and are the common components of PPE?

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3. What is an accident and what are the types of accidents?

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4. Discuss the types of fire-extinguisher and their uses?

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5. Write a short note on health and hygiene?

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6. What are the common components of First-Aid kit?

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7. What are the symptoms of shock and what should be the first-aid?

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8. What are the symptoms of heat exhaustion and what should be the first-aid?

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7. Team Work

Unit 7.1 – Working in a Team

Key Learning Outcomes 💡

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

1. Know the benefits of team work.
2. Understand the stages of team building.
3. Understand the methods of working in a team effectively.

Unit 7.1: Working in a Team

Unit Objectives

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

1. Know the benefits of team work.
2. Understand the stages of team building.
3. Understand the methods of working in a team effectively

7.1.1 Why work in teams?

There are several good reasons:

• Research shows that we all learn effectively from each other. Hence, your teams should be learning teams, with the focus on helping each other to learn.

• Teams are much more effective than individuals for work on compl ex projects.

• Teamwork develops your interpersonal skills in coping with conflict, in being a chairperson, in developing your interdependence and accountability and in developing your sense of self-esteem. This aids your personal development and your non-work-related relationships.

7.1.2 Effective teams

Why do some groups accomplish very little, while others achieve much more?

This difference stems very much from the **processes within the group** - its inner dynamics or workings. The features of an effective team include:

• combined group effort of all members

• clear goals

• group members focused on learning

• mutual trust and support

• open communication

• democratic processes.

7.1.3 Making the most of your team

There are many advantages of working collaboratively with other students. To make the most of your experience as a team member, remember to:

• Become actively. Don't wait for another team member to do all the work.

• Share - open communication and the contribution of ideas and information is essential for successful and highly performing teams.

• Learn to work cooperatively. The success of your team will depend on helping each other.

• Respect your fellow team members. Be aware that each team member will have unique talents and ways of learning. Not everyone learns by the same process.

• Use your time productively and effectively. Define clear goals - what needs to get done, by whom and why?

• Expect success - be enthusiastic and positive.

• Meet with your group members regularly.

• Ask your tutor for frequent feedback - that's the tutor's role.

• Maintain a sense of humour - keep things in perspective.

• Hang in there - developing a good team is hard work and demands commitment from all team members.

7.1.4 Group development Process

There is strong evidence that groups pass through a sequence of five stages of development. These are sometimes defined as:

- ☐ Forming, or coming together

- ☐ Storming, or conflict

- ☐ Norming, or working out the rules

- ☐ Performing, or getting the job done

- ☐ Mourning, or breaking up.

The length of time different groups take to pass through each of these developmental stages will vary, but it is generally not possible to achieve high team performance until the group has passed through at least the first three stages. The duration of each stage will depend on factors such as individual and team maturity, task complexity, leadership, organisational climate, and external climate.

Forming ….. *Am I a member of this group?*

During this stage of group development new team members discover what being a member of this group means.

You may find that you and/or other group members need:

• clear goals and objectives

• definition of tasks and roles

• clear work plans

• to identify group behaviour, standards and norms and ways to handle behavioural problems

You and/or other group members may:

• demonstrate excitement

• participate hesitantly

• show tentative attachment to the group

• discuss problems peripheral to the task

• be uncomfortable and anxious about the new situation

• accomplish minimal work

This stage is complete when new members start thinking of themselves as part of a group.

Storming ….. *Who controls this group?*

During this stage of group development, team members may become hostile or overzealous as a way to express their individuality and resist group formation.

You may find that you and/or other group members exhibit:

• infighting, defensiveness and competition

• doubts about success

• low group morale

• polarisation of group members

• concern over excessive work

• disunity and increased tension

You and/or other group members may:

• set unrealistic goals

• resist the task demands

• establish a pecking order

• criticise group leaders or other group members

• complain.

Many groups do not develop beyond this stage because they lack the ability to listen to each other and find mutually acceptable resolutions to the major issues.

Norming ….. *What are the rules of this group?*

During this stage of group development, members accept the team, the team norms, their own roles and the idiosyncrasies of fellow group members. Emotional conflict is reduced by patching up previously conflicting relationships.

You and/or other group members may:

• Attempt to achieve maximum harmony by avoiding conflict

• develop a high level of trust and respect for others in the group

• discuss group dynamics constructively

• form friendships

• develop a sense of team cohesion with a common spirit and goals

• have high group morale

• establish and maintain group boundaries

• accomplish a moderate amount of work

During this stage, if the formally appointed leader is not effective, or there is no formal leader, a leader will emerge or should be agreed upon who can focus the group resources to solve problems.

Performing ….. *How high can this group go?*

Now that the team has established its interpersonal norms, it becomes an entity capable of diagnosing and solving problems, and making decisions. This stage is not always reached by all teams.

You and/or other group members may:

• be willing to sort through group problems

• develop high conflict resolution skills

• understand members' strengths and weaknesses

• undertake constructive self-change

• identify closely with the group

• accomplish a great deal of work

Groups reaching this stage will be effective and will devote energy to maintain good group relations.

Mourning …. *Where do we go from here?*

This final stage of group development applies more to temporary teams like task groups or committees. However these days, with reorganisations occurring frequently this stage is not uncommon.

You and/or other group members may:

• feel elated at the successful attainment of goals

• feel disappointed at unattained goals

• feel a sense of loss when the group is disbanded

• feel relief at the end of the process

• congratulate each other

• celebrate.

McGourty, J & DeMeuse, KP 2001, Team developer: an assessment and skill building program, John Wiley & Sons
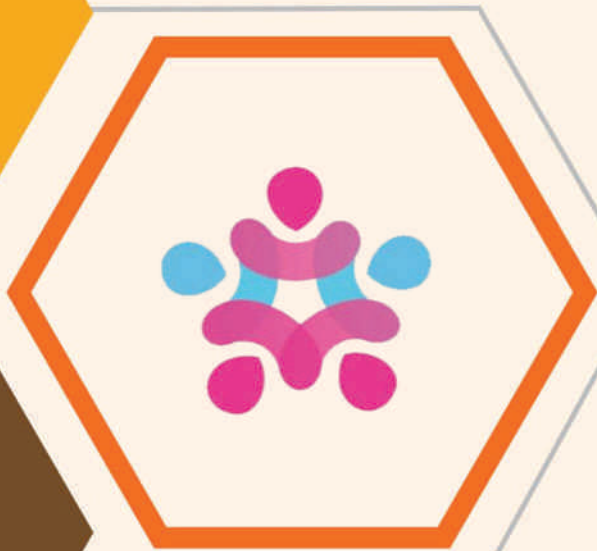
Exercise

1. Why should we work in a team?

    _____

    _____

    _____

    _____

2. What are the features of an effective team?

_____

_____

_____

_____

_____

_____

_____

_____

3. Discuss the group development process?

_____

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_____

4. How can we get the maximum output from a team?

_____

_____

_____

_____

8. Employability & Entrepreneurship Skills

Key Learning Outcomes

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

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

36. Recall the functions of basic computer keys

37. Discuss the main applications of MS Office

38. Discuss the benefits of Microsoft Outlook

39. Discuss the different types of e-commerce

40. List the benefits of e-commerce for retailers and customers

41. Discuss how the Digital India campaign will help boost e-commerce in India

42. Explain how you will sell a product or service on an e-commerce platform

43. Discuss the importance of saving money

44. Discuss the benefits of saving money

45. Discuss the main types of bank accounts

46. Describe the process of opening a bank account

47. Differentiate between fixed and variable costs

48. Describe the main types of investment options

49. Describe the different types of insurance products

50. Describe the different types of taxes

51. Discuss the uses of online banking

52. Discuss the main types of electronic funds transfers

53. Discuss the steps to prepare for an interview

54. Discuss the steps to create an effective Resume

55. Discuss the most frequently asked interview questions

56. Discuss how to answer the most frequently asked interview questions

57. Discuss basic workplace terminology

58. Discuss the concept of entrepreneurship

59. Discuss the importance of entrepreneurship

60. Describe the characteristics of an entrepreneur

61. Describe the different types of enterprises

62. List the qualities of an effective leader

63. Discuss the benefits of effective leadership

64. List the traits of an effective team

65. Discuss the importance of listening effectively

66. Discuss how to listen effectively

67. Discuss the importance of speaking effectively

68. Discuss how to speak effectively

69. Discuss how to solve problems

70. List important problem solving traits

71. Discuss ways to assess problem solving skills

72. Discuss the importance of negotiation

73. Discuss how to negotiate

74. Discuss how to identify new business opportunities

75. Discuss how to identify business opportunities within your business

76. Understand the meaning of entrepreneur

77. Describe the different types of entrepreneurs

78. List the characteristics of entrepreneurs

79. Recall entrepreneur success stories

80. Discuss the entrepreneurial process

81. Describe the entrepreneurship ecosystem

82. Discuss the government's role in the entrepreneurship ecosystem

83. Discuss the current entrepreneurship ecosystem in India

84. Understand the purpose of the Make in India campaign

85. Discuss the relationship between entrepreneurship and risk appetite

86. Discuss the relationship between entrepreneurship and resilience

87. Describe the characteristics of a resilient entrepreneur

88. Discuss how to deal with failure

89. Discuss how market research is carried out

90. Describe the 4 Ps of marketing

91. Discuss the importance of idea generation

92. Recall basic business terminology

93. Discuss the need for CRM

94. Discuss the benefits of CRM

95. Discuss the need for networking

96. Discuss the benefits of networking

97. Understand the importance of setting goals

98. Differentiate between short-term, medium-term and long-term goals

99. Discuss how to write a business plan

100. Explain the financial planning process

101. Discuss ways to manage your risk

102. Describe the procedure and formalities for applying for bank finance

103. Discuss how to manage your own enterprise

104. List important questions that every entrepreneur should ask before starting an enterprise

UNIT 8.1: Personal Strengths & Value Systems

Unit Objectives ⊙

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

1. Explain the meaning of health

2. List common health issues

3. Discuss tips to prevent common health issues

4. Explain the meaning of hygiene

5. Understand the purpose of Swacch Bharat Abhiyan

6. Explain the meaning of habit

7. Discuss ways to set up a safe work environment

8. Discuss critical safety habits to be followed by employees

9. Explain the importance of self-analysis

10. Understand motivation with the help of Maslow's Hierarchy of Needs

11. Discuss the meaning of achievement motivation

12. List the characteristics of entrepreneurs with achievement motivation

13. List the different factors that motivate you

14. Discuss how to maintain a positive attitude

15. Discuss the role of attitude in self-analysis

16. List your strengths and weaknesses

17. Discuss the qualities of honest people

18. Describe the importance of honesty in entrepreneurs

19. Discuss the elements of a strong work ethic

20. Discuss how to foster a good work ethic

21. List the characteristics of highly creative people

22. List the characteristics of highly innovative people

23. Discuss the benefits of time management

24. List the traits of effective time managers

25. Describe effective time management technique

26. Discuss the importance of anger management

27. Describe anger management strategies

28. Discuss tips for anger management

29. Discuss the causes of stress

30. Discuss the symptoms of stress

31. Discuss tips for stress management

8.1.1 Health, Habits, Hygiene: What is Health

As per the World Health Organization (WHO), health is a "State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." This means being healthy does not simply mean not being unhealthy – it also means you need to be at peace emotionally, and feel fit physically. For example, you cannot say you are healthy simply because you do not have any physical ailments like a cold or cough. You also need to think about whether you are feeling calm, relaxed and happy.

Common Health Issues

Some common health issues are:

- Allergies
- Asthma
- Skin Disorders
- Depression and Anxiety
- Diabetes
- Cough, Cold, Sore Throat
- Difficulty Sleeping
- Obesity

Tips to Prevent Health Issues

Taking measures to prevent ill health is always better than curing a disease or sickness. You can stay healthy by:

- Eating healthy foods like fruits, vegetables and nuts
- Cutting back on unhealthy and sugary foods
- Drinking enough water everyday
- Not smoking or drinking alcohol
- Exercising for at least 30 minutes a day, 4-5 times a week
- Taking vaccinations when required
- Practicing yoga exercises and meditation

How many of these health standards do you follow? Tick the ones that apply to you.

1. Get minimum 7-8 hours of sleep every night. ☐
2. Avoid checking email first thing in the morning and right before you go to bed at night ☐
3. Don't skip meals – eat regular meals at correct meal times. ☐
4. Read a little bit every single day. ☐
5. Eat more home cooked food than junk food. ☐

6. Stand more than you sit. ☐

7. Drink a glass of water first thing in the morning and have at least 8 glasses of water through the day. ☐

8. Go to the doctor and dentist for regular checkups. ☐

9. Exercise for 30 minutes at least 5 days a week. ☐

10. Avoid consuming lots of aerated beverages. ☐

What is Hygiene?

As per the World Health Organization (WHO), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." In other words, hygiene means ensuring that you do whatever is required to keep your surroundings clean, so that you reduce the chances of spreading germs and diseases.

For instance, think about the kitchen in your home. Good hygiene means ensuring that the kitchen is always spick and span, the food is put away, dishes are washed and dustbins are not overflowing with garbage. Doing all this will reduce the chances of attracting pests like rats or cockroaches, and prevent the growth of fungus and other bacteria, which could spread disease.

How many of these health standards do you follow? Tick the ones that apply to you.

1. Have a bath or shower every day with soap – and wash your hair with shampoo 2-3 times a week. ☐

2. Wear a fresh pair of clean undergarments every day. ☐

3. Brush your teeth in the morning and before going to bed. ☐

4. Cut your fingernails and toenails regularly. ☐

5. Wash your hands with soap after going to the toilet. ☐

6. Use an anti-perspirant deodorant on your underarms if you sweat a lot. ☐

7. Wash your hands with soap before cooking or eating. ☐

8. Stay home when you are sick, so other people don't catch what you have. ☐

9. Wash dirty clothes with laundry soap before wearing them again. ☐

10. Cover your nose with a tissue/your hand when coughing or sneezing. ☐

See how healthy and hygienic you are, by giving yourself 1 point for every ticked statement!

Then take a look at what your score means.

Your Score

0-7/20: You need to work a lot harder to stay fit and fine! Make it a point to practice good habits daily and see how much better you feel!

7-14/20: Not bad, but there is scope for improvement! Try and add a few more good habits to your daily routine.

14-20/20: Great job! Keep up the good work! Your body and mind thank you!

Swachh Bharat Abhiyan

We have already discussed the importance of following good hygiene and health practices for ourselves. But, it is not enough for us to be healthy and hygienic. We must also extend this standard to our homes, our immediate surroundings and to our country as a whole.

The 'Swachh Bharat Abhiyan' (Clean India Mission) launched by Prime Minister Shri Narendra Modi on 2nd October 2014, believes in doing exactly this. The aim of this mission is to clean the streets and roads of India and raise the overall level of cleanliness. Currently this mission covers 4,041 cities and towns across the country. Millions of our people have taken the pledge for a clean India. You should take the pledge too, and do everything possible to keep our country clean!

What are Habits?

A habit is a behaviour that is repeated frequently. All of us have good habits and bad habits. Keep in mind the phrase by John Dryden: "We first make our habits, and then our habits make us." This is why it is so important that you make good habits a way of life, and consciously avoid practicing bad habits.

Some good habits that you should make part of your daily routine are:

• Always having a positive attitude

• Making exercise a part of your daily routine

• Reading motivational and inspirational stories

• Smiling! Make it a habit to smile as often as possible

• Making time for family and friends

• Going to bed early and waking up early

Some bad habits that you should quit immediately are:

• Skipping breakfast

• Snacking frequently even when you are not hungry

• Eating too much fattening and sugary food

• Smoking, drinking alcohol and doing drugs

• Spending more money than you can afford

• Worrying about unimportant issues

• Staying up late and waking up late

Tips

• Following healthy and hygienic practices every day will make you feel good mentally and physically.

• Hygiene is two-thirds of health – so good hygiene will help you stay strong and healthy!

8.1.2: Safety: Tips to Design a Safe Workplace

Every employer is obligated to ensure that his workplace follows the highest possible safety protocol. When setting up a business, owners must make it a point to:

•   Use ergonomically designed furniture and equipment to avoid stooping and twisting

•   Provide mechanical aids to avoid lifting or carrying heavy objects

•   Have protective equipment on hand for hazardous jobs

•   Designate emergency exits and ensure they are easily accessible

•   Set down health codes and ensure they are implemented

•   Follow the practice of regular safety inspections in and around the workplace

•   Ensure regular building inspections are conducted

•   Get expert advice on workplace safety and follow it

Non-Negotiable Employee Safety Habits

Every employer is obligated to ensure that his workplace follows the highest possible safety protocol. When setting up a business, owners must make it a point to:

•   Immediately report unsafe conditions to a supervisor

•   Recognize and report safety hazards that could lead to slips, trips and falls

•   Report all injuries and accidents to a supervisor

•   Wear the correct protective equipment when required

•   Learn how to correctly use equipment provided for safety purposes

•   Be aware of and avoid actions that could endanger other people

•   Take rest breaks during the day and some time off from work during the week

Tips

•   Be aware of what emergency number to call at the time of a workplace emergency

•   Practice evacuation drills regularly to avoid chaotic evacuations

8.1.3 Self Analysis – Attitude, Achievement Motivation: What is Self-Analysis

To truly achieve your full potential, you need to take a deep look inside yourself and find out what kind of person you really are. This attempt to understand your personality is known as self-analysis. Assessing yourself in this manner will help you grow, and will also help you to identify areas within yourself that need to be further developed, changed or eliminated. You can better understand yourself by taking a deep look at what motivates you, what your attitude is like, and what your strengths and weaknesses are.

What is Motivation?

Very simply put, motivation is your reason for acting or behaving in a certain manner. It is important to understand that not everyone is motivated by the same desires – people are motivated by many, many different things. We can understand this better by looking at Maslow's Hierarchy of Needs.

Maslow's Hierarchy of Needs

Famous American psychologist Abraham Maslow wanted to understand what motivates people. He believed that people have five types of needs, ranging from very basic needs (called physiological needs) to more important needs that are required for self-growth (called self-actualization needs). Between the physiological and self-actualization needs are three other needs – safety needs, belongingness and love needs, and esteem needs. These needs are usually shown as a pyramid with five levels and are known as Maslow's Hierarchy of Needs.

Self - actualization: achiving one's full potential, including creative activities

Esteem needs: prestige and feeling of accomplishment

Belongingness and love needs: intimate relationships, friends

Safety needs: Security, safety

Physiological needs: food, water, warmth, rest

Self-fulfillment needs

Psychological needs
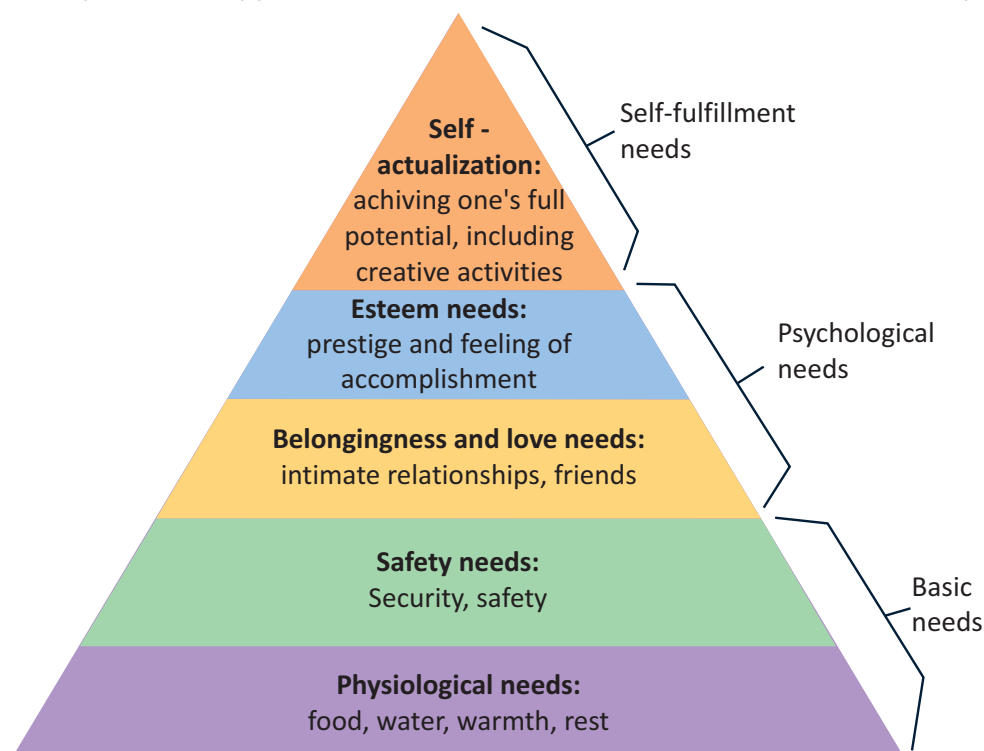
Basic needs

As you can see from the pyramid, the lowest level depicts the most basic needs. Maslow believed that our behaviour is motivated by our basic needs, until those needs are met. Once they are fulfilled, we move to the next level and are motived by the next level of needs. Let's understand this better with an example.

Rupa comes from a very poor family. She never has enough food, water, warmth or rest. According to Maslow, until Rupa is sure that she will get these basic needs, she will not even think about the next level of needs – her safety needs. But, once Rupa is confident that her basic needs will be met, she will move to the next level, and her behaviour will then be motivated by her need for security and safety. Once these new needs are met, Rupa will once again move to the next level, and be motivated by her need for relationships and friends. Once this need is satisfied, Rupa will then focus on the fourth level of needs – her esteem needs, after which she will move up to the fifth and last level of needs – the desire to achieve her full potential.

Understanding Achievement Motivation

We now know that people are motivated by basic, psychological and self-fulfillment needs. However, certain people are also motivated by the achievement of highly challenging accomplishments. This is known as Achievement Motivation, or 'need for achievement'.

The level of motivation achievement in a person differs from individual to individual. It is important that entrepreneurs have a high level of achievement motivation – a deep desire to accomplish something important and unique. It is equally important that they hire people who are also highly motivated by challenges and success.

What Motivates You?

What are the things that really motivate you? List down five things that really motivate you.

Remember to answer honestly!

I am motivated by:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Characteristics of Entrepreneurs with Achievement Motivation

Entrepreneurs with achievement motivation can be described as follows:

- Unafraid to take risks for personal accomplishment
- Love being challenged
- Future-oriented
- Flexible and adaptive
- Value negative feedback more than positive feedback

- Very persistent when it comes to achieving goals
- Extremely courageous
- Highly creative and innovative
- Restless - constantly looking to achieve more
- Feel personally responsible for solving problems

Think about it:

- How many of these traits do you have?
- Can you think of entrepreneurs who display these traits?

How to Cultivate a Positive Attitude

The good news is attitude is a choice. So it is possible to improve, control and change our attitude, if we decide we want to! The following tips help foster a positive mindset:

- Remember that you control your attitude, not the other way around
- Devote at least 15 minutes a day towards reading, watching or listening to something positive
- Avoid negative people who only complain and stop complaining yourself
- Expand your vocabulary with positive words and delete negative phrases from your mind
- Be appreciative and focus on what's good in yourself, in your life, and in others
- Stop thinking of yourself as a victim and start being proactive
- Imagine yourself succeeding and achieving your goals

What is Attitude?

Now that we understand why motivation is so important for self-analysis, let's look at the role our attitude plays in better understanding ourselves. Attitude can be described as your tendency (positive or negative), to think and feel about someone or something. Attitude is the foundation for success in every aspect of life. Our attitude can be our best friend or our worst enemy. In other words:

"The only disability in life is a bad attitude."

When you start a business, you are sure to encounter a wide variety of emotions, from difficult times and failures to good times and successes. Your attitude is what will see you through the tough times and guide you towards success. Attitude is also infectious. It affects everyone around you, from your customers to your employees to your investors. A positive attitude helps build confidence in the workplace while a negative attitude is likely to result in the demotivation of your people.

What Are Your Strengths and Weaknesses?

Another way to analyze yourself is by honestly identifying your strengths and weaknesses. This will help you use your strengths to your best advantage and reduce your weaknesses.

Note down all your strengths and weaknesses in the two columns below. Remember to be honest with yourself!

Strengths	Weaknesses

Tips

- Achievement motivation can be learned.
- Don't be afraid to make mistakes.
- Train yourself to finish what you start.
- Dream big.

8.1.4 Honesty & Work Ethics: What is Honesty?

Honesty is the quality of being fair and truthful. It means speaking and acting in a manner that inspires trust. A person who is described as honest is seen as truthful and sincere, and as someone who isn't deceitful or devious and doesn't steal or cheat. There are two dimensions of honesty – one is honesty in communication and the other is honesty in conduct.

Honesty is an extremely important trait because it results in peace of mind and builds relationships that are based on trust. Being dishonest, on the other hand, results in anxiety and leads to relationships full of distrust and conflict.

Qualities of Honest People

Honest individuals have certain distinct characteristics. Some common qualities among honest people are:

1. They don't worry about what others think of them. They believe in being themselves – they don't bother about whether they are liked or disliked for their personalities.

2. They stand up for their beliefs. They won't think twice about giving their honest opinion, even if they are aware that their point of view lies with the minority.

3. They are think skinned. This means they are not affected by others judging them harshly for their honest opinions.

4. They forge trusting, meaningful and healthy friendships. Honest people usually surround themselves with honest friends. They have faith that their friends will be truthful and upfront with them at all times.

They are trusted by their peers. They are seen as people who can be counted on for truthful and objective feedback and advice.

*   Honesty and employees: When entrepreneurs build honest relationships with their employees, it leads to more transparency in the workplace, which results in higher work performance and better results.

*   Honesty and investors: For entrepreneurs, being honest with investors means not only sharing strengths but also candidly disclosing current and potential weaknesses, problem areas and solution strategies. Keep in mind that investors have a lot of experience with startups and are aware that all new companies have problems. Claiming that everything is perfectly fine and running smoothly is a red flag for most investors.

*   Honesty with oneself: The consequences of being dishonest with oneself can lead to dire results, especially in the case of entrepreneurs. For entrepreneurs to succeed, it is critical that they remain realistic about their situation at all times, and accurately judge every aspect of their enterprise for what it truly is.

Importance of Honesty in Entrepreneurs

One of the most important characteristics of entrepreneurs is honesty. When entrepreneurs are honest with their customers, employees and investors, it shows that they respect those that they work with. It is also important that entrepreneurs remain honest with themselves. Let's look at how being honest would lead to great benefits for entrepreneurs.

*   Honesty and customers: When entrepreneurs are honest with their customers it leads to stronger relationships, which in turn results in business growth and a stronger customer network.

What are Work Ethics?

Being ethical in the workplace means displaying values like honesty, integrity and respect in all your decisions and communications. It means not displaying negative qualities like lying, cheating and stealing.

Workplace ethics play a big role in the profitability of a company. It is as crucial to an enterprise as high morale and teamwork. This is why most companies lay down specific workplace ethic guidelines that must compulsorily be followed by their employees. These guidelines are typically outlined in a company's employee handbook.

Elements of a Strong Work Ethic

An entrepreneur must display strong work ethics, as well as hire only those individuals who believe in and display the same level of ethical behavior in the workplace. Some elements of a strong work ethic are:

- **Professionalism**: This involves everything from how you present yourself in a corporate setting to the manner in which you treat others in the workplace.

- **Respectfulness**: This means remaining poised and diplomatic regardless of how stressful or volatile a situation is.

- **Dependability**: This means always keeping your word, whether it's arriving on time for a meeting or delivering work on time.

- **Dedication**: This means refusing to quit until the designated work is done, and completing the work at the highest possible level of excellence.

- **Determination**: This means embracing obstacles as challenges rather than letting them stop you, and pushing ahead with purpose and resilience to get the desired results.

- **Accountability**: This means taking responsibility for your actions and the consequences of your actions, and not making excuses for your mistakes.

- **Humility**: This means acknowledging everyone's efforts and had work, and sharing the credit for accomplishments.

How to Foster a Good Work Ethic

As an entrepreneur, it is important that you clearly define the kind of behaviour that you expect from each and every team member in the workplace. You should make it clear that you expect employees to display positive work ethics like:

- **Honesty**: All work assigned to a person should be done with complete honesty, without any deceit or lies.

- **Good attitude**: All team members should be optimistic, energetic, and positive.

- **Reliability**: Employees should show up where they are supposed to be, when they are supposed to be there.

- **Good work habits**: Employees should always be well groomed, never use inappropriate language, conduct themselves professionally at all times, etc.

- **Initiative**: Doing the bare minimum is not enough. Every team member needs to be proactive and show initiative.

- **Trustworthiness**: Trust is non-negotiable. If an employee cannot be trusted, it's time to let that employee go.

- **Respect**: Employees need to respect the company, the law, their work, their colleagues and themselves.
- **Integrity**: Each and every team member should be completely ethical and must display above board behaviour at all times.
- **Efficiency**: Efficient employees help a company grow while inefficient employees result in a waste of time and resources.

Tips

- Don't get angry when someone tells you the truth and you don't like what you hear.
- Always be willing to accept responsibility for your mistakes.

8.1.5 Creativity & Innovation : What is Creativity

Creativity means thinking outside the box. It means viewing things in new ways or from different perspectives, and then converting these ideas into reality. Creativity involves two parts: thinking and producing. Simply having an idea makes you imaginative, not creative. However, having an idea and acting on it makes you creative.

Characteristics of Highly Creative People

Some characteristics of creative people are:

- They are imaginative and playful
- They see issues from different angles
- They notice small details
- They have very little tolerance for boredom

- They detest rules and routine
- They love to daydream
- They are very curious

What is Innovation?

There are many different definitions of innovation. In simple terms, innovation means turning an idea into a solution that adds value. It can also mean adding value by implementing a new product, service or process, or significantly improving on an existing product, service or process.

Characteristics of Highly Innovative People

Some characteristics of highly innovative people are:

- They embrace doing things differently
- They don't believe in taking shortcuts
- They are not afraid to be unconventional
- They are highly proactive and persistent
- They are organized, cautious and risk-averse

Tips

- Take regular breaks from your creative work to recharge yourself and gain fresh perspective.
- Build prototypes frequently, test them out, get feedback, and make the required changes.

8.1.6 Time Management: What is Time Management?

Time management is the process organizing your time, and deciding how to allocate your time between different activities. Good time management is the difference between working smart (getting more done in less time) and working hard (working for more time to get more done).

Effective time management leads to an efficient work output, even when you are faced with tight deadlines and high pressure situations. On the other hand, not managing your time effectively results in inefficient output and increases stress and anxiety.

Benefits of Time Management

Time management can lead to huge benefits like:

- Greater productivity
- Better professional reputation
- Higher chances for career advancement

- Higher efficiency
- Reduced stress
- Greater opportunities to achieve goals

Not managing time effectively can result in undesirable consequences like:

- Missing deadlines
- Substandard work quality
- Stalled career

- Inefficient work output
- Poor professional reputation
- Increase in stress and anxiety

Traits of Effective Time Managers

Some traits of effective time managers are:

- They begin projects early
- They set daily objectives
- They modify plans if required, to achieve better results
- They are flexible and open-minded
- They inform people in advance if their help will be required
- They know how to say no

- They break tasks into steps with specific deadlines
- They continually review long term goals
- They think of alternate solutions if and when required
- They ask for help when required
- They create backup plans

Effective Time Management Techniques

You can manage your time better by putting into practice certain time management techniques. Some helpful tips are:

- Plan out your day as well as plan for interruptions. Give yourself at least 30 minutes to figure out your time plan. In your plan, schedule some time for interruptions.
- Put up a "Do Not Disturb" sign when you absolutely have to complete a certain amount of work.
- Close your mind to all distractions. Train yourself to ignore ringing phones, don't reply to chat messages and disconnect from social media sites.

- Delegate your work. This will not only help your work get done faster, but will also show you the unique skills and abilities of those around you.

- Stop procrastinating. Remind yourself that procrastination typically arises due to the fear of failure or the belief that you cannot do things as perfectly as you wish to do them.

- Prioritize. List each task to be completed in order of its urgency or importance level. Then focus on completing each task, one by one.

- Maintain a log of your work activities. Analyze the log to help you understand how efficient you are, and how much time is wasted every day.
  Create time management goals to reduce time wastage.

Tips

- Always complete the most important tasks first.

- Get at least 7 – 8 hours of sleep every day.

- Start your day early.

- Don't waste too much time on small, unimportant details.

- Set a time limit for every task that you will undertake.

- Give yourself some time to unwind between tasks.

8.1.7 Anger Management: What is Anger Management

Anger management is the process of:

1. Learning to recognize the signs that you, or someone else, is becoming angry

2. Taking the best course of action to calm down the situation in a positive way

Anger management does not mean suppressing anger.

Importance of Anger Management

Anger is a perfectly normal human emotion. In fact, when managed the right way, anger can be considered a healthy emotion. However, if it is not kept in check, anger can make us act inappropriately and can lead to us saying or doing things that we will likely later regret. Extreme anger can:

- **Hurt you physically**:: It leads to heart disease, diabetes, a weakened immune system, insomnia, and high blood pressure.

- **Hurt you mentally**: It can cloud your thinking and lead to stress, depression and mental health issues.

- **Hurt your career**: It can result in alienating your colleagues, bosses, clients and lead to the loss of respect.

- **Hurt your relationships**: It makes it hard for your family and friends to trust you, be honest with you and feel comfortable around you.
  This is why anger management, or managing anger appropriately, is so important.

Anger Management Strategies

Here are some strategies that can help you control your anger:

Strategy 1: Relaxation

Something as simple as breathing deeply and looking at relaxing images works wonders in calming down angry feelings. Try this simple breathing exercise:

1. Take a deep breath from your diaphragm (don't breathe from your chest)

2. Visualize your breath coming up from your stomach

3. Keep repeating a calming word like 'relax' or 'take it easy' (remember to keep breathing deeply while repeating the word)

4. Picture a relaxing moment (this can be from your memory or your imagination)

Follow this relaxation technique daily, especially when you realize that you're starting to feel angry.

Strategy 2: Cognitive Restructuring

Cognitive restructuring means changing the manner in which you think. Anger can make you curse, swear, exaggerate and act very dramatically. When this happens, force yourself to replace your angry thoughts with more logical ones. For instance, instead of thinking 'Everything is ruined' change your mindset and tell yourself 'It's not the end of the world and getting angry won't solve this'.

Strategy 3: Problem Solving

Getting angry about a problem that you cannot control is a perfectly natural response. Sometimes, try as you may, there may not be a solution to the difficulty you are faced with. In such cases, stop focusing on solving the problem, and instead focus on handling and facing the problem. Remind yourself that you will do your best to deal with the situation, but that you will not blame yourself if you don't get the solution you desire.

Strategy 4: Better Communication

When you're angry, it is very easy to jump to inaccurate conclusions. In this case, you need to force yourself to stop reacting, and think carefully about what you want to say, before saying it. Avoid saying the first thing that enters your head. Force yourself to listen carefully to what the other person is saying. Then think about the conversation before responding.

Strategy 5: Changing Your Environment

If you find that your environment is the cause of your anger, try and give yourself a break from your surroundings. Make an active decision to schedule some personal time for yourself, especially on days that are very hectic and stressful. Having even a brief amount of quiet or alone time is sure to help calm you down.

Tips for Anger Management

- The following tips will help you keep your anger in check:
- Take some time to collect your thoughts before you speak out in anger.
- Express the reason for your anger in an assertive, but non-confrontational manner once you have calmed down.
- Do some form of physical exercise like running or walking briskly when you feel yourself getting angry.
- Make short breaks part of your daily routine, especially during days that are stressful. Focus on how to solve a problem that's making you angry, rather than focusing on the fact that the problem is making you angry.

Tips

- Try to forgive those who anger you, rather than hold a grudge against them.
- Avoid using sarcasm and hurling insults. Instead, try and explain the reason for your frustration in a polite and mature manner.

8.1.8 Stress Management: What is Stress

We say we are 'stressed' when we feel overloaded and unsure of our ability to deal with the pressures placed on us. Anything that challenges or threatens our well-being can be defined as a stress. It is important to note that stress can be good and bad. While good stress keeps us going, negative stress undermines our mental and physical health. This is why it is so important to manage negative stress effectively.

Causes of Stress

Stress can be caused by internal and external factors.

Internal causes of stress

- Constant worry
- Rigid thinking
- Unrealistic expectations

- Pessimism
- Negative self-talk
- All in or all out attitude

External causes of stress

- Major life changes
- Difficulties with relationships
- Having too much to do

- Difficulties at work or in school
- Financial difficulties
- Worrying about one's children and/or family

Symptoms of Stress

Stress can manifest itself in numerous ways. Take a look at the cognitive, emotional, physical and behavioral symptoms of stress.

Cognitive Symptoms	Emotional Symptoms
• Memory problems	• Depression
• Concentration issues	• Agitation
• Lack of judgement	• Irritability
• Pessimism	• Loneliness
• Anxiety	• Anxiety
• Constant worrying	• Anger

Physical Symptoms	Behavioral Symptoms
• Aches and pain	• Increase or decrease in appetite
• Diarrhea or constipation	• Over sleeping or not sleeping enough
• Nausea	• Withdrawing socially
• Dizziness	• Ignoring responsibilities
• Chest pain and/or rapid heartbeat	• Consumption of alcohol or cigarettes
• Frequent cold or flu like feelings	• Nervous habits like nail biting, pacing etc.

Tips to Manage Stress

The following tips can help you manage your stress better:

• Note down the different ways in which you can handle the various sources of your stress.

• Remember that you cannot control everything, but you can control how you respond.

• Discuss your feelings, opinions and beliefs rather than reacting angrily, defensively or passively.

• Practice relaxation techniques like meditation, yoga or tai chi when you start feeling stressed.

• Devote a part of your day towards exercise.

• Eat healthy foods like fruits and vegetables. Avoid unhealthy foods especially those containing large amounts of sugar.

• Plan your day so that you can manage your time better, with less stress.

• Say no to people and things when required.

• Schedule time to pursue your hobbies and interests.

• Ensure you get at least 7-8 hours of sleep.

• Reduce your caffeine intake.

• Increase the time spent with family and friends.

Tips

• Force yourself to smile even if you feel stressed. Smiling makes us feel relaxed and happy.

• Stop yourself from feeling and thinking like a victim. Change your attiude and focus on being proactive.

8.2. Digital Literacy: A Recap

Unit Objectives ⦿

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

1. Identify the basic parts of a computer

2. Identify the basic parts of a keyboard

3. Recall basic computer terminology

4. Recall basic computer terminology

5. Recall the functions of basic computer keys

6. Discuss the main applications of MS Office

7. Discuss the benefits of Microsoft Outlook

8. Discuss the different types of e-commerce

9. List the benefits of e-commerce for retailers and customers

10. Discuss how the Digital India campaign will help boost e-commerce in India

11. Describe how you will sell a product or service on an e-commerce platform

8.2.1 Computer and Internet basics:
Basic Parts of a Computer
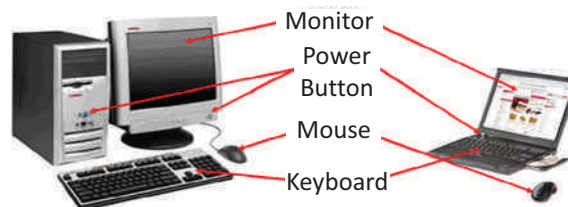
Basic Parts of a Keyboard
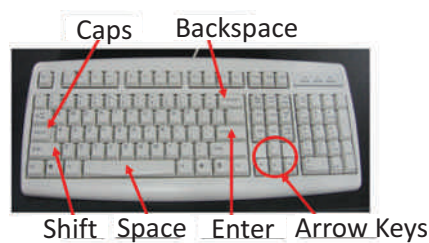
Basic Parts of a Computer

- **Central Processing Unit (CPU)**: The brain of the computer. It interprets and carries out program instructions.

- **Hard Drive**: A device that stores large amounts of data.

- **Monitor**: The device that contains the computer screen where the information is visually displayed.

- **Desktop**: The first screen displayed after the operating system loads.

- **Background**: The image that fills the background of the desktop.

Basic Parts of a Computer

- **Mouse**: A hand-held device used to point to items on the monitor.

- **Speakers**: Devices that enable you to hear sound from the computer.

- **Printer**: A device that converts output from a computer into printed paper documents.

- **Icon**: A small picture or image that visually represents something on your computer.

- **Cursor**: An arrow which indicates where you are positioned on the screen.

- **Program Menu**: A list of programs on your computer that can be accessed from the Start menu.

- **Taskbar**: The horizontal bar at the bottom of the computer screen that lists applications that are currently in use.

- **Recycle Bin**: A temporary storage for deleted files.

Basic Internet Terms

- **The Internet**: A vast, international collection of computer networks that transfers information.

- **The World Wide Web**: A system that lets you access information on the Internet.

- **Website**: A location on the World Wide Web (and Internet) that contains information about a specific topic.

- **Homepage**: Provides information about a website and directs you to other pages on that website.

- **Link/Hyperlink**: A highlighted or underlined icon, graphic, or text that takes you to another file or object.

- **Web Address/URL**: The address for a website.

- **Address Box**: A box in the browser window where you can type in a web address.

Basic Computer Keys

- **Arrow Keys**: Press these keys to move your cursor.

- **Space bar**: Adds a space.

- **Enter/Return**: Moves your cursor to a new line.

- **Shift**: Press this key if you want to type a capital letter or the upper symbol of a key.

- **Caps Lock**: Press this key if you want all the letters you type to be capital letters. Press it again to revert back to typing lowercase letters.

- **Backspace**: Deletes everything to the left of your cursor.

Tips

- When visiting a .com address, there no need to type http:// or even www. Just type the name of the website and then press Ctrl + Enter. (Example: Type 'apple' and press Ctrl + Enter to go to www.apple.com)

- Press the Ctrl key and press the + or - to increase and decrease the size of text.

- Press F5 or Ctrl + R to refresh or reload a web page.

8.2.2 MS Office and Email: About MS Office

MS Office or Microsoft Office is a suite of computer programs developed by Microsoft. Although meant for all users, it offers different versions that cater specifically to students, home users and business users. All the programs are compatible with both, Windows and Macintosh.

Most Popular Office Products

Some of the most popular and universally used MS Office applications are:

- **Microsoft Word**: Allows users to type text and add images to a document.
- **Microsoft Excel**: Allows users to enter data into a spreadsheet and create calculations and graphs.
- **Microsoft PowerPoint**: Allows users to add text, pictures and media and create slideshows and presentations.
- **Microsoft Outlook**: Allows users to send and receive email.
- **Microsoft OneNote**: Allows users to make drawings and notes with the feel of a pen on paper.
- **Microsoft Access**: Allows users to store data over many tables.

Why Choose Microsoft Outlook

A popular email management choice especially in the workplace, Microsoft Outlook also includes an address book, notebook, web browser and calendar. Some major benefits of this program are:

- **Integrated search function**: You can use keywords to search for data across all Outlook programs.
- **Enhanced security**: Your email is safe from hackers, junk mail and phishing website email.
- **Email syncing**: Sync your mail with your calendar, contact list, notes in One Note and...your phone!
- **Offline access to emai:l** No Internet? No problem! Write emails offline and send them when you're connected again.

Tips

- Press Ctrl+R as a shortcut method to reply to email.
- Set your desktop notifications only for very important emails.
- Flag messages quickly by selecting messages and hitting the Insert key.
- Save frequently sent emails as a template to reuse again and again.
- Conveniently save important emails as files.

8.2.3 E-Commerce: What is E-Commerce

E-commerce is the buying or selling of goods and services, or the transmitting of money or data, electronically on the internet. E-Commerce is the short form for "electronic commerce."

Examples of E-Commerce

Some examples of e-commerce are:

- Online shopping
- Online auctions
- Online ticketing

- Electronic payments
- Internet banking

Types of E-Commerce

E-commerce can be classified based on the types of participants in the transaction. The main types of e-commerce are:

- **Business to Business (B2B)**: Both the transacting parties are businesses.
- **Business to Consumer (B2C)**: Businesses sell electronically to end-consumers.
- **Consumer to Consumer (C2C):** Consumers come together to buy, sell or trade items to other consumers.
- **Consumer-to-Business (C2B)**: Consumers make products or services available for purchase to companies looking for exactly those services or products.
- **Business-to-Administration (B2A)**: Online transactions conducted between companies and public administration.
- **Consumer-to-Administration (C2A)**: Online transactions conducted between individuals and public administration.

Benefits of E-Commerce

The e-commerce business provides some benefits for retailers and customers.

Benefits for retailers:

- Establishes an online presence
- Reduces operational costs by removing overhead costs
- Increases brand awareness through the use of good keywords
- Increases sales by removing geographical and time constraints

Benefits for customers:

- Offers a wider range of choice than any physical store
- Enables goods and services to be purchased from remote locations
- Enables consumers to perform price comparisons

Digital India Campaign

Prime Minister Narendra Modi launched the Digital India campaign in 2015, with the objective of offering every citizen of India access to digital services, knowledge and information. The campaign aims to improve the country's online infrastructure and increase internet connectivity, thus boosting the e-commerce industry.

Currently, the majority of online transactions come from tier 2 and tier 3 cities. Once the Digital India campaign is in place, the government will deliver services through mobile connectivity, which will help deliver internet to remote corners of the country. This will help the e-commerce market to enter India's tier 4 towns and rural areas.

E-Commerce Activity

Choose a product or service that you want to sell online. Write a brief note explaining how you will use existing e-commerce platforms, or create a new e-commerce platform, to sell your product or service.

Tips

- Before launching your e-commerce platform, test everything.
- Pay close and personal attention to your social media.

8.3: Money Matters

Unit Objectives

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

1. Discuss the importance of saving money

2. Discuss the benefits of saving money

3. Discuss the main types of bank accounts

4. Describe the process of opening a bank account

5. Differentiate between fixed and variable costs

6. Describe the main types of investment options

7. Describe the different types of insurance products

8. Describe the different types of taxes

9. Discuss the uses of online banking

10. Discuss the main types of electronic funds transfers

8.3.1 Personal Finance – Why to Save: Importance of Saving

We all know that the future is unpredictable. You never know what will happen tomorrow, next week or next year. That's why saving money steadily through the years is so important. Saving money will help improve your financial situation over time. But more importantly, knowing that you have money stashed away for an emergency will give you peace of mind. Saving money also opens the door to many more options and possibilities.

Benefits of Saving

Inculcating the habit of saving leads to a vast number of benefits. Saving helps you:

- **Become financially independent**: When you have enough money saved up to feel secure you can start making your choices, from taking a vacation whenever you want, to switching careers or starting your own business.

- **Invest in yourself through education**: Through saving, you can earn enough to pay up for courses that will add to your professional experience and ultimately result in higher paying jobs.

- **Get out of debt**: Once you have saved enough as a reserve fund, you can use your savings to pay off debts like loans or bills that have accumulated over time.

- **Be prepared for surprise expenses**: Having money saved enables you to pay for unforeseen expenses like sudden car or house repairs, without feeling financially stressed.

- **Pay for emergencies**: Saving helps you deal with emergencies like sudden health issues or emergency trips without feeling financially burdened.

- **Afford large purchases and achieve major goals**:: Saving diligently makes it possible to place down payments towards major purchases and goals, like buying a home or a car.
- **Retire**: The money you have saved over the years will keep you comfortable when you no longer have the income you would get from your job.

Tips

- Break your spending habit. Try not spending on one expensive item per week, and put the money that you would have spent into your savings.
- Decide that you will not buy anything on certain days or weeks and stick to your word.

8.3.2 Types of Bank Accounts, Opening a Bank Account: Types of Bank Accounts

In India, banks offer four main types of bank accounts. These are:

• Current Accounts

• Savings Accounts

• Recurring Deposit Accounts

• Fixed Deposit Accounts

Current Accounts
Current accounts offer the most liquid deposits and thus, are best suited for businessmen and companies. As these accounts are not meant for investments and savings, there is no imposed limit on the number or amount of transactions that can be made on any given day. Current account holders are not paid any interest on the amounts held in their accounts. They are charged for certain services offered on such accounts.

Savings Accounts
Savings accounts are meant to promote savings, and are therefore the number one choice for salaried individuals, pensioners and students. While there is no restriction on the number and amount of deposits made, there are usually restrictions on the number and amount of withdrawals. Savings account holders are paid interest on their savings.

Recurring Deposit Accounts
Recurring Deposit accounts, also called RD accounts, are the accounts of choice for those who want to save an amount every month, but are unable to invest a large sum at one time. Such account holders deposit a small, fixed amount every month for a pre-determined period (minimum 6 months). Defaulting on a monthly payment results in the account holder being charged a penalty amount. The total amount is repaid with interest at the end of the specified period.

Fixed Deposit Accounts
Fixed Deposit accounts, also called FD accounts, are ideal for those who wish to deposit their savings for a long term in return for a high rate of interest. The rate of interest offered depends on the amount deposited and the time period, and also differs from bank to bank. In the case of an FD, a certain amount of money is deposited by the account holder for a fixed period of time. The money can be withdrawn when the period expires. If necessary, the depositor can break the fixed deposit prematurely. However, this usually attracts a penalty amount which also differs from bank to bank.

Opening a Bank Account

Opening a bank account is quite a simple process. Take a look at the steps to open an account of your own:

Step 1: Fill in the Account Opening Form

This form requires you to provide the following information:

• Personal details (name, address, phone number, date of birth, gender, occupation, address)

• Method of receiving your account statement (hard copy/email)

• Details of your initial deposit (cash/cheque)

• Manner of operating your account (online/mobile banking/traditional via cheque, slip books)

Ensure that you sign wherever required on the form.

Step 2: Affix your Photograph

Stick a recent photograph of yourself in the allotted space on the form.

Step 3: Provide your Know Your Customer (KYC) Details
KYC is a process that helps banks verify the identity and address of their customers. To open an account, every individual needs to submit certain approved documents with respect to photo identity (ID) and address proof. Some Officially Valid Documents (OVDs) are:

- Passport

- Driving License

- Voters' Identity Card

- PAN Card

- UIDAI (Aadhaar) Card

Step 4: Submit All your Documents

Submit the completed Account Opening Form and KYC documents. Then wait until the forms are processed and your account has been opened!

Tips

- Select the right type of account.

- Fill in complete nomination details.

- Ask about fees.

- Understand the rules.

- Check for online banking – it's convenient!

- Keep an eye on your bank balance.

8.3.3 Costs: Fixed vs Variable: What are Fixed and Variable Costs

Fixed costs and variable costs together make up a company's total cost. These are the two types of costs that companies have to bear when producing goods and services.

A fixed cost does not change with the volume of goods or services a company produces. It always remains the same.

A variable cost, on the other hand, increases and decreases depending on the volume of goods and services produced. In other words, it varies with the amount produced.

Differences Between Fixed and Variable Costs

Let's take a look at some of the main differences between fixed and variable costs:

Criteria	Fixed Costs	Variable Costs
Meaning	A cost that stays the same, regardless of the output produced.	A cost that changes when the
Nature	Time related.	Volume related.
Incurred	Incurred irrespective of units being produced.	Incurred only when units are produced.
Unit cost	Inversely proportional to the number of units produced.	Remains the same, per unit.
Examples	Depreciation, rent, salary, insurance, tax etc.	Material consumed, wages, commission on sales, packing expenses, etc.

Tips

- When trying to determine whether a cost is fixed or variable, simply ask the following question: Will the particular cost change if the company stopped its production activities? If the answer is no, then it is a fixed cost. If the answer is yes, then it is probably a variable cost.

8.3.4 Investment, Insurance and Taxes:

Investment

Investment means that money is spent today with the aim of reaping financial gains at a future time. The main types of investment options are as follows:

- **Bonds:** Bonds are instruments used by public and private companies to raise large sums of money – too large to be borrowed from a bank. These bonds are then issued in the public market and are bought by lenders.

- **Stocks:** Stocks or equity are shares that are issued by companies and are bought by the general public.

- **Small Savings Schemes:** Small Savings Schemes are tools meant to save money in small amounts. Some popular schemes are the Employees Provident Fund, Sukanya Samriddhi Scheme and National Pension Scheme.

- **Mutual Funds:** Mutual Funds are professionally managed financial instruments that invest money in different securities on behalf of investors.

- **Fixed Deposits:** A fixed amount of money is kept aside with a financial institution for a fixed amount of time in return for interest on the money.

- **Real Estate:** Loans are taken from banks to purchase real estate, which is then leased or sold with the aim of making a profit on the appreciated property price.

- **Hedge Funds:** Hedge funds invest in both financial derivatives and/or publicly traded securities.

- **Private Equity:** Private Equity is trading in the shares of an operating company that is not publicly listed and whose shares are not available on the stock market.

- **Venture Capital :**Venture Capital involves investing substantial capital in a budding company in return for stocks in that company.

Insurance

There are two types of insurance – Life Insurance and Non-Life or General Insurance.

Life Insurance

Life Insurance deals with all insurance covering human life.

Life Insurance Products

The main life insurance products are:

- **Term Insurance:** This is the simplest and cheapest form of insurance. It offers financial protection for a specified tenure, say 15 to 20 years. In the case of your death, your family is paid the sum assured. In the case of your surviving the term, the insurer pays nothing.

- **Endowment Policy:** This offers the dual benefit of insurance and investment. Part of the premium is allocated towards the sum assured, while the remaining premium gets invested in equity and debt. It pays a lump sum amount after the specified duration or on the death of the policyholder, whichever is earlier.

- **Unit-Linked Insurance Plan (ULIP):** Here part of the premium is spent on the life cover, while the remaining amount is invested in equity and debt. It helps develop a regular saving habit.

- **Money Back Life Insurance :**While the policyholder is alive, periodic payments of the partial survival benefits are made during the policy tenure. On the death of the insured, the insurance company pays the full sum assured along with survival benefits.

- **Whole Life Insurance :**It offers the dual benefit of insurance and investment. It offers insurance cover for the whole life of the person or up to 100 years whichever is earlier.

General Insurance

General Insurance deals with all insurance covering assets like animals, agricultural crops, goods, factories, cars and so on.

General Insurance Products

The main general insurance products are:

- **Motor Insurance:** This can be divided into Four Wheeler Insurance and Two Wheeler Insurance.

- **Health Insurance:** The main types of health insurance are individual health insurance, family floater health insurance, comprehensive health insurance and critical illness insurance.

- **Travel Insurance:** This can be categorised into Individual Travel Policy, Family Travel Policy, Student Travel Insurance and Senior Citizen Health Insurance.

- **Home Insurance:** This protects the house and its contents from risk.

- **Marine Insurance:** This insurance covers goods, freight, cargo etc. against loss or damage during transit by rail, road, sea and/or air.

Taxes

There are two types of taxes – Direct Taxes and Indirect Taxes.

Direct Tax

Direct taxes are levied directly on an entity or a person and are non-transferrable.

Some examples of Direct Taxes are:

- **Income Tax:** This tax is levied on your earning in a financial year. It is applicable to both, individuals and companies.

- **Capital Gains Tax:** This tax is payable whenever you receive a sizable amount of money. It is usually of two types – short term capital gains from investments held for less than 36 months and long term capital gains from investments held for longer than 36 months.

- **Securities Transaction Tax:** This tax is added to the price of a share. It is levied every time you buy or sell shares.

- **Perquisite Tax:** This tax is levied is on perks that have been acquired by a company or used by an employee.

- **Corporate Tax:** Corporate tax is paid by companies from the revenue they earn.

Indirect Tax

Indirect taxes are levied on goods or services.

Some examples of Indirect Taxes are:

- **Sales Tax:** Sales Tax is levied on the sale of a product.

- **Service Tax:** Service Tax is added to services provided in India.

- **Value Added Tax:** Value Added Tax is levied at the discretion of the state government. The tax is levied on goods sold in the state. The tax amount is decided by the state.

- **Customs Duty & Octroi:**   Customs Duty is a charge that is applied on purchases that are imported from another country. Octroi is levied on goods that cross state borders within India.

- **Excise Duty:** Excise Duty is levied on all goods manufactured or produced in India.

Tips

- Think about how quickly you need your money back and pick an investment option accordingly.

- Ensure that you are buying the right type of insurance policy for yourself.

- Remember, not paying taxes can result in penalties ranging from fines to imprisonment.

8.3.5 Online Banking, NEFT, RTGS etc.: What is Online Banking

Internet or online banking allows account holders to access their account from a laptop at any location. In this way, instructions can be issued. To access an account, account holders simply need to use their unique customer ID number and password.

Internet banking can be used to:

• Find out an account balance

• Transfer amounts from one account to another

• Arrange for the issuance of cheques

• Instruct payments to be made

• Request for a cheque book

• Request for a statement of accounts

• Make a fixed deposit

Electronic Funds Transfers

Electronic funds transfer is a convenient way of transferring money from the comfort of one's own home, using integrated banking tools like internet and mobile banking.

Transferring funds via an electronic gateway is extremely convenient. With the help of online banking, you can choose to:

• Transfer funds into your own accounts of the same bank.

• Transfer funds into different accounts of the same bank.

• Transfer funds into accounts in different banks, using NEFT.

• Transfer funds into other bank accounts using RTGS.

• Transfer funds into various accounts using IMPS.

NEFT

NEFT stands for National Electronic Funds Transfer. This money transfer system allows you to electronically transfer funds from your respective bank accounts to any other account, either in the same bank or belonging to any other bank. NEFT can be used by individuals, firms and corporate organizations to transfer funds between accounts.

In order to transfer funds via NEFT, two things are required:

• A transferring bank

• A destination bank

Before you can transfer funds through NEFT, you will need to register the beneficiary who will be receiving the funds. In order to complete this registration, you will require the following

• Recipient's name	• Recipient's bank's name
• Recipient's account number	• Recipient's bank's IFSC code

RTGS

RTGS stands for Real Time Gross Settlement. This is a real time funds transfer system which enables you to transfer funds from one bank to another, in real time or on a gross basis. The transferred amount is immediately deducted from the account of one bank, and instantly credited to the other bank's account. The RTGS payment gateway is maintained by the Reserve Bank of India. The transactions between banks are made electronically.

RTGS can be used by individuals, companies and firms to transfer large sums of money. Before remitting funds through RTGS, you will need to add the beneficiary and his bank account details via your online banking account. In order to complete this registration, you will require the following information:

- Name of the beneficiary
- Beneficiary's bank address
- Beneficiary's account number
- Beneficiary's bank's IFSC code

IMPS

IMPS stands for Immediate Payment Service. This is a real-time, inter-bank, electronic funds transfer system used to transfer money instantly within banks across India. IMPS enables users to make instant electronic transfer payments using mobile phones through both, Mobile Banking and SMS. It can also be used through ATMs and online banking. IMPS is available 24 hours a day and 7 days a week. The system features a secure transfer gateway and immediately confirms orders that have been fulfilled.

To transfer money through IMPS, the you need to:

- Register for IMPS with your bank

- Receive a Mobile Money Identifier (MMID) from the bank

- Receive a MPIN from the bank

Once you have both these, you can login or make a request through SMS to transfer a particular amount to a beneficiary.

For the beneficiary to receive the transferred money, he must:

1. Link his mobile number with his respective account
2. Receive the MMID from the bank

In order to initiate a money transfer through IMPS, you will need to enter the following information:

1. The beneficiary's mobile number
2. The beneficiary's MMID
3. The transfer amount
4. Your MPIN

As soon as money has been deducted from your account and credited into the beneficiary's account, you will be sent a confirmation SMS with a transaction reference number, for future reference.

Differences Between NEFT, RTGS & IMPS

Criteria	NEFT	RTGS	IMPS
Settlement	Done in batches	Real-time	Real-time
Full form	National Electronic Fund Transfer	Real Time Gross Settlement	Immediate Payment Service
Timings on Monday – Friday	8:00 am – 6:30 pm	9:00 am – 4:30 pm	24x7
Timings on Saturday	8:00 am – 1:00 pm	9:00 am – 1:30 pm	24x7
Minimum amount of money transfer limit	₹1	₹2 lacs	₹1
Maximum amount of money transfer limit	₹10 lacs	₹10 lacs per day	₹2 lacs
Maximum charges as per RBI	Upto 10,000 – ₹2.5 above 10,000 – 1 lac – ₹5 above 1 – 2 lacs – ₹15 above 2 – 5 lacs – ₹25 above 5 – 10 lacs – ₹25	above 2 – 5 lacs – ₹25 above 5 – 10 lacs – ₹50	Upto 10,000 – ₹5 above 10,000 – 1 lac – ₹5 above 1 – 2 lacs – ₹15

Tips

- Never click on any links in any e-mail message to access your online banking website.
- You will never be asked for your credit or debit card details while using online banking.
- Change your online banking password regularly.

8.4. Preparing for Employment & Self Employment

Unit Objectives

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

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

8.4.1 Interview Preparation: How to Prepare for an Interview

The success of your getting the job that you want depends largely on how well your interview for that job goes. Therefore, before you go in for your interview, it is important that you prepare for it with a fair amount of research and planning. Take a look at the steps to follow in order to be well prepared for an interview:

1. **Research the organization that you are having the interview with.**

   • Studying the company beforehand will help you be more prepared at the time of the interview. Your knowledge of the organization will help you answer questions at the time of the interview, and will leave you looking and feeling more confident. This is sure to make you stand out from other, not as well informed, candidates.

   • Look for background information on the company. Ty and find an overview of the company and its industry profile.

   • Visit the company website to get a good idea of what the company does. A company website offers a wealth of important information. Read and understand the company's mission statement. Pay attention to the company's products/services and client list. Read through any press releases to get an idea of the company's projected growth and stability.

   • Note down any questions that you have after your research has been completed.

2. **Think about whether your skills and qualifications match the job requirements.**

   • Carefully read through and analyze the job description.

   • Make a note of the knowledge, skills and abilities required to fulfill the job requirements.

   • Take a look at the organization hierarchy. Figure out where the position you are applying for fits into this hierarchy.

3. **Go through the most typical interview questions asked, and prepare your responses.**

   • Remember, in most interviews a mix of resume-based, behavioral and case study questions are asked.

   • Think about the kind of answers you would like to provide to typical questions asked in these three areas.

   • Practice these answers until you can express them confidently and clearly.

4. **Plan your attire for the interview.**
   - It is always safest to opt for formal business attire, unless expressly informed to dress in business casual (in which case you should use your best judgement).
   - Ensure that your clothes are clean and well-ironed. Pick neutral colours – nothing too bright or flashy.
   - The shoes you wear should match your clothes, and should be clean and suitable for an interview.
   - Remember, your aim is to leave everyone you meet with the impression that you are a professional and highly efficient person.

5. **Ensure that you have packed everything that you may require during the interview.**
   - Carry a few copies of your resume. Use a good quality paper for your resume print outs.
   - Always take along a notepad and a pen.
   - Take along any information you may need to refer to, in order to fill out an application form.
   - Carry a few samples of your work, if relevant.

6. **Remember the importance of non-verbal communication.**
   - Practice projecting confidence. Remind yourself to smile and make eye contact. Practice giving a firm handshake.
   - Keep in mind the importance of posture. Practice sitting up straight. Train yourself to stop nervous gestures like fidgeting and foot-tapping.
   - Practice keeping your reactions in check. Remember, your facial expressions provide a good insight into your true feelings. Practice projecting a positive image.

7. **Make a list of questions to end the interview with.**
   - Most interviews will end with the interviewer(s) asking if you have any questions. This is your chance to show that you have done your research and are interested in learning more about the company.
   - If the interviewer does not ask you this question, you can inform him/her that you have some queries that you would like to discuss. This is the time for you to refer to the notes you made while studying the company.
   - Some good questions to ask at this point are:
     - What do you consider the most important criteria for success in this job?
     - How will my performance be evaluated?
     - What are the opportunities for advancement?
     - What are the next steps in the hiring process?
   - Remember, never ask for information that is easily available on the company website.

Tips

- Ask insightful and probing questions.
- When communicating, use effective forms of body language like smiling, making eye contact, and actively listening and nodding. Don't slouch, play with nearby items, fidget, chew gum, or mumble.

8.4.2 Preparing an Effective Resume: How to Create an Effective Resume

A resume is a formal document that lists a candidate's work experience, education and skills. A good resume gives a potential employer enough information to believe the applicant is worth interviewing. That's why it is so important to create a résumé that is effective. Take a look at the steps to create an effective resume:

Step 1: Write the Address Section
The Address section occupies the top of your resume. It includes information like your name, address, phone number and e-mail address. Insert a bold line under the section to separate it from rest of your resume.
Example:

> Jasmine Watts
> Breach Candy, Mumbai – India
> Contact No: +91 2223678270
> Email: jasmine.watts@gmail.com
> _____

Step 2: Add the Profile Summary Section
This part of your resume should list your overall experiences, achievements, awards, certifications and strengths. You can make your summary as short as 2-3 bullet points or as long as 8-10 bullet points.
Example:

> **Profile Summary**
> • A Content Writer graduated from University of Strathclyde having 6 years of experience in writing website copy.
> • Core expertise lies in content creation for e-learning courses, specifically for the K-12 segment.

Step 3: Include Your Educational Qualifications

When listing your academic records, first list your highest degree. Then add the second highest qualification under the highest one and so on. To provide a clear and accurate picture of your educational background, it is critical that include information on your position, rank, percentage or CPI for every degree or certification that you have listed.

If you have done any certifications and trainings, you can add a Trainings & Certifications section under your Educational Qualifications section.
Example:

> **Educational Qualifications**
> • Masters in International Management (2007) from Columbia University with 8.8 CPI.
> • Bachelor of Management Studies (2004) from Mumbai University with 87% marks.
> • 10+2 with Math, Stats (2001) from Maharashtra Board with 91% marks.
> • High School (1999) from Maharashtra Board with 93% marks.

Step 4: List Your Technical Skills
When listing your technical skills, start with the skills that you are most confident about. Then add the skills that you do not have as good a command over. It is perfectly acceptable to include just one skill, if you feel that particular skill adds tremendous value to your résumé. If you do not have any technical skills, you can omit this step.
Example:

Technical Skills
- Flash
- Photoshop

Step 5: Insert Your Academic Project Experience
List down all the important projects that you have worked on. Include the following information in this section:

• Project title	• Organization	• Platform used
• Contribution	• Description	

Example:

Academic Projects
Project Title: Different Communication Skills
Organization: True Blue Solutions
Platform used: Articulate
Contribution: Content writing and graphic visualization
Description: Development of storyboards for corporate induction & training programs

Step 6: List Your Strengths

This is where you list all your major strengths. This section should be in the form of a bulleted list.
Example:

Strengths
- Excellent oral, written and presentation skills
- Action-oriented and result-focused
- Great time management skills

Step 7: List Your Extracurricular Activities
It is very important to show that you have diverse interests and that your life consists of more than academics. Including your extracurricular activities can give you an added edge over other candidates who have similar academic scores and project experiences. This section should be in the form of a bulleted list.

Example:

Extracurricular Activities

• Member of the Debate Club

• Played tennis at a national level

• Won first prize in the All India Camel Contest, 2010

Step 8: Write Your Personal Details

The last section of your résumé must include the following personal information:

• Date of birth   • Gender & marital status

• Nationality   • Languages known

Example:

Personal Details

• Date of birth: 25th May, 1981

• Gender & marital status: Female, Single

• Nationality: Indian

• Languages known: English, Hindi, Tamil, French

Tips

• Keep your resume file name short, simple and informational.

• Make sure the resume is neat and free from typing errors.

• Always create your resume on plain white paper.

8.4.3 Interview FAQs

Take a look at some of the most frequently asked interview questions, and some helpful tips on how to answer them.

Q1. Can you tell me a little about yourself?

Tips to answer:

- Don't provide your full employment or personal history.
- Offer 2-3 specific experiences that you feel are most valuable and relevant.
- Conclude with how those experiences have made you perfect for this specific role.

Q2. How did you hear about the position?

Tips to answer:

- Tell the interviewer how you heard about the job – whether it was through a friend (name the friend), event or article (name them) or a job portal (say which one).
- Explain what excites you about the position and what in particular caught your eye about this role.

Q3. What do you know about the company?

Tips to answer:

- Don't recite the company's About Us page.
- Show that you understand and care about the company's goals.
- Explain why you believe in the company's mission and values.

Q4. Why do you want this job?

Tips to answer:

- Show that you are passionate about the job.
- Identify why the role is a great fit for you.
- Explain why you love the company.

Q5. Why should we hire you?

Tips to answer:

- Prove through your words that you can not only do the work, but can definitely deliver excellent results.
- Explain why you would be a great fit with the team and work culture.
- Explain why you should be chosen over any other candidate.

Q6. What are your greatest professional strengths?

Tips to answer:

- Be honest – share some of your real strengths, rather than give answers that you think sound good.
- Offer examples of specific strengths that are relevant to the position you are applying for.
- Provide examples of how you've demonstrated these strengths.

Q7. What do you consider to be your weaknesses?

Tips to answer:

- The purpose of this question is to gauge your self-awareness and honesty.
- Give an example of a trait that you struggle with, but that you're working on to improve.

Q8. What are your salary requirements?

Tips to answer:

- Do your research beforehand and find out the typical salary range for the job you are applying for.

- Figure out where you lie on the pay scale based on your experience, education, and skills.

- Be flexible. Tell the interviewer that you know your skills are valuable, but that you want the job and are willing to negotiate.

Q9. What do you like to do outside of work?

Tips to answer:

- The purpose of this question is to see if you will fit in with the company culture.

- Be honest – open up and share activities and hobbies that interest and excite you.

Q10. If you were an animal, which one would you want to be?

Tips to answer:

- The purpose of this question is to see if you are able to think on your feet.

- There's no wrong answer – but to make a great impression try to bring out your strengths or personality traits through your answer.

Q11: What do you think we could do better or differently?

Tips to answer:

- The purpose of this question is to see if you have done your research on the company, and to test whether you can think critically and come up with new ideas.

- Suggest new ideas. Show how your interests and expertise would help you execute these ideas.

Q12: Do you have any questions for us?

Tips to answer:

- Do not ask questions to which the answers can be easily found on the company website or through a quick online search.

- Ask intelligent questions that show your ability to think critically.

Tips

- Be honest and confident while answering.

- Use examples of your past experiences wherever possible to make your answers more impactful.

8.4.4 Work Readiness – Terms & Terminologies: Basic Workplace Terminology

Every employee should be well versed in the following terms:

- **Annual leave:** Paid vacation leave given by employers to employees.
- **Background Check:** A method used by employers to verify the accuracy of the information provided by potential candidates.
- **Benefits:** A part of an employee's compensation package.
- **Breaks:** Short periods of rest taken by employees during working hours.
- **Compensation Package:** The combination of salary and benefits that an employer provides to his/her employees.
- **Compensatory Time (Comp Time):** Time off in lieu of pay.
- **Contract Employee:** An employee who works for one organization that sells said employee's services to another company, either on a project or time basis.
- **Contract of Employment:** When an employee is offered work in exchange for wages or salary, and accepts the offer made by the employer, a contract of employment exists.
- **Corporate Culture:** The beliefs and values shared by all the members of a company, and imparted from one generation of employees to another.
- **Counter Offer/Counter Proposal:** A negotiation technique used by potential candidates to increase the amount of salary offered by a company.
- **Cover Letter:** A letter that accompanies a candidate's resume. It emphasizes the important points in the candidate's resume and provides real examples that prove the candidate's ability to perform the expected job role.
- **Curriculum Vitae (CV)/Resume:** A summary of a candidate's achievements, educational background, work experience, skills and strengths.
- **Declining Letter:** A letter sent by an employee to an employer, turning down the job offer made by the employer to the employee.
- **Deductions:** Amounts subtracted from an employee's pay and listed on the employee's pay slip.
- **Discrimination:** The act of treating one person not as favourably as another person.
- **Employee:** A person who works for another person in exchange for payment.
- **Employee Training:** A workshop or in-house training that an employee is asked to attend by his or her superior, for the benefit of the employer.
- **Employment Gaps:** Periods of unemployed time between jobs.
- **Fixed-Term Contract:** A contract of employment which gets terminated on an agreed-upon date.
- **Follow-Up:** The act of contacting a potential employer after a candidate has submitted his or her resume.
- **Freelancer/Consultant/Independent Contractor:** A person who works for him or herself and pitches for temporary jobs and projects with different employers.
- **Holiday**: Paid time-off from work.
- **Hourly Rate**: The amount of salary or wages paid for 60 minutes of work.

- **Internship**: A job opportunity offered by an employer to a potential employee, called an intern, to work at the employer's company for a fixed, limited time period.

- **Interview**: A conversation between a potential employee and a representative of an employer, in order to determine if the potential employee should be hired.

- **Job Application**: A form which asks for a candidate's information like the candidate's name, address, contact details and work experience. The purpose of a candidate submitting a job application, is to show that candidate's interest in working for a particular company.

- **Job Offer**: An offer of employment made by an employer to a potential employee.

- **Job Search Agent**   : A program that enables candidates to search for employment opportunities by selecting criteria listed in the program, for job vacancies.

- **Lay Off**: A lay off occurs when an employee is temporarily let go from his or her job, due to the employer not having any work for that employee.

- **Leave**: Formal permission given to an employee, by his or her employer, to take a leave of absence from work.

- **Letter of Acceptance**: A letter given by an employer to an employee, confirming the offer of employment made by the employer, as well as the conditions of the offer.

- **Letter of Agreement**: A letter that outlines the terms of employment.

- **Letter of Recommendation**: A letter written for the purpose of validating the work skills of a person.

- **Maternity Leave**: Leave taken from work by women who are pregnant, or who have just given birth.

- **Mentor**: A person who is employed at a higher level than you, who offers you advice and guides you in your career.

- **Minimum wage**: The minimum wage amount paid on an hourly basis.

- **Notice**: An announcement made by an employee or an employer, stating that the employment contract will end on a particular date.

- **Offer of Employment** : An offer made by an employer to a prospective employee that contains important information pertaining to the job being offered, like the starting date, salary, working conditions etc.

- **Open-Ended Contract** : A contract of employment that continues till the employer or employee terminates it.

- **Overqualified**: A person who is not suited for a particular job because he or she has too many years of work experience, or a level of education that is much higher than required for the job, or is currently or was previously too highly paid.

- **Part-Time Worker**: An employee who works for fewer hours than the standard number of hours normally worked.

- **Paternity Leave**: Leave granted to a man who has recently become a father.

- **Recruiters/Headhunters/Executive Search Firms**: Professionals who are paid by employers to search for people to fill particular positions.

- **Resigning/Resignations**: When an employee formally informs his or her employer that he or she is quitting his or her job.

- **Self-Employed**: A person who has his or her own business and does not work in the capacity of an employee.

- **Time Sheet**: A form that is submitted to an employer, by an employee, that contains the number of hours worked every day by the employee.

8.5. Understanding Entrepreneurship

Unit Objectives ⦿

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

8.5.1 Concept Introduction, (Characteristic of an Entrepreneur, types of firms / types of enterprises): Entrepreneurs and Entrepreneurship

Anyone who is determined to start a business, no matter what the risk, is an entrepreneur. Entrepreneurs run their own start-up, take responsibility for the financial risks and use creativity, innovation and vast reserves of self-motivation to achieve success. They dream big and are determined to do whatever it takes to turn their idea into a viable offering. The aim of an entrepreneur is to create an enterprise. The process of creating this enterprise is known as entrepreneurship.

Importance of Entrepreneurship

Entrepreneurship is very important for the following reasons:

1. It results in the creation of new organizations
2. It brings creativity into the marketplace
3. It leads to improved standards of living
4. It helps develop the economy of a country

Characteristics of Entrepreneurs

All successful entrepreneurs have certain characteristics in common.

They are all:

*   Extremely passionate about their work
*   Confident in themselves
*   Disciplined and dedicated
*   Motivated and driven
*   Highly creative
*   Visionaries
*   Open-minded
*   Decisive

Entrepreneurs also have a tendency to:

*   Have a high risk tolerance
*   Thoroughly plan everything
*   Manage their money wisely
*   Make their customers their priority
*   Understand their offering and their market in detail
*   Ask for advice from experts when required
*   Know when to cut their losses

Examples of Famous Entrepreneurs

Some famous entrepreneurs are:

- Bill Gates (Founder of Microsoft)
- Steve Jobs (Co-founder of Apple)
- Mark Zuckerberg (Founder of Facebook)
- Pierre Omidyar (Founder of eBay)

Types of Enterprises

As an entrepreneur in India, you can own and run any of the following types of enterprises:

Sole Proprietorship

In a sole proprietorship, a single individual owns, manages and controls the enterprise. This type of business is the easiest to form with respect to legal formalities. The business and the owner have no separate legal existence. All profit belongs to the proprietor, as do all the losses - the liability of the entrepreneur is unlimited.

Partnership

A partnership firm is formed by two or more people. The owners of the enterprise are called partners. A partnership deed must be signed by all the partners. The firm and its partners have no separate legal existence. The profits are shared by the partners. With respect to losses, the liability of the partners is unlimited. A firm has a limited life span and must be dissolved when any one of the partners dies, retires, claims bankruptcy or goes insane.

Limited Liability Partnership (LLP)

In a Limited Liability Partnership or LLP, the partners of the firm enjoy perpetual existence as well as the advantage of limited liability. Each partner's liability is limited to their agreed contribution to the LLP. The partnership and its partners have a separate legal existence.

Tips

- Learn from others' failures.
- Be certain that this is what you want.
- Search for a problem to solve, rather than look for a problem to attach to your idea.

8.5.2 Leadership & Teamwork: Leadership and Leaders

Leadership means setting an example for others to follow. Setting a good example means not asking someone to do something that you wouldn't willingly want to do yourself. Leadership is about figuring out what to do in order to win as a team, and as a company.

Leaders believe in doing the right things. They also believe in helping others to do the right things. An effective leader is someone who:

• Creates an inspiring vision of the future.

• Motivates and inspires his team to pursue that vision.

Leadership Qualities That All Entrepreneurs Need

Building a successful enterprise is only possible if the entrepreneur in charge possesses excellent leadership qualities. Some critical leadership skills that every entrepreneur must have are:

1. **Pragmatism**: This means having the ability to highlight all obstacles and challenges, in order to resolve issues and reduce risks.

2. **Humility**: This means admitting to mistakes often and early, and being quick to take responsibility for your actions. Mistakes should be viewed as challenges to overcome, not opportunities to point blame.

3. **Flexibility**: It is critical for a good leader to be very flexible and quickly adapt to change. It is equally critical to know when to adapt and when not to.

4. **Authenticity**: This means showing both, your strengths and your weaknesses. It means being human and showing others that you are human.

5. **Reinvention**: This means refreshing or changing your leadership style when necessary. To do this, it's important to learn where your leadership gaps lie and find out what resources are required to close them.

6. **Awareness**: This means taking the time to recognize how others view you. It means understanding how your presence affects those around you.

Benefits of Effective Leadership

Effective leadership results in numerous benefits. Great leadership leads to the leader successfully:

• Gaining the loyalty and commitment of the team members

• Motivating the team to work towards achieving the company's goals and objectives

• Building morale and instilling confidence in the team members

• Fostering mutual understanding and team-spirit among team members

• Convincing team members about the need to change when a situation requires adaptability

Teamwork and Teams

Teamwork occurs when the people in a workplace combine their individual skills to pursue a common goal. Effective teams are made up of individuals who work together to achieve this common goal. A great team is one who holds themselves accountable for the end result.

Importance of Teamwork in Entrepreneurial Success

For an entrepreneurial leader, building an effective team is critical to the success of a venture. An entrepreneur must ensure that the team he builds possesses certain crucial qualities, traits and characteristics. An effective team is one which has:

1. **Unity of purpose:**   All the team members should clearly understand and be equally committed to the purpose, vision and goals of the team.

2. **Great communication skills:**   Team members should have the ability to express their concerns, ask questions and use diagrams, and charts to convey complex information.

3. **The ability to collaborate:** Every member should feel entitled to provide regular feedback on new ideas.

4. **Initiative:** The team should consist of proactive individuals. The members should have the enthusiasm to come up with new ideas, improve existing ideas, and conduct their own research.

5. **Visionary members:** The team should have the ability to anticipate problems and act on these potential problem before they turn into real problems.

6. **Great adaptability skills:** The team must believe that change is a positive force. Change should be seen as the chance to improve and try new things.

7. **Excellent organizational skills:** The team should have the ability to develop standard work processes, balance responsibilities, properly plan projects, and set in place methods to measure progress and ROI.

Tips

- Don't get too attached to your original idea. Allow it to evolve and change.

- Be aware of your weaknesses and build a team that will complement your shortfalls.

- Hiring the right people is not enough. You need to promote or incentivize your most talented people to keep them motivated.

- Earn your team's respect.

8.5.3 Communication Skills: Listening & Speaking: The Importance of Listening Effectively

Listening is the ability to correctly receive and understand messages during the process of communication. Listening is critical for effective communication. Without effective listening skills, messages can easily be misunderstood. This results in a communication breakdown and can lead to the sender and the receiver of the message becoming frustrated or irritated.

It's very important to note that listening is not the same as hearing. Hearing just refers to sounds that you hear. Listening is a whole lot more than that. To listen, one requires focus. It means not only paying attention to the story, but also focusing on how the story is relayed, the way language and voice is used, and even how the speaker uses their body language. The ability to listen depends on how effectively one can perceive and understand both, verbal and non-verbal cues.

How to Listen Effectively

To listen effectively you should:

- Stop talking

- Stop interrupting

- Focus completely on what is being said

- Nod and use encouraging words and gestures

- Be open-minded

- Think about the speaker's perspective

- Be very, very patient

- Pay attention to the tone that is being used

- Pay attention to the speaker's gestures, facial expressions and eye movements

- Not try and rush the person

- Not let the speaker's mannerisms or habits irritate or distract you

How to Listen Effectively

How successfully a message gets conveyed depends entirely on how effectively you are able to get it through. An effective speaker is one who enunciates properly, pronounces words correctly, chooses the right words and speaks at a pace that is easily understandable. Besides this, the words spoken out loud need to match the gestures, tone and body language used.

What you say, and the tone in which you say it, results in numerous perceptions being formed. A person who speaks hesitantly may be perceived as having low self-esteem or lacking in knowledge of the discussed topic. Those with a quiet voice may very well be labelled as shy. And those who speak in commanding tones with high levels of clarity, are usually considered to be extremely confident. This makes speaking a very critical communication skill.

How to Speak Effectively

To speak effectively you should:

- Incorporate body language in your speech like eye contact, smiling, nodding, gesturing etc.

- Build a draft of your speech before actually making your speech.

- Ensure that all your emotions and feelings are under control.

- Pronounce your words distinctly with the correct pitch and intensity. Your speech should be crystal clear at all times.

- Use a pleasant and natural tone when speaking. Your audience should not feel like you are putting on an accent or being unnatural in any way.

- Use precise and specific words to drive your message home. Ambiguity should be avoided at all costs.

- Ensure that your speech has a logical flow.

- Be brief. Don't add any unnecessary information.

- Make a conscious effort to avoid irritating mannerisms like fidgeting, twitching etc.

- Choose your words carefully and use simple words that the majority of the audience will have no difficulty understanding.

- Use visual aids like slides or a whiteboard.

- Speak slowly so that your audience can easily understand what you're saying. However, be careful not to speak too slowly because this can come across as stiff, unprepared or even condescending.

- Remember to pause at the right moments.

Tips

- If you're finding it difficult to focus on what someone is saying, try repeating their words in your head.

- Always maintain eye contact with the person that you are communicating with, when speaking as well as listening. This conveys and also encourages interest in the conversation.

8.5.4 Problem Solving & Negotiation skills:
What is a Problem?

As per The Concise Oxford Dictionary (1995), a problem is, "A doubtful or difficult matter requiring a solution"

All problems contain two elements:

1. Goals   2. Obstacles

The aim of problem solving is to recognize the obstacles and remove them in order to achieve the goals.

How to Solve Problems

Solving a problem requires a level of rational thinking. Here are some logical steps to follow when faced with an issue:

Step 1: Identify the problem	**Step 2:** Study the problem in detail
Step 3: List all possible solutions	**Step 4:** Select the best solution
Step 5: Implement the chosen solution	**Step 6:** Check that the problem has really been solved

Important Traits for Problem Solving

Highly developed problem solving skills are critical for both, business owners and their employees. The following personality traits play a big role in how effectively problems are solved:

- Being open minded
- Being proactive
- Having a positive attitude
- Asking the right questions
- Not panicking
- Focusing on the right problem

How to Assess for Problem Solving Skills

As an entrepreneur, it would be a good idea to assess the level of problem solving skills of potential candidates before hiring them. Some ways to assess this skill are through:

1. **Application forms**: Ask for proof of the candidate's problem solving skills in the application form.

2. **Psychometric tests**: Give potential candidates logical reasoning and critical thinking tests and see how they fare.

3. **Interviews**: Create hypothetical problematic situations or raise ethical questions and see how the candidates respond.

4. **Technical questions**: Give candidates examples of real life problems and evaluate their thought process.

What is Negotiation?

Negotiation is a method used to settle differences. The aim of negotiation is to resolve differences through a compromise or agreement while avoiding disputes. Without negotiation, conflicts are likely to lead to resentment between people. Good negotiation skills help satisfy both parties and go a long way towards developing strong relationships.

Why Negotiate

Starting a business requires many, many negotiations. Some negotiations are small while others are critical enough to make or break a startup. Negotiation also plays a big role inside the workplace. As an entrepreneur, you need to know not only know how to negotiate yourself, but also how to train employees in the art of negotiation.

How to Negotiate

Take a look at some steps to help you negotiate:

Step 1: Pre-Negotiation Preparation	Agree on where to meet to discuss the problem, decide who all will be present and set a time limit for the discussion.
Step 2: Discuss the Problem	This involves asking questions, listening to the other side, putting your views forward and clarifying doubts.
Step 3: Clarify the Objective	Ensure that both parties want to solve the same problem and reach the same goal.
Step 4: Aim for a Win-Win Outcome	Try your best to be open minded when negotiating. Compromise and offer alternate solutions to reach an outcome where both parties win.
Step 5: Clearly Define the Agreement	When an agreement has been reached, the details of the agreement should be crystal clear to both sides, with no scope for misunderstandings.
Step 6: Implement the Agreed Upon Solution	Agree on a course of action to set the solution in motion

Tips

- Know exactly what you want before you work towards getting it
- Give more importance to listening and thinking, than speaking
- Focus on building a relationship rather than winning
- Remember that your people skills will affect the outcome
- Know when to walk away – sometimes reaching an agreement may not be possible

8.5.5 Business Opportunities Identification: Entrepreneurs and Opportunities

"The entrepreneur always searches for change, responds to it and exploits it as an opportunity."
Peter Drucker

The ability to identify business opportunities is an essential characteristic of an entrepreneur.

What is an Opportunity?

The word opportunity suggests a good chance or a favourable situation to do something offered by circumstances.

A business opportunity means a good or favourable change available to run a specific business in a given environment, at a given point of time.

Common Questions Faced by Entrepreneurs

A critical question that all entrepreneurs face is how to go about finding the business opportunity that is right for them.

Some common questions that entrepreneurs constantly think about are:

•   Should the new enterprise introduce a new product or service based on an unmet need?

•   Should the new enterprise select an existing product or service from one market and offer it in another where it may not be available?

•   Should the enterprise be based on a tried and tested formula that has worked elsewhere?

It is therefore extremely important that entrepreneurs must learn how to identify new and existing business opportunities and evaluate their chances of success.

When is an Idea an Opportunity?

An idea is an opportunity when:

•   It creates or adds value to a customer

•   It solves a significant problem, removes a pain point or meets a demand

•   Has a robust market and profit margin

•   Is a good fit with the founder and management team at the right time and place

Factors to Consider When Looking for Opportunities

Consider the following when looking for business opportunities:

•   Economic trends
•   Changes in funding
•   Changing relationships between vendors, partners and suppliers

•   Market trends
•   Changes in political support
•   Shift in target audience

Ways to Identify New Business Opportunities

1. Identify Market Inefficiencies

   When looking at a market, consider what inefficiencies are present in the market. Think about ways to correct these inefficiencies.

2. Remove Key Hassles

   Rather than create a new product or service, you can innovatively improve a product, service or process.

3. Create Something New

   Think about how you can create a new experience for customers, based on existing business models.

4. Pick a Growing Sector/Industry

   Research and find out which sectors or industries are growing and think about what opportunities you can tap in the same.

5. Think About Product Differentiation

   If you already have a product in mind, think about ways to set it apart from the existing ones.

Ways to Identify Business Opportunities Within Your Business

1. SWOT Analysis

   An excellent way to identify opportunities inside your business is by creating a SWOT analysis. The acronym SWOT stands for strengths, weaknesses, opportunities, and threats. SWOT analysis framework:

STRENGTH
What are your strengths?
What unique capabilities do you posses?
What do you do better than others?
What do others percieve as your strengths?

WEAKNESSES
What are your weaknesses?
What do your competitors do better than you?

S **W**
O **T**

OPPORTUNITIES
What Trends may positively impact you?
What oppprtunities are available to you?

THREATS
Do you have solid financial support?
What trends may negatively impact you?

Consider the following when looking for business opportunities:

By looking at yourself and your competitors using the SWOT framework, you can uncover opportunities that you can exploit, as well as manage and eliminate threats that could derail your success.

2. Establishing Your USP

Establish your USP and position yourself as different from your competitors. Identify why customers should buy from you and promote that reason.

Opportunity Analysis

Once you have identified an opportunity, you need to analyze it.
To analyze an opportunity, you must:

• Focus on the idea

• Focus on the market of the idea

• Talk to industry leaders in the same space as the idea

• Talk to players in the same space as the idea

Tips

• Remember, opportunities are situational.

• Look for a proven track record.

• Avoid the latest craze.

• Love your idea.

8.5.6 Entrepreneurship Support Eco - System: What is an Entrepreneur?

An entrepreneur is a person who:

- Does not work for an employee
- Runs a small enterprise
- Assumes all the risks and rewards of the enterprise, idea, good or service

Types of Entrepreneurs

There are four main types of entrepreneurs:

1. **The Traditional Entrepreneur**: This type of entrepreneur usually has some kind of skill – they can be a carpenter, mechanic, cook etc. They have businesses that have been around for numerous years like restaurants, shops and carpenters. Typically, they gain plenty of experience in a particular industry before they begin their own business in a similar field.

2. **The Growth Potential Entrepreneur**: The desire of this type of entrepreneur is to start an enterprise that will grow, win many customers and make lots of money. Their ultimate aim is to eventually sell their enterprise for a nice profit. Such entrepreneurs usually have a science or technical background.

3. **The Project-Oriented Entrepreneur**: This type of entrepreneur generally has a background in the Arts or psychology. Their enterprises tend to be focus on something that they are very passionate about.

4. **The Lifestyle Entrepreneur**: This type of entrepreneur has usually worked as a teacher or a secretary. They are more interested in selling something that people will enjoy, rather than making lots of money.

Characteristics of an Entrepreneur

Successful entrepreneurs have the following characteristics:

- They are highly motivated
- They are creative and persuasive
- They are mentally prepared to handle each and every task
- They have excellent business skills – they know how to evaluate their cash flow, sales and revenue
- They are willing to take great risks
- They are very proactive – this means they are willing to do the work themselves, rather than wait for someone else to do it
- They have a vision – they are able to see the big picture
- They are flexible and open-minded
- They are good at making decisions

Entrepreneur Success Stories

Dhiru Bhai Ambani

Dhirubhai Ambani began his entrepreneurial career by selling "bhajias" to pilgrims in Mount Girnar on weekends. At 16, he moved to Yemen where he worked as a gas-station attendant, and as a clerk in an oil company. He returned to India with Rs. 50,000 and started a textile trading company. Reliance went on to become the first Indian company to raise money in global markets and the first Indian company to feature in Forbes 500 list.

Dr. Karsanbhai Patel

Karsanbhai Patel made detergent powder in the backyard of his house. He sold his product door-to-door and offered a money back guarantee with every pack that was sold. He charged Rs. 3 per kg when the cheapest detergent at that time was Rs.13 per kg. Dr. Patel eventually started Nirma which became a whole new segment in the Indian domestic detergent market.

The Entrepreneurial Process

Let's take a look at the stages of the entrepreneurial process.

Stage 1 : Idea Generation. The entrepreneurial process begins with an idea that has been thought of by the entrepreneur. The idea is a problem that has the potential to be solved.

Stage 2: Germination or Recognition. In this stage a possible solution to the identified problem is thought of.

Stage 3: Preparation or Rationalization. The problem is studied further and research is done to find out how others have tried to solve the same problem.

Stage 4 : Incubation or Fantasizing. This stage involves creative thinking for the purpose of coming up with more ideas. Less thought is given to the problem areas.

Stage 5: Feasibility Study: The next step is the creation of a feasibility study to determine if the idea will make a profit and if it should be seen through.

Stage 6 : Illumination or Realization. This is when all uncertain areas suddenly become clear. The entrepreneur feels confident that his idea has merit.

Stage 7: Verification or Validation. In this final stage, the idea is verified to see if it works and if it is useful.

Take a look at the diagram below to get a better idea of this process.

```
  Idea            Germination
Generation   →    (Recognition)
                       ↓
                  Preparation
                  (Rationalisation)
                       ↓
                  Incubation
                  (Fantasising)
                       ↓
  Fasibility   ←
   Study
     ↓
 Illumination  →   Varification
 (Realisation)     (Validation)
```
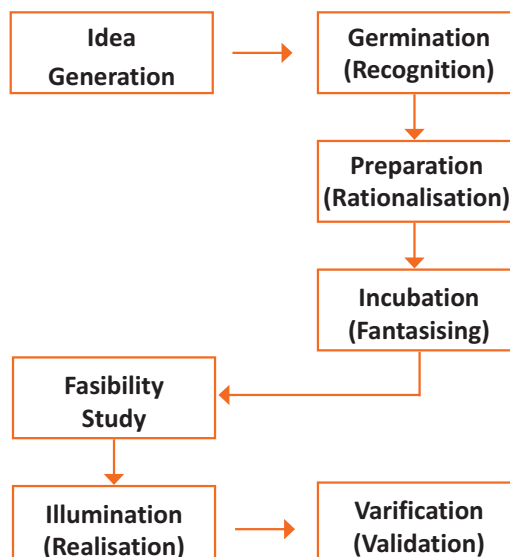
What is an Entrepreneur?

The entrepreneurship support ecosystem signifies the collective and complete nature of entrepreneurship. New companies emerge and flourish not only because of the courageous, visionary entrepreneurs who launch them, but they thrive as they are set in an environment or 'ecosystem' made of private and public participants. These players nurture and sustain the new ventures, facilitating the entrepreneurs' efforts.

An entrepreneurship ecosystem comprises of the following six domains:

1. **Favourable Culture:** This includes elements such as tolerance of risk and errors, valuable networking and positive social standing of the entrepreneur.

2. **Facilitating Policies & Leadership:** This includes regulatory framework incentives and existence of public research institutes.

3. **Financing Options:** Angel financing, venture capitalists and micro loans would be good examples of this.

4. **Human Capital:** This refers to trained and untrained labour, entrepreneurs and entrepreneurship training programmes, etc.

5. **Conducive Markets for Products & Services:** This refers to an existence or scope of existence of a market for the product/service.

6. **Institutional & Infrastructural Support:** This includes legal and financing advisers, telecommunications, digital and transportation infrastructure, and entrepreneurship networking programmes.

These domains indicate whether there is a strong entrepreneurship support ecosystem and what actions should the government put in place to further encourage this ecosystem. The six domains and their various elements have been graphically depicted.

Early Customers
- Early adopters for proof-of-concept
- Expertise in productizing
- Reference customer
- First reviews
- Distribution channels

Leadership
- Unequivocal support
- Social legitimacy
- Open door for advocate
- Entrepreneurship strategy
- urgency, crisis and challenge

Government
- Institutions
  e.g. Investment, support
- Financial support
  e.g. for R&D, jump start funds
- Regulatory framework
  incentives
  e.g. Tax benifits
- Research institutes
- Venture-friendly
  legislation
- e.g. Bankruptcy,
  contract enforcement, property rights, and labour

Financial Capital
- Micro-loans
- Angel investors, friends and family
- Zero-stage venture capital
- Venture capital funds
- Private equity
- Public capital markets
- Debt

Success Stories
- Visible successes
- Wealth generation for founders
- International reputation

Societal norms
- Tolerance of risk, mistakes, failure
- Innovation, creativity, experimentation
- Social status of entrepreneur
- Wealth creation
- Ambition, drive, hunger

Networks
- Entrepreneure's networks
- Diaspora networks
- Multinational corporations

Labour
- Skilled and unskilled
- Serial entrepreneures
- Later generation family

Educational Institutions
- General degrees (professional and academic)
- Specific entrepreneurship training

Infrastructure
- Telecommunications
- Transportation & logistics
- Energy
- Zones, incubation centers, clusters

Support Professions
- Legal
- Accounting
- Investment bankers

Non-Government Institution
- Entrepreneurship
  promotion in
  non-profits
- Business plan
  contests
- Conferences
- Entrepreneur- friendly association

Circles: Finance, Culture, Policy, **Entrepreneurship**, Supports, Market, Human Capital

Every entrepreneurship support ecosystem is unique and all the elements of the ecosystem are interdependent. Although every region's entrepreneurship ecosystem can be broadly described by the above features, each ecosystem is the result of the hundred elements interacting in highly complex and particular ways.

Entrepreneurship ecosystems eventually become (largely) self-sustaining. When the six domains are resilient enough, they are mutually beneficial. At this point, government involvement can and should be significantly minimized. Public leaders do not need to invest a lot to sustain the ecosystem. It is imperative that the entrepreneurship ecosystem incentives are formulated to be self-liquidating, hence focusing on sustainability of the environment.

Government's Role in the Entrepreneurship Ecosystem

Encouraging new ventures is a major focus for policymakers. Governments across the world are recognizing that new businesses flourish in distinctive types of supportive environments. Policymakers should study the scenario and take into account the following points whilst they formulate policies and regulations that enable successful entrepreneurship support ecosystems.

1. Policymakers should avoid regulations that discourage new entrants and work towards building efficient methods for business startups. Policies and regulations that favour existing, dominant firms over entrepreneurial ventures, restrict competition and obstruct entry for new companies.

2. Instead of developing policies conceptually intended to correct market failures, policymakers should interact with entrepreneurs and understand the challenges faced by them. The feedback should be used to develop policies that incite idea exploration, product development and increased rates of deal flow.

3. Entrepreneurial supporters should create a database that enables identifying who the participants in the ecosystem are and how they are connected. These ecosystem maps are useful tools in developing engagement strategies.

4. Disruptions are unavoidable in economic and social life. However, it's important to note that economic disruption gives rise to entrepreneurial opportunities. Architects of the entrepreneurship ecosystems (entrepreneurs, mentors, policymakers and consumers,) should anticipate these dips, thus capitalizing on the opportunities they create.

The need for effective strategies to enable local entrepreneurship support ecosystems is a practical one. Better understanding of the actual ecosystems provides a framework within which policy makers can ask relevant questions, envisage more efficient approaches, and assess ensuing outcomes.

Snapshot of the Entrepreneurship Ecosystem in India

Entrepreneurship has earned a newfound respect in India. Many Indians, with exposure to the world of business, who traditionally would have opted for a job, are setting up their own ventures. Many elements of the entrepreneurship ecosystem are beginning to come together. For example, increase in venture capitalists, government schemes and incubators, academia industry linkages, and emerging clusters and support to rural economy. All these initiatives are effective but there is a need to scale up and enrich the ecosystem further in the following ways:

1. We need to review our attitude towards failures and accept them as learning experiences.

2. We must encourage the educated to become entrepreneurs and provide students in schools and colleges with entrepreneurship skills.

3.   Universities, research labs and the government need to play the role of enablers in the entrepreneurship support ecosystem.

4.   Policymakers need to focus on reducing the obstacles such as corruption, red tape and bureaucracy.

5.   We need to improve our legal systems and court international venture capital firms and bring them to India.

6.   We must devise policies and methods to reach the secondary and tertiary towns in India, where people do not have access to the same resources available in the cities.

Today, there is a huge opportunity in this country to introduce innovative solutions that are capable of scaling up, and collaborating within the ecosystem as well as enriching it.

Make in India Campaign

Every entrepreneur has certain needs. Some of their important needs are:

•   To easily get loans

•   To easily find investors

•   To get tax exemptions

•   To easily access resources and good infrastructure

•   To enjoy a procedure that is free of hassles and is quick

•   To be able to easily partner with other firms

The Make in India campaign, launched by Prime Minister Modi aims to satisfy all these needs of young, aspiring entrepreneurs. Its objective is to:

•   Make investment easy

•   Support new ideas

•   Enhance skill development

•   Safeguard the ideas of entrepreneurs

•   Create state-of-the-art facilities for manufacturing goods

Tips

•   Research the existing market, network with other entrepreneurs, venture capitalists, angel investors, and thoroughly review the policies in place to enable your entrepreneurship.

•   Failure is a stepping stone and not the end of the road. Review yours and your peers' errors and correct them in your future venture.

•   Be proactive in your ecosystem. Identify the key features of your ecosystem and enrich them to ensure self-sustainability of your entrepreneurship support ecosystem.

8.5.7 Risk Appetite & Resilience:
Entrepreneurship and Risk

Entrepreneurs are inherently risk takers. They are path-makers not path-takers. Unlike a normal, cautious person, an entrepreneur would not think twice about quitting his job (his sole income) and taking a risk on himself and his idea.

An entrepreneur is aware that while pursuing his dreams, assumptions can be proven wrong and unforeseen events may arise. He knows that after dealing with numerous problems, success is still not guaranteed. Entrepreneurship is synonymous with the ability to take risks. This ability, called risk-appetite, is an entrepreneurial trait that is partly genetic and partly acquired.

What is Risk Appetite?

Risk appetite is defined as the extent to which a company is equipped to take risk, in order to achieve its objectives. Essentially, it refers to the balance, struck by the company, between possible profits and the hazards caused by changes in the environment (economic ecosystem, policies, etc.). Taking on more risk may lead to higher rewards but have a high probability of losses as well. However, being too conservative may go against the company as it can miss out on good opportunities to grow and reach their objectives.

The levels of risk appetite can be broadly categorized as "low", "medium" and "high." The company's entrepreneur(s) have to evaluate all potential alternatives and select the option most likely to succeed. Companies have varying levels of risk appetites for different objectives. The levels depend on:

• The type of industry

• Market pressures

• Company objectives

For example, a startup with a revolutionary concept will have a very high risk appetite. The startup can afford short term failures before it achieves longer term success. This type of appetite will not remain constant and will be adjusted to account for the present circumstances of the company.

Risk Appetite Statement

Companies have to define and articulate their risk appetite in sync with decisions made about their objectives and opportunities. The point of having a risk appetite statement is to have a framework that clearly states the acceptance and management of risk in business. It sets risk taking limits within the company. The risk appetite statement should convey the following:

• The nature of risks the business faces.

• Which risks the company is comfortable taking on and which risks are unacceptable.

• How much risk to accept in all the risk categories.

• The desired tradeoff between risk and reward.

• Measures of risk and methods of examining and regulating risk exposures.

Entrepreneurship and Resilience

Entrepreneurs are characterized by a set of qualities known as resilience. These qualities play an especially large role in the early stages of developing an enterprise. Risk resilience is an extremely valuable characteristic as it is believed to protect entrepreneurs against the threat of challenges and changes in the business environment.

What is Entrepreneurial Resilience?

Resilience is used to describe individuals who have the ability to overcome setbacks related to their life and career aspirations. A resilient person is someone who is capable of easily and quickly recovering from setbacks. For the entrepreneur, resilience is a critical trait. Entrepreneurial resilience can be enhanced in the following ways:

• By developing a professional network of coaches and mentors

• By accepting that change is a part of life

• By viewing obstacles as something that can be overcome

Characteristics of a Resilient Entrepreneur

The characteristics required to make an entrepreneur resilient enough to go the whole way in their business enterprise are:

• A strong internal sense of control
• Strong social connections
• Skill to learn from setbacks
• Ability to look at the bigger picture

• Ability to diversify and expand
• Survivor attitude
• Cash-flow conscious habits
• Attention to detail

Tips

• Cultivate a great network of clients, suppliers, peers, friends and family. This will not only help you promote your business, but will also help you learn, identify new opportunities and stay tuned to changes in the market.

• Don't dwell on setbacks. Focus on what the you need to do next to get moving again.

• While you should try and curtail expenses, ensure that it is not at the cost of your growth.

8.5.8 Success & Failures: Understanding Successes and Failures in Entrepreneurship

Shyam is a famous entrepreneur, known for his success story. But what most people don't know, is that Shyam failed numerous times before his enterprise became a success. Read his interview to get an idea of what entrepreneurship is really about, straight from an entrepreneur who has both, failed and succeeded.

Interviewer: Shyam, I have heard that entrepreneurs are great risk-takers who are never afraid of failing. Is this true?

Shyam: Ha ha, no of course it's not true! Most people believe that entrepreneurs need to be fearlessly enthusiastic. But the truth is, fear is a very normal and valid human reaction, especially when you are planning to start your own business! In fact, my biggest fear was the fear of failing. The reality is, entrepreneurs fail as much as they succeed. The trick is to not allow the fear of failing to stop you from going ahead with your plans. Remember, failures are lessons for future success!

Interviewer: What, according to you, is the reason that entrepreneurs fail?

Shyam: Well, there is no one single reason why entrepreneurs fail. An entrepreneur can fail due to numerous reasons. You could fail because you have allowed your fear of failure to defeat you. You could fail because you are unwilling to delegate (distribute) work. As the saying goes, "You can do anything, but not everything!" You could fail because you gave up too easily – maybe you were not persistent enough. You could fail because you were focusing your energy on small, insignificant tasks and ignoring the tasks that were most important. Other reasons for failing are partnering with the wrong people, not being able to sell your product to the right customers at the right time at the right price… and many more reasons!

Interviewer: As an entrepreneur, how do you feel failure should be looked at?

Shyam: I believe we should all look at failure as an asset, rather than as something negative. The way I see it, if you have an idea, you should try to make it work, even if there is a chance that you will fail. That's because not trying is failure right there, anyway! And failure is not the worst thing that can happen. I think having regrets because of not trying, and wondering 'what if' is far worse than trying and actually failing.

Interviewer: How did you feel when you failed for the first time?

Shyam: I was completely heartbroken! It was a very painful experience. But the good news is, you do recover from the failure. And with every subsequent failure, the recovery process gets a lot easier. That's because you start to see each failure more as a lesson that will eventually help you succeed, rather than as an obstacle that you cannot overcome. You will start to realize that failure has many benefits.

Interviewer: Can you tell us about some of the benefits of failing?

Shyam: One of the benefits that I have experienced personally from failing is that the failure made me see things in a new light. It gave me answers that I didn't have before. Failure can make you a lot stronger. It also helps keep your ego in control.

Interviewer: What advice would you give entrepreneurs who are about to start their own enterprises?

Shyam: I would tell them to do their research and ensure that their product is something that is actually wanted by customers. I'd tell them to pick their partners and employees very wisely and cautiously. I'd tell them that it's very important to be aggressive – push and market your product as aggressively as possible. I would warn them that starting an enterprise is very expensive and that they should be prepared for a situation where they run out of money.

I would tell them to create long term goals and put a plan in action to achieve that goal. I would tell them to build a product that is truly unique. Be very careful and ensure that you are not copying another startup. Lastly, I'd tell them that it's very important that they find the right investors.

Interviewer: That's some really helpful advice, Shyam! I'm sure this will help all entrepreneurs to be more prepared before they begin their journey! Thank you for all your insight!

Tips

- Remember that nothing is impossible.
- Identify your mission and your purpose before you start.
- Plan your next steps – don't make decisions hastily.

8.6: Preparing to be an Entrepreneur

Unit Objectives 🎯

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

1. Discuss how market research is carried out
2. Describe the 4 Ps of marketing
3. Discuss the importance of idea generation
4. Recall basic business terminology
5. Discuss the need for CRM
6. Discuss the benefits of CRM
7. Discuss the need for networking
8. Discuss the benefits of networking
9. Understand the importance of setting goals
10. Differentiate between short-term, medium-term and long-term goals
11. Discuss how to write a business plan
12. Explain the financial planning process
13. Discuss ways to manage your risk
14. Describe the procedure and formalities for applying for bank finance
15. Discuss how to manage your own enterprise
16. List important questions that every entrepreneur should ask before starting an enterprise

8.6.1 Market Study / The 4 Ps of Marketing / Importance of an IDEA: Understanding Market Research

Market research is the process of gathering, analyzing and interpreting market information on a product or service that is being sold in that market. It also includes information on:

• Past, present and prospective customers

• Customer characteristics and spending habits

• The location and needs of the target market

• The overall industry

• Relevant competitors

Market research involves two types of data:

• Primary information. This is research collected by yourself or by someone hired by you.

• Secondary information. This is research that already exists and is out there for you to find and use.

Primary research

Primary research can be of two types:

- Exploratory: This is open-ended and usually involves detailed, unstructured interviews.

- Specific: This is precise and involves structured, formal interviews. Conducting specific research is the more expensive than conducting exploratory research.

Secondary research

Secondary research uses outside information. Some common secondary sources are:

- Public sources: These are usually free and have a lot of good information. Examples are government departments, business departments of public libraries etc.

- Commercial sources: These offer valuable information but usually require a fee to be paid. Examples are research and trade associations, banks and other financial institutions etc.

- Educational institutions: These offer a wealth of information. Examples are colleges, universities, technical institutes etc.

The 4 Ps of Marketing

The 4 Ps of marketing are Product, Price, Promotion and Place. Let's look at each of these 4 Ps in detail.

Product

A product can be:

- A tangible good
- An intangible service

Whatever your product is, it is critical that you have a clear understanding of what you are offering, and what its unique characteristics are, before you begin with the marketing process.

Some questions to ask yourself are:

- What does the customer want from the product/service?

- What needs does it satisfy?

- Are there any more features that can be added?

- Does it have any expensive and unnecessary features?

- How will customers use it?

- What should it be called?

- How is it different from similar products?

- How much will it cost to produce?

- Can it be sold at a profit?

Price

Once all the elements of Product have been established, the Price factor needs to be considered.

The Price of a Product will depend on several factors such as profit margins, supply, demand and the marketing strategy.

Some questions to ask yourself are:

• What is the value of the product/service to customers?

• Do local products/services have established price points?

• Is the customer price sensitive?

• Should discounts be offered?

• How is your price compared to that of your competitors?

Promotion

Once you are certain about your Product and your Price, the next step is to look at ways to promote it. Some key elements of promotion are advertising, public relations, social media marketing, email marketing, search engine marketing, video marketing and more.

Some questions to ask yourself are:

• Where should you promote your product or service?

• What is the best medium to use to reach your target audience?

• When would be the best time to promote your product?

• How are your competitors promoting their products?

Place

According to most marketers, the basis of marketing is about offering the right product, at the right price, at the right place, at the right time. For this reason, selecting the best possible location is critical for converting prospective clients into actual clients.

Some questions to ask yourself are:

• Will your product or service be looked for in a physical store, online or both?

• What should you do to access the most appropriate distribution channels?

• Will you require a sales force?

• Where are your competitors offering their products or services?

• Should you follow in your competitors' footsteps?

• Should you do something different from your competitors?

Importance of an IDEA

Ideas are the foundation of progress. An idea can be small or ground-breaking, easy to accomplish or extremely complicated to implement. Whatever the case, the fact that it is an idea gives it merit. Without ideas, nothing is possible. Most people are afraid to speak out their ideas, out for fear of being ridiculed. However, if are an entrepreneur and want to remain competitive and innovative, you need to bring your ideas out into the light.

Some ways to do this are by:

- Establishing a culture of brainstorming where you invite all interested parties to contribute

- Discussing ideas out loud so that people can add their ideas, views, opinions to them

- Being open minded and not limiting your ideas, even if the idea who have seems ridiculous

- Not discarding ideas that you don't work on immediately, but instead making a note of them and shelving them so they can be revisited at a later date

Tips

- Keep in mind that good ideas do not always have to be unique.

- Remember that timing plays a huge role in determining the success of your idea.

- Situations and circumstances will always change, so be flexible and adapt your idea accordingly.

8.6.2 Business Entity Concepts:
Basic Business Terminology

If your aim is to start and run a business, it is crucial that you have a good understanding of basic business terms. Every entrepreneur should be well versed in the following terms:

- Accounting: A systematic method of recording and reporting financial transactions.

- Accounts payable: Money owed by a company to its creditors.

- Accounts Receivable: The amount a company is owed by its clients.

- Assets: The value of everything a company owns and uses to conduct its business.

- Balance Sheet: A snapshot of a company's assets, liabilities and owner's equity at a given moment.

- Bottom Line: The total amount a business has earned or lost at the end of a month.

- Business: An organization that operates with the aim of making a profit.

- Business to Business (B2B): A business that sells goods or services to another business.

- Business to Consumer (B2C): A business that sells goods or services directly to the end user.

- Capital: The money a business has in its accounts, assets and investments. The two main types of capital are debt and equity.

- Cash Flow: The overall movement of funds through a business each month, including income and expenses.

- Cash Flow Statement: A statement showing the money that entered and exited a business during a specific period of time.

- Contract: A formal agreement to do work for pay.

- Depreciation: The degrading value of an asset over time.

- Expense: The costs that a business incurs through its operations.

- Finance: The management and allocation of money and other assets.

- Financial Report: A comprehensive account of a business' transactions and expenses.

- Fixed Cost: A one-time expense.

- Income Statement (Profit and Loss Statement): Shows the profitability of a business during a period of time.

- Liabilities: The value of what a business owes to someone else.

- Marketing: The process of promoting, selling and distributing a product or service.

- Net Income/Profit: Revenues minus expenses.

- Net Worth: The total value of a business.

- Payback Period: The amount of time it takes to recover the initial investment of a business.

- Profit Margin: The ratio of profit, divided by revenue, displayed as a percentage.

- Return on Investment (ROI): The amount of money a business gets as return from an investment.

- Revenue: The total amount of income before expenses are subtracted.

- Sales Prospect: A potential customer.

- Supplier: A provider of supplies to a business.

- Target Market: A specific group of customers at which a company's products and services are aimed.

- Valuation: An estimate of the overall worth of the business.

- Variable Cost: Expenses that change in proportion to the activity of a business.

- Working Capital: Calculated as current assets minus current liabilities.

8.6.3 CRM & Networking: What is CRM?

CRM stands for Customer Relationship Management. Originally the expression Customer Relationship Management meant managing one's relationship with customers. However, today it refers to IT systems and software designed to help companies manage their relationships.

The Need for CRM

The better a company can manage its relationships with its customers, the higher the chances of the company's success. For any entrepreneur, the ability to successfully retain existing customers and expand the enterprise is paramount. This is why IT systems that focus on addressing the problems of dealing with customers on a daily basis are becoming more and more in demand.

Customer needs change over time, and technology can make it easier to understand what customers really want. This insight helps companies to be more responsive to the needs of their customers. It enables them to modify their business operations when required, so that their customers are always served in the best manner possible. Simply put, CRM helps companies recognize the value of their clients and enables them to capitalize on improved customer relations.

Benefits of CRM

CRM has a number of important benefits:

• It helps improve relations with existing customers which can lead to:

  ◦ Increased sales

  ◦ Identification of customer needs

  ◦ Cross-selling of products

• It results in better marketing of one's products or services

• It enhances customer satisfaction and retention

• It improves profitability by identifying and focusing on the most profitable customers

8.3.4 What is Networking?

In business, networking means leveraging your business and personal connections in order to bring in a regular supply of new business. This marketing method is effective as well as low cost. It is a great way to develop sales opportunities and contacts. Networking can be based on referrals and introductions, or can take place via phone, email, and social and business networking websites.

8.3.5 The Need for Networking

Networking is an essential personal skill for business people, but it is even more important for entrepreneurs. The process of networking has its roots in relationship building. Networking results in greater communication and a stronger presence in the entrepreneurial ecosystem. This helps build strong relationships with other entrepreneurs.

Business networking events held across the globe play a huge role in connecting like-minded entrepreneurs who share the same fundamental beliefs in communication, exchanging ideas and converting ideas into realities. Such networking events also play a crucial role in connecting entrepreneurs with potential investors. Entrepreneurs may have vastly different experiences and backgrounds but they all have a common goal in mind – they all seek connection, inspiration, advice, opportunities and mentors. Networking offers them a platform to do just that.

Benefits of Networking

Networking offers numerous benefits for entrepreneurs. Some of the major benefits are:

- Getting high quality leads
- Increased business opportunities
- Good source of relevant connections
- Advice from like-minded entrepreneurs
- Gaining visibility and raising your profile
- Meeting positive and enthusiastic people
- Increased self-confidence
- Satisfaction from helping others
- Building strong and lasting friendships

Tips

- Use social media interactions to identify needs and gather feedback.
- When networking, ask open-ended questions rather than yes/no type questions.

8.6.4 Business Plan: Why Set Goals

Setting goals is important because it gives you long-term vision and short-term motivation. Goals can be short term, medium term and long term.

Short-Term Goals

• These are specific goals for the immediate future.

Example: Repairing a machine that has failed.

Medium-Term Goals

• These goals are built on your short term goals.

• They do not need to be as specific as your short term goals.

Example: Arranging for a service contract to ensure that your machines don't fail again.

Long-Term Goals

These goals require time and planning.

They usually take a year or more to achieve.

Example: Planning your expenses so you can buy new machinery

Why Create a Business Plan

A business plan is a tool for understanding how your business is put together. It can be used to monitor progress, foster accountable and control the fate of the business. It usually offers a 3-5 year projection and outlines the plan that the company intends to follow to grow its revenues. A business plan is also a very important tool for getting the interest of key employees or future investors.

A business plan typically comprises of eight elements.

Elements of a Business Plan

Executive Summary

The executive summary follows the title page. The summary should clearly state your desires as the business owner in a short and businesslike way. It is an overview of your business and your plans. Ideally this should not be more than 1-2 pages.

Your Executive Summary should include:

• The Mission Statement: Explain what your business is all about.

   Example: Nike's Mission Statement

   Nike's mission statement is "To bring inspiration and innovation to every athlete in the world."

• Company Information: Provide information like when your business was formed, the names and roles of the founders, the number of employees, your business location(s) etc.

• Growth Highlights: Mention examples of company growth. Use graphs and charts where possible.

• Your Products/Services: Describe the products or services provided.

• Financial Information: Provide details on current bank and investors.

• Summarize future plans: Describe where you see your business in the future.

Business Description

The second section of your business plan needs to provide a detailed review of the different elements of your business. This will help potential investors to correctly understand your business goal and the uniqueness of your offering.

Your Business Description should include:

• A description of the nature of your business

• The market needs that you are aiming to satisfy

• The ways in which your products and services meet these needs

• The specific consumers and organizations that you intend to serve

• Your specific competitive advantages

Market Analysis

The market analysis section usually follows the business description. The aim of this section is to showcase your industry and market knowledge. This is also the section where you should lay down your research findings and conclusions.

Your Market Analysis should include:

• Your industry description and outlook

• Information on your target market

• The needs and demographics of your target audience

• The size of your target market

• The amount of market share you want to capture

• Your pricing structure

• Your competitive analysis

• Any regulatory requirements

Organization & Management

This section should come immediately after the Market Analysis.

Your Organization & Management section should include:

• Your company's organizational structure

• Details of your company's ownership

• Details of your management team

• Qualifications of your board of directors

• Detailed descriptions of each division/department and its function

• The salary and benefits package that you offer your people

• The incentives that you offer

Service or Product Line

The next section is the service or product line section. This is where you describe your service or product, and stress on their benefits to potential and current customers. Explain in detail why your product of choice will fulfill the needs of your target audience.

Your Service or Product Line section should include:

- A description of your product/service

- A description of your product or service's life cycle

- A list of any copyright or patent filings

- A description of any R&D activities that you are involved in or planning

Marketing & Sales

Once the Service or Product Line section of your plan has been completed, you should start on the description of the marketing and sales management strategy for your business.

Your Marketing section should include the following strategies:

- **Market penetration strategy** : This strategy focuses on selling your existing products or services in existing markets, in order to increase your market share.

- **Growth strategy**: This strategy focuses on increasing the amount of market share, even if it reduces earnings in the short-term.

- **Channels of distribution strategy** : These can be wholesalers, retailers, distributers and even the internet.

- **Communication strategy**: These can be written strategies (e-mail, text, chat), oral strategies (phone calls, video chats, face-to-face conversations), non-verbal strategies (body language, facial expressions, tone of voice) and visual strategies (signs, webpages, illustrations).

Your Sales section should include the following information:

- **A salesforce strategy**: This strategy focuses on increasing the revenue of the enterprise.

- **A breakdown of your sales activities**: This means detailing out how you intend to sell your products or services – will you sell it offline or online, how many units do you intend to sell, what price do you plan to sell each unit at, etc.

Funding Request

This section is specifically for those who require funding for their venture.

The Funding Request section should include the following information:

- How much funding you currently require.

- How much funding you will require over the next five years. This will depend on your long-term goals.

- The type of funding you want and how you plan to use it. Do you want funding that can be used only for a specific purpose, or funding that can be used for any kind of requirement?

- Strategic plans for the future. This will involve detailing out your long-term plans – what these plans are and how much money you will require to put these plans in motions.

- Historical and prospective financial information. This can be done by creating and maintaining all your financial records, right from the moment your enterprise started, to the present day. Documents required for this are your balance sheet which contains details of your company's assets and liabilities, your income statement which lists your company's revenues, expenses and net income for the year, your tax returns (usually for the last three years) and your cash flow budget which lists the cash that came in, the cash that went out and states whether you had a cash deficit (negative balance) or surplus (positive balance) at the end of each month.

Financial Planning

Before you begin building your enterprise, you need to plan your finances. Take a look at the steps for financial planning:

Step 1 : Create a financial plan. This should include your goals, strategies and timelines for accomplishing these goals.

Step 2: Organize all your important financial documents. Maintain a file to hold your investment details, bank statements, tax papers, credit card bills, insurance papers and any other financial records.

Step 3: Calculate your net worth. This means figure out what you own (assets like your house, bank accounts, investments etc.), and then subtract what you owe (liabilities like loans, pending credit card amounts etc.) the amount you are left with is your net worth.

Step 4: Make a spending plan. This means write down in detail where your money will come from, and where it will go.

Step 5: Build an emergency fund. A good emergency fund contains enough money to cover at least 6 months' worth of expenses.

Step 6: Set up your insurance. Insurance provides long term financial security and protects you against risk.

Risk Management

As an entrepreneur, it is critical that you evaluate the risks involved with the type of enterprise that you want to start, before you begin setting up your company. Once you have identified potential risks, you can take steps to reduce them. Some ways to manage risks are:

• Research similar business and find out about their risks and how they were minimized.

• Evaluate current market trends and find out if similar products or services that launched a while ago are still being well received by the public.

• Think about whether you really have the required expertise to launch your product or service.

• Examine your finances and see if you have enough income to start your enterprise.

• Be aware of the current state of the economy, consider how the economy may change over time, and think about how your enterprise will be affected by any of those changes.

• Create a detailed business plan.

Tips

• Ensure all the important elements are covered in your plan.

• Scrutinize the numbers thoroughly.

• Be concise and realistic.

• Be conservative in your approach and your projections.

• Use visuals like charts, graphs and images wherever possible.

8.6.5 Procedure and Formalities for Bank Finance: The Need for Bank Finance

For entrepreneurs, one of the most difficult challenges faced involves securing funds for startups. With numerous funding options available, entrepreneurs need to take a close look at which funding methodology works best for them. In India, banks are one of the largest funders of startups, offering funding to thousands of startups every year.

What Information Should Entrepreneurs Offer Banks for Funding?

When approaching a bank, entrepreneurs must have a clear idea of the different criteria that banks use to screen, rate and process loan applications. Entrepreneurs must also be aware of the importance of providing banks with accurate and correct information. It is now easier than ever for financial institutions to track any default behaviour of loan applicants. Entrepreneurs looking for funding from banks must provide banks with information relating to their general credentials, financial situation and guarantees or collaterals that can be offered.

General Credentials

This is where you, as an entrepreneur, provide the bank with background information on yourself. Such information includes:

- Letter(s) of Introduction: This letter should be written by a respected business person who knows you well enough to introduce you. The aim of this letter is set across your achievements and vouch for your character and integrity.

- Your Profile: This is basically your resume. You need to give the bank a good idea of your educational achievements, professional training, qualifications, employment record and achievements.

- Business Brochure: A business brochure typically provides information on company products, clients, how long the business has been running for etc.

- Bank and Other References: If you have an account with another bank, providing those bank references is a good idea.

- Proof of Company Ownership or Registration: In some cases, you may need to provide the bank with proof of company ownership and registration. A list of assets and liabilities may also be required.

Financial Situation

Banks will expect current financial information on your enterprise. The standard financial reports you should be prepared with are:

- Balance Sheet
- Cash-Flow Statement
- Business Plan

- Profit-and-Loss Account
- Projected Sales and Revenues
- Feasibility Study

Guarantees or Collaterals

Usually banks will refuse to grant you a loan without security. You can offer assets which the bank can seize and sell off if you do not repay the loan. Fixed assets like machinery, equipment, vehicles etc. are also considered to be security for loans.

The Lending Criteria of Banks

Your request for funding will have a higher chance of success if you can satisfy the following lending criteria:

- Good cash flow

- Adequate shareholders' funds

- Adequate security

- Experience in business

- Good reputation

The Procedure

To apply for funding the following procedure will need to be followed.

1. Submit your application form and all other required documents to the bank.

2. The bank will carefully assess your credit worthiness and assign ratings by analyzing your business information with respect to parameters like management, financial, operational and industry information as well as past loan performance.

3. The bank will make a decision as to whether or not you should be given funding.

Tips

- Get advice on funding options from experienced bankers.

- Be cautious and avoid borrowing more than you need, for longer than you need, at an interest rate that is higher than you are comfortable with.

8.6.6 Enterprise Management - An Overview:
How to Manage Your Enterprise

To manage your enterprise effectively you need to look at many different aspects, right from managing the day-to-day activities to figuring out how to handle a large scale event. Let's take a look at some simple steps to manage your company effectively.

Step 1: Use your leadership skills and ask for advice when required.

Let's take the example of Ramu, an entrepreneur who has recently started his own enterprise. Ramu has good leadership skills – he is honest, communicates well, knows how to delegate work etc. These leadership skills definitely help Ramu in the management of his enterprise. However, sometimes Ramu comes across situations that he is unsure how to handle. What should Ramu do in this case? One solution is for him to find a more experienced manager who is willing to mentor him. Another solution is for Ramu to use his networking skills so that he can connect with managers from other organizations, who can give him advice on how to handle such situations.

Step 2: Divide your work amongst others – realize that you cannot handle everything yourself.

Even the most skilled manager in the world will not be able to manage every single task that an enterprise will demand of him. A smart manager needs to realize that the key to managing his enterprise lies in his dividing all his work between those around him. This is known as delegation. However, delegating is not enough. A manager must delegate effectively if he wants to see results. This is important because delegating, when done incorrectly, can result in you creating even more work for yourself. To delegate effectively, you can start by making two lists. One list should contain the things that you know you need to handle yourself. The second list should contain the things that you are confident can be given to others to manage and handle. Besides incorrect delegation, another issue that may arise is over-delegation. This means giving away too many of your tasks to others. The problem with this is, the more tasks you delegate, the more time you will spend tracking and monitoring the work progress of those you have handed the tasks to. This will leave you with very little time to finish your own work.

Step 3: Hire the right people for the job.

Hiring the right people goes a long way towards effectively managing your enterprise. To hire the best people suited for the job, you need to be very careful with your interview process. You should ask potential candidates the right questions and evaluate their answers carefully. Carrying out background checks is always a good practice. Running a credit check is also a good idea, especially if the people you are planning to hire will be handling your money. Create a detailed job description for each role that you want filled and ensure that all candidates have a clear and correct understanding of the job description. You should also have an employee manual in place, where you

put down every expectation that you have from your employees. All these actions will help ensure that the right people are approached for running your enterprise.

Step 4: Motivate your employees and train them well.

Your enterprise can only be managed effectively if your employees are motivated to work hard for your enterprise. Part of being motivated involves your employees believing in the vision and mission of your enterprise and genuinely wanting to make efforts towards pursuing the same. You can motivate your employees with recognition, bonuses and rewards for achievements. You can also motivate them by telling them about how their efforts have led to the company's success. This will help them feel pride and give them a sense of responsibility that will increase their motivation.

Besides motivating your people, your employees should be constantly trained in new practices and technologies. Remember, training is not a one-time effort. It is a consistent effort that needs to be carried out regularly.

Step 5: Train your people to handle your customers well.

Your employees need to be well-versed in the art of customer management. This means they should be able to understand what their customers want, and also know how to satisfy their needs. For them to truly understand this, they need to see how you deal effectively with customers. This is called leading by example. Show them how you sincerely listen to your clients and the efforts that you put into understand their requirements. Let them listen to the type of questions that you ask your clients so they understand which questions are appropriate.

Step 6: Market your enterprise effectively.

Use all your skills and the skills of your employees to market your enterprise in an effective manner. You can also hire a marketing agency if you feel you need help in this area.

Now that you know what is required to run your enterprise effectively, put these steps into play, and see how much easier managing your enterprise becomes!

Tips

- Get advice on funding options from experienced bankers.
- Be cautious and avoid borrowing more than you need, for longer than you need, at an interest rate that is higher than you are comfortable with.

8.6.7. 20 Questions to Ask Yourself Before Considering Entrepreneurship

1. Why am I starting a business?
2. What problem am I solving?
3. Have others attempted to solve this problem before? Did they succeed or fail?
4. Do I have a mentor[1] or industry expert that I can call on?
5. Who is my ideal customer[2]?
6. Who are my competitors[3]?
7. What makes my business idea different from other business ideas?
8. What are the key features of my product or service?
9. Have I done a SWOT[4] analysis?
10. What is the size of the market that will buy my product or service?
11. What would it take to build a minimum viable product[5] to test the market?
12. How much money do I need to get started?
13. Will I need to get a loan?
14. How soon will my products or services be available?
15. When will I break even[6] or make a profit?
16. How will those who invest in my idea make a profit?
17. How should I set up the legal structure[7] of my business?
18. What taxes[8] will I need to pay?
19. What kind of insurance[9] will I need?
20. Have I reached out to potential customers for feedback?

Tips

- It is very important to validate your business ideas before you invest significant time, money and resources into it.
- The more questions you ask yourself, the more prepared you will be to handle to highs and lows of starting an enterprise.

Footnotes:

1. A mentor is a trusted and experienced person who is willing to coach and guide you.
2. A customer is someone who buys goods and/or services.
3. A competitor is a person or company that sells products and/or services similar to your products and/or services.
4. SWOT stands for Strengths, Weaknesses, Opportunities and Threats. To conduct a SWOT analysis of your company, you need to list down all the strengths and weaknesses of your company, the opportunities that are present for your company and the threats faced by your company.

5. A minimum viable product is a product that has the fewest possible features, that can be sold to customers, for the purpose of getting feedback from customers on the product.

6. A company is said to break even when the profits of the company are equal to the costs.

7. The legal structure could be a sole proprietorship, partnership or limited liability partnership.

8. There are two types of taxes – direct taxes payable by a person or a company, or indirect taxes charged on goods and/or services.

9. There are two types of insurance – life insurance and general insurance. Life insurance covers human life while general insurance covers assets like animals, goods, cars etc.

Notes

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GOVERNMENT OF INDIA
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Price: