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APPAREL MADE-UPS HOME FURNISHING
SECTOR SKILL COUNCIL

Participant Handbook

Sector
Apparel, Made-ups and Home Furnishing

Sub-Sector
Apparel

Occupation
Self Employed Tailor

Reference ID: **AMH/Q1947, Version 1.0**
NSQF Level 4

Self Employed Tailor

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"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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Certificate
COMPLIANCE TO
QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS
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About this book

This Participant Handbook is designed to enable training for the specific Qualification Pack(QP). Each National Occupational (NOS) is covered across Unit/s.

Key Learning Objectives for the specific NOS mark the beginning of the Unit/s for that NOS.

- Drafting and cutting the fabric
- Carry out the process of sewing for dress materials and common household items of textiles
- Carry out inspections and alterations to adjust corrections for fittings
- Maintain health, safety and security in the tailoring shop
- Maintain work area, tools and machines
- Comply with industry, regulatory and organizational requirements

Symbols used in the book have been listed below.

Symbols Used

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Table of Content

New Employability Skills Module is available at the following link: https://eskillindia.org/Home/handbook/NewEmployability

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1. Orientation and Introduction

Unit 1.1 - Apparel Industry

Unit 1.2 - Role and Responsibilities of a Tailor

Key Learning Outcomes 

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

1. Know who is a Tailor.
2. Understand the roles and responsibilities of a Tailor.

UNIT 1.1: Apparel Industry

Unit Objectives

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

1. Familiarize with the Apparel Sector

1.1.1 Apparel Sector – Industry Overview

Indian Textile and Clothing (Apparel) industry is the second largest manufacturer in the world. The Indian textiles and clothing sector is expected to grow at 10.01 percent in the next 10 years from the current value of INR3.92 lakh crores in 2012–13 to INR10.54 lakh crores in 2021–22. Of these, the garments sector is estimated to grow at an average rate of 15.44 percent over the years, thereby accounting for about 70 percent of the total production The demand for domestic consumption for home textiles and garments is expected to increase rapidly . In fact, the garments sub-sector alone is estimated to increase by seven times from INR 51400 crores in 2012–13 to INR3.70 lakh crores in 2021–22

The Indian textile sub-sector has traditionally been contributing significantly to the economy and manpower as well as to the structural changes in the manufacturing sector. As of 2012, the sector contributed 4 percent of the GDP, 32 percent of the manufacturing sector and 9 percent of total exports The sector's output is expected to grow at an annual average rate of 10 percent in the next 10 years, thereby increasing its worth to INR 10.5 lakh crores in 2022. Several factors that would contribute to the growth would include:

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

Ready Made Garments

The ready-made garments section has grown rapidly in the last few years. Both exports and domestic demands shall drive sector growth in future.

The ready-made garments segment comprises men's, women's and kid's clothing, which may be used for either private (home/office wear) or commercial (uniforms for school, waiters and flight crew) purposes.

- Men's wear is the biggest segment in the ready-made garment segment, comprising about 43 percent of its share in the total revenue generated. This is followed by women's wear, with a share of 38 percent; 10

percent share of boys wear and 9 percent for girls wear in the total revenue generated by the ready-made garment segment.

- Changing lifestyles and consumption patterns are expected to drive the sector's supply of causal wear with an 11 percent growth, which would drive demand for workforce with specialised skills in western formals design, blended fabrics and increased application work on clothes.

Actual and Projected size of Indian Textile Industry

In 2011 global trade in textiles and apparel was around US$ 705 billion. This was approximately 4% of the total global trade of all commodities estimated at ~ US$ 15 trillion. During the period 2000 to 2010 the textile and apparel trade has grown at a modest CAGR of 6.4% per annum. Further, the Global Textile and Apparel, or T&A, trade is expected to grow to USD 1 trillion by 2020.

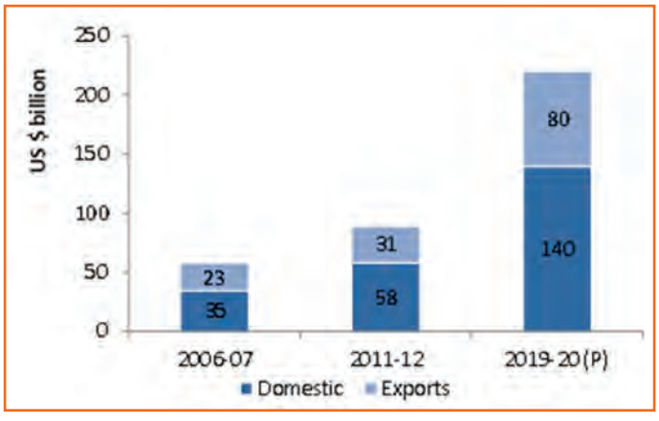

Fig 1.1.1: Major Textile Exporters to the World (% share)

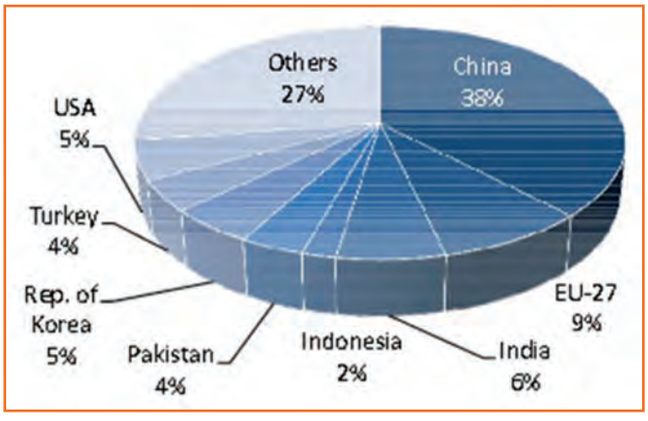

Fig 1.1.2: Major Textiles and Clothing Regions in India

Source: Office of Textile Commissioner and IMaCS Analysis

- **Gujarat and Maharashtra:** Most large companies across all sectors of the value chain, including spinning, weaving, home textiles and garments, are located here. Key players include Aravind Mills, Raymond, Welspun, Bombay Dyeing, Alok, Century Textiles.
- **Karnataka and Kerala:** Bangalore and Mysore have a few garment firms. Some major garment exporters include Gokaldas Exports and Shahi Exports.
- **Tamil Nadu:** Major cities that serve as textile hubs are Tirupur, Coimbatore, Madurai and Karur; known for apparels, spinning mills, silk and home textile units, respectively. Key players include Loyal Textiles, KG Denim, Asian Fabric. Tamil Nadu accounts for the largest textiles and clothing production of INR 761820 crores, which also employs the largest number of workers (2.63 million) in textile factories. This state is followed by Gujarat, which has an annual textile production valued at INR 49165 crores.
- **There are more than 70 textiles and clothing clusters in India** accounting for about 80 percent of the total production. There are 39 power loom clusters and 13 ready-made garment clusters in India.
- **Bhiwandi and Malegaon** are the two largest power loom clusters. Major ready-made garments clusters are located in Delhi, Mumbai, Gurgaon, Nagpur, Madurai and Salem, with annual turnover of more than INR 1000 crores since 2003. The state of Maharashtra has 10 textile clusters. Other major states in terms of the number clusters are Tamil Nadu, Andhra Pradesh, Karnataka, Kerala and Uttar Pradesh (seven clusters each).

Employment Scenario in the Sector

It also provides employment to approximately 35 million persons directly & approximately 55 million persons indirectly. India is among the very few countries which have presence across the entire supply chain, from natural and synthetic fibres right up to finished goods manufacturing. It has presence in organised mill sector as well as

decentralised sectors like handloom, power loom, silk, etc.

Currently, 15.23 million people are employed in the textile sub-sector across yarn and fabric, home textiles, technical textiles and readymade garments. Fifty-one percent of the total workforce is engaged in the manufacturing of readymade garments, followed by yarn and fabrics with 26 percent. Human resource requirement in the sector is expected to reach.

22.34 million by 2022 translating into 6.31 million additional employment opportunities during the period 2013-22.

Sub Sector	Employment in Millions	
	2017	2022
Spinning Weaving and Finishing of Textiles	3.14	3.18
Manufacture of Other Textiles	10.64	13.78
Manufacture of Wearing Apparel	4.28	4.58
Overall	18.06	22.34

Fig 1.1.3: Sub Sectors in Apparel Industry

1.1.2 Made-ups and Home Furnishings

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

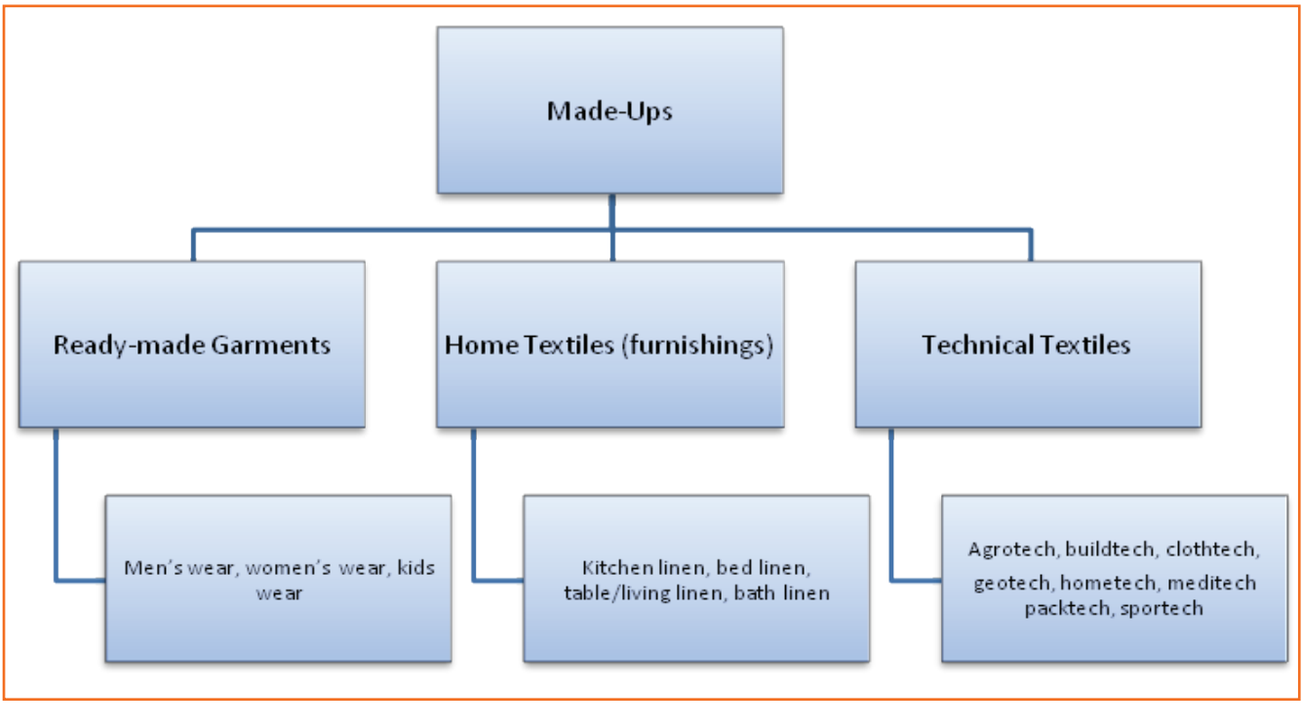

Fig 1.1.4: Made-ups and Home Furnishing Sub-sector

Indian is among one of the biggest exporters in Apparel and Made-ups industry. In Home Textiles India is second only to China in global exports, whereas in apparels, India is among the top 10.

Product	Total World Export	Major Contributor			India's Contribution		Other Competing Countries
		Country	Share & Value	Ranks	Share & Value	Ranks	
Apparel	193400159	China	6 1 2 2 4 3 6 0 (32.45%)	1	7 4 2 9 9 7 5 (3.8%)	7	Itely, Bangladesh, HK, Vietnam
H o m e Textiles	55921991	China	2 4 0 1 5 8 5 3 (42094%)	1	3 9 7 3 0 4 2 (7.10%)	2	

*Fig 1.1.5: Textile Exports by Major Countries and India ('000 USD) * Source NSDC Skill Gap Study – Textile & Clothing*

As evident from the Figs above, India is fast becoming one of the leading global players in the Home Furnishings/Textile. Home Furnishings industry offers wide varieties of products like bedspreads, furnishing fabrics, curtains, rugs, cushion covers etc. Indian Home Furnishings Market is forecasted to increase at an annual growth rate (CAGR) of 8 percent over next five years. The industry will reach a value of approximately US $5.29 billion by 2018. The Indian Home Furnishing industry provides a unique blend of modern technology and ethnic techniques to bring out products that are one of the best in the world. The increase in the spending power of the Indian working class is also expected to contribute in the growth of domestic consumption of made-ups and home furnishings industry

Fig 1.1.6: Home Furnishing

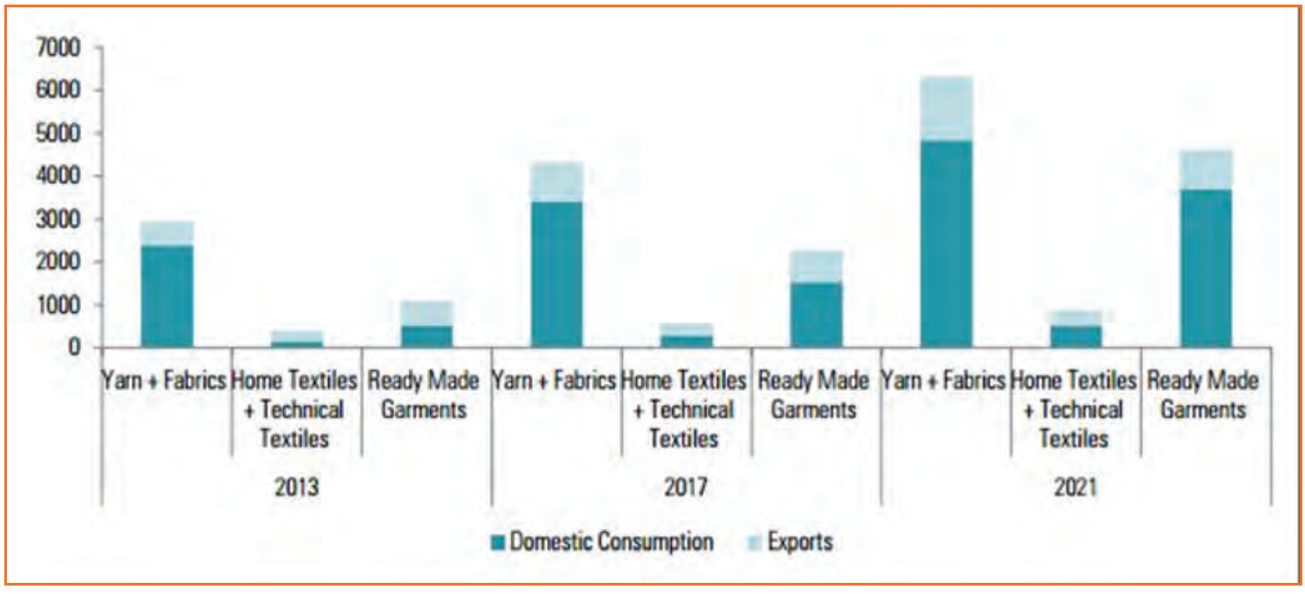

*Fig 1.1.7: Estimated Domestic Consumption of Indian Textile Production (in INR '000) * Source NSDC Skill Gap Study – Textile & Clothing*

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

Fig 1.1.8: Apparel Made-ups

Exercise

1. When was sewing machine invented?
   a) 20th century
   b) 19th century
   c) 18th century
   d) 17th century
2. As of 2012, the Indian textile sub-sector contributed ____ percent of the GDP, _____ percent of the manufacturing sector and _____ percent of total exports.
   a) 4,32,9
   b) 32,4,9
   c) 4,32,8
   d) 4,33,9
3. Explain the categories of Made-ups sub-sector with the help of a flow chart.

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UNIT 1.2: Role and Responsibilities of a Tailor

Unit Objectives

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

1. Know who is a Tailor.
2. Understand the roles and responsibilities of a Tailor.

1.2.1 Self Employed Tailor - Job Description

Self Employed Tailor is a role of a self employed professional tailor who can sew and repair garments, made ups and home-furnishing articles and manage livelihood out of it.

A Tailor, also called a Stitcher is an important job-role associated with Apparel sector and gives livelihood to a number of people who do not have a job. The primary responsibility is to stitch/ sew fabric, fur, or synthetic materials to produce apparels.

Fig 1.2.1: Tailors on the Job

Attributes: The tailor should have following attributes:

- Good eyesight
- Eye-hand-leg coordination
- Motor skills
- Clear vision and free from colour vision.

She should have good interpersonal skills, good listener and business acumen.

1.2.1.1 Job Overview

Tailors operate and tend sewing machines in order to perform garment sewing operations. This includes joining, reinforcing and decorating garments or parts of garments. Tailors handle work on a large scale as they are required to operate and tend to industrial machineries. They mount attachments such as needles and pattern blades and adjust machines according to the specifications provided to them.

Tailors also adjust machine controls and regulate stitching speeds for every sewing project that they work on. It is important for tailors to possess in depth knowledge of sewing machinery and the garments industry. They also need to have sound hand-eye coordination and be able to cope with moderate physical effort.

1.2.1.2 Tailor's Duties and Responsibilities

- Refer to orders for sewing garments and select appropriate materials.
- Ensure that all materials and auxiliary supplies are available prior to beginning work.
- Start sewing machinery at the beginning of a shift and test it for proper functionality.
- Address any discrepancies or problems faced during the testing period.
- Draw threads through needles and adjust machine functions to meet the requirements of the sewing project.
- Position materials under needles to sew them together or make patterns.
- Replace and rethread needles for a subsequent project or in case of the existing one needing more thread.
- Sew missing stitches or replacement parts in accordance to repair instructions provided.
- Observe operations to detect any faults or defects in stitching.
- Notify supervisors of any problems or discrepancies during the sewing process.
- Attach button, grips, hooks and fasteners to finished garments.
- Attach elastic or tape to garments as specified in the work order.
- Ensure that the finished product conforms to the design and merchandising instructions provided in the work order.
- Ensure that excess material or threads are cut away from the finished product.
- Trim finished garments using scissors and cutters.
- Perform general and preventative maintenance tasks on sewing machines to ensure their longevity.
- Examine finished garments for compliance and ensure that appropriate tags are sewed on them.
- Count number of garments stitched during a shift and record this information in company provided logs.

Exercise

1. Which of the followings are the key attributes of a Self Employed Tailor:
   a) Motor Skills
   b) Good eyesight
   c) Vision
   d) All the above
2. What are the roles and responsibilities of a Self Employed Tailor?

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2. Drafting and Cutting the Fabric

AMH/N1947

Key Learning Outcomes 

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

1. Know and recognize the different types of material and tools used in stitching.
2. Understand the stitching terms.
3. Recognize the different types of fabric.
4. Recognize the trims and accessories
5. Understand the importance and use of trims and accessories
6. Understand the different size chart comparison tables
7. Know the different terms used in size charts
8. Know how to take measurements for different garments.
9. Understand different types of defects
10. Find and rectify the defects
11. Identify different types of faults

UNIT 2.1: Tools and Equipment Required for Tailoring

Unit Objectives

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

1. Know and recognize the different types of material and tools used in stitching.
2. Understand the stitching terms.

2.1.1 Basic List of Material and Tools Required for Stitching

There are various processes a tailor follows while stitching a garment. There are various tools which aid each of these processes. Types of tools are as:

1. Measuring tools
2. Cutting tools
3. Marking or drafting tools
4. Hand tools

Scissors: Scissor are utilized for cutting the fabric and has a handle which is aligned with the blade which helps you do the cutting steadily by keeping the scissors even.

Fig.2.1.1: Scissors

Fig.2.1.2: Rotary cutter

Rotary cutter: The rotary cutter is something which has a blade to cut easily and smoothly through fabric. It's very efficient to be used to all different kinds of projects, however it is especially good for quilting. All you require is a rubber cutting mat and a rotary ruler so that when you are using a rotary- cutter the surface of the Fig can be prevented from getting cut. Also, keeping a mat helps in cutting a fabric in straight.

Thread: Various sort of threads are available, they are available in rainbow colors, including clear ones. For most of the sewing machines all you need is a need a spool of thread. The cone shaped threads are also used however they are for different kind of machine called a serger.

Fig.2.1.3: Threads

Fig.2.1.4: Measuring tape

Measuring tape: Measuring tape used for sewing to make it softer than that used for construction projects so that it can be used to fit clothing to the body.

Needles: A sewing machine requires diverse needles than which are used for hand-sewing. Machine needles have a bigger, blunter tip where they fit into the machine. Various types of needles are used on various kinds of projects.

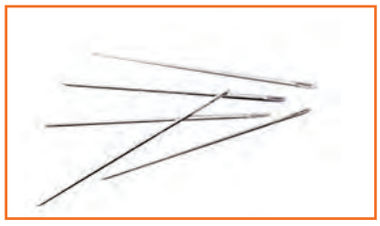

Fig.2.1.5: Needles

Fig.2.1.6: Fabric

Fabric: As different projects have different types of needle or thread requirements similarly as per the requirement different types of fabrics are also needed with different project for sewing.

Pins: Pins are used to hold fabric together where it's supposed to be sewn and to be adjusted as per the required fitting during alterations.

Pincushion: Pincushions are very useful in keeping the pins in order and in place, it is usually in apple's pumpkin's or tomato's shape.

Fig.2.1.7: Pins and Pincushion

Fig.2.1.8: Iron and Ironing Board

Iron and Ironing Board: An iron is used to press fabric, seams open and make darts. Your everyday iron is fine.

Seam ripper: The name says it all: It's used to rip seams. Especially comes in handy when you're a beginning sewer.

Fig.2.1.9: Seam ripper

Fig.2.1.10: Pinking Shears

Pinking Shears: cuts a zigzag edge and is used for finishing hem edges, seams, etc. It should not be used for cutting out a garment b'coz it will not give an accurate cut line of the fabric.

Fig.2.1.11: Cutting Fig

Cutting Fig: A flat board placed on a fig where the fabric is laid out and cut. The fabric can be pinned securely to the cutting board to prevent it from slipping.

Sewing Gauge: a 6 inch gauge with a movable indicator convenient for measuring short lengths.

Fig.2.1.12: Sewing Gauge

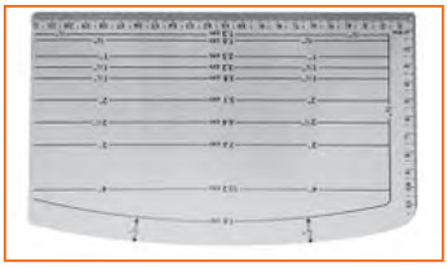

Fig.2.1.13: Hem Gauge

Hem Gauge: a measuring device marked with various depths and hemline folds. It is practical when hemming straight on grain edges.

Yardstick/Meterstick: is use to measure fabric and to check grain line. It can be used in marking a long straight lines and in measuring hem lengths.

Fig.2.1.14: Yardstick/Meterstick

Fig.2.1.15: Hip Curve

Hip Curve: The Hip Curve is used in connecting or shaping slightly curve points.It has a measure of inches at the front and centimeters at the back part.

L-square: It is useful in constructing perpendicular lines with divisional parts located in longer and shorter arms.

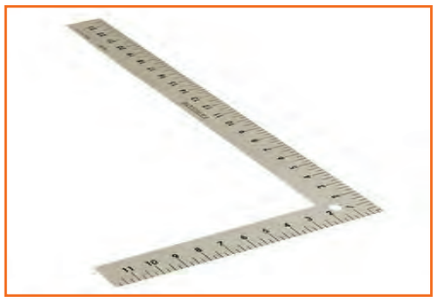

Fig.2.1.16: L-square

Fig.2.1.17: Tailor's Chalk

Tailor's Chalk: A thin piece of hard chalk used in tailoring for making temporary alteration marks on clothing.

Novelty Yarns: Novelty yarns include a wide variety of yarns made with unusual features, structure or fiber composition such as slubs, inclusions, metallic or synthetic fibers, laddering and varying thickness introduced during production.

Fig.2.1.18: Novelty Yarns

Fig.2.1.19: Masking Tape

Masking tape: Also known as sticky tape, is a type of pressure-sensitive tape made of a thin and easy-to-tear paper, and an easily released pressure-sensitive adhesive. It is available in a variety of widths. It is used mainly in painting, to mask off areas that should not be painted.

French Curve: A French curve is a template usually made from metal, wood or plastic composed of many different curves. It is used in manual drafting to draw smooth curves of varying radii. The shapes are segments of the Euler spiral or clothoid curve.

Fig.2.1.20: French Curve

Fig.2.1.21: Hand Needle

Hand Needle: Hand sewing needles are available in varying sizes with varying points. They guide the thread through fabric when you are hand sewing.

Punch Needle: A Punch needle is an easy to use tool that opens up a delightful world of dimensional needle art. It quickly and easily produces one-level or exciting three dimensional designs.

Fig.2.1.22: Punch Needle

Fig.2.1.23: Frame, Round

Frame, round: Used for creating designs through hand stitch.

Pattern making paper: Used for practising cutting and creating patterns.

Fig.2.1.24: Pattern making paper

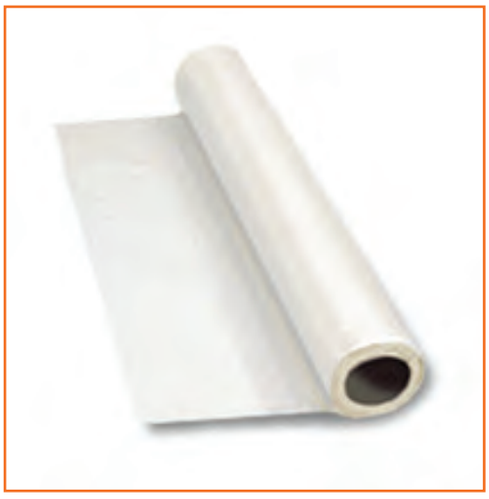

Fig.2.1.25: Tracing paper

Tracing paper: Tracing paper is paper made to have low opacity used for creating designs.

Hand held thread trimmer: Used for thread trimming.

Fig.2.1.26: Hand held thread trimmer

Fig.2.1.27: Bent neck, metallic Tweezer

Bent neck, metallic Tweezer: Tweezers are small tools used for picking up objects too small to be easily handled with the human hands

Pencils (HB, 2B, 4B): The graphite grading scales used to measure the hardness of a pencil's graphite core. The higher the number the harder the writing core and the lighter the mark left on the paper.

Fig.2.1.28: Pencils (HB, 2B, 4B)

Fig.2.1.29: Pick glass

Pick glass: Handy Reed Pick glass helps in checking the reed pick of the fabric. It also helps in checking the weaving, dyeing & printing defects in the fabric if any is made.

Needle threader: A needle threader is a device for helping to put thread through the eye of a needle. Many kinds exist, though a common type combines a short length of fine wire bent into a diamond shape, with one corner held by a piece of tinplate or plastic.

Fig.2.1.30: Needle threader

Fig.2.1.31: Nonwoven Non-fusible Backing Paper

Nonwoven Non-fusible Backing Paper: It is made of man-made fibers bonded together to form a paper-like sheet. SFig nonwovens (no stretch) are best for medium- to heavyweight fabrics with a slight to very crisp hand. Nonwovens with a crosswise or all-direction stretch can be used for soft to moderate shaping. Fusibles today are fast, secure and easy to use.

Hand embroidery book: Used for learning hand embroidery.

Fig.2.1.32: Hand embroidery book

Fig.2.1.33: Fabric Glue

Fabric Glue: It provide temporary or permanent ways to attach fabric without sewing.

Surface ornamentation material (Beads, Sequins): Decorative material used for decoration of clothes.

Fig.2.1.34: Beads

Fig.2.1.35: Sequins

Buttons: are attached to garment by hand stitching or machine stitching

Fig.2.1.36: Buttons

Fig.2.1.37: Hooks

Hooks: are attached to garment with the help of needle and thread

Trims: Trim or trimming in clothing and home decorating is applied ornament, such as gimp, ribbon, ruffles.

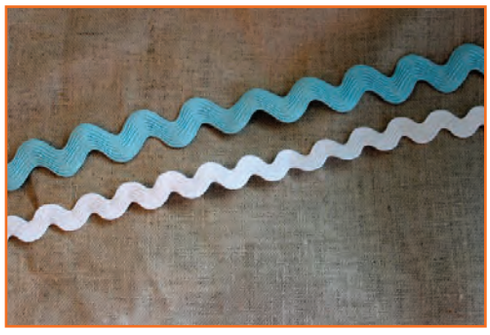

Fig.2.1.38: Trims

Fig.2.1.39: Lace

Lace: A fine open fabric of cotton or silk, made by looping, twisting, or knitting thread in patterns and used especially for trimming garments.

Zipper: Attached in lower garments.

Fig.2.1.40: Zipper

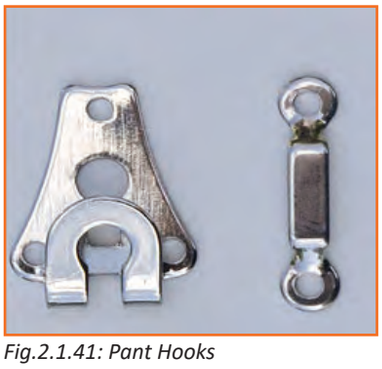

Fig.2.1.41: Pant Hooks

Pant hooks: Attached in lower garments.

Sewing Mannequin: it is a type of a doll used by tailors or tailors to display or fit clothing.

Fig.2.1.42: Sewing Mannequin

Fig.2.1.43: Greyscale

Greyscale: It is used for maching colors in the sewed garment against the specifications.

Thimble: It is a small hard cup warn for protection on the finger that pushes the needle in sewing

Fig.2.1.44: Thimble

2.1.2 Understanding Tailoring Terms

- **LINING:** An extra cloth attached under the main garment is known as lining. Used mainly under transparent materials, lining gives the garment extra strength as well as finishing.
- **INTER LINING:** An extra layer put in between the main garment and the lining is known as inter lining.
- **SEAM ALLOWANCE:** The margin kept for stitching the garment is known as seam allowance. This means thatafter drafting the neck, armhole, waist and chest, about 4cm margin is kept and then another line drawn which is the stitching guide – this is known as the seam allowance.
- **SELVEDGE:** The finished edge of the cloth which is a self-finished edge at the time of weaving is known as selvedge.
- **PANELS:** Strips of cloth joined in a garment for fashion or to increase the width are known as panels.
- **SEAM:** Seams are the basis of a garment. It is used to attach two pieces of cloth. After cutting the various parts of the garment from a piece of cloth it is these seams either sewn by hand or with the help of a machine which give those various pieces of cloth the shape of a garment.
- **DART:** Without spoiling the shape of the garment, and in order to give a perfect fit, a small amount of cloth is folded and stitched with a single strand till the other end. This process is called putting a dart. It is used at

various places on the garment like bust dart, waist dart etc. to give fitting or fullness to shape.

- **PLEATS:** A fold taken from the inside of a garment and held in place by a stitch is known as a pleat. These are of many types like straight pleats, inverted pleats etc. These are used either as a design element or to provide fullness or fitting.
- **TUCKS:** Folding the cloth a little from the right side and stitching in a straight line is known as putting a tuck. This is also used to enhance the beauty of the garment or to provide a better fit. If these stitched lines appear of the thickness of a pin then they are known as pin tucks.

Exercise

1. _____ is available in a rainbow of colours, including clear
   a) Scissors
   b) Thread
   c) Pins
   d) Needles
2. An iron is used for pressing the fabric, making darts and opening seams.
   a) True
   b) False
3. _____ is a 6 inch gauge with a movable indicator convenient for measuring short lengths.
   a) Hem gauge
   b) Meterstick
   c) Sewing gauge
   d) Hip curve
4. Greyscale is used for matching colours in the sewed garment against the specifications.
   a) True
   b) False
5. What are the tailoring terms?

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6. What is tracing paper?

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UNIT 2.2: Types of Fabric

Unit Objectives

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

1. Recognize the different types of fabric.

2.2.1 Types of Fabric

Fabric can be classified into two types:

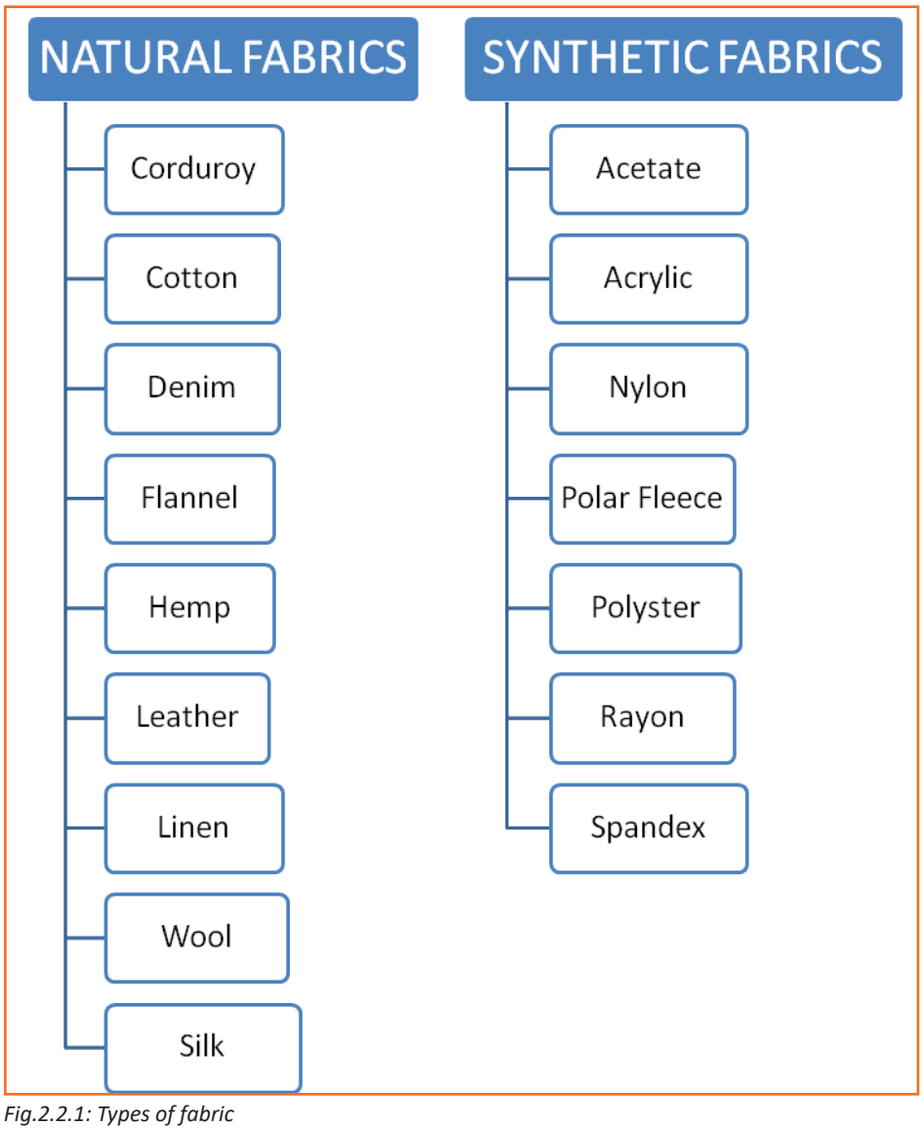

Fig.2.2.1: Types of fabric

2.2.2 Fabric Commonly used for Garment Sewing

Silk

Silk is a natural protein fibre. It is a delicate fabric and is very light weight and due to these features it has a free flowing and smooth drape. It has a slightly shimmery appearance. It is a difficult fabric to work with as it is very slippery. Its elasticity is very moderate to poor. Apparels made of silk have to be Dry cleaned.

Fig.2.2.2: Silk

Fig.2.2.3: Velvet

Velvet

Velvet is a type of woven tufted fabric. Good quality velvet is made of cotton or polyester. The most expensive velvet is made of silk and sold today as 'Silk Velvet'. Velvet has a smooth, soft and rich touch and often used in evening wear and also extensively used for upholstery. Apparels made of velvet have to be Dry cleaned.

Chiffon

Chiffon is a sheer fabric with a free flowing drape and crepe like structure. Chiffon is usually made of silk or polyester. It is very light and thin and these features make it a very challenging material to sew. Chiffon is a popular fabric for summer garments because of its light weight.

Fig.2.2.4: Chiffon

Fig.2.2.5: Satin

Satin

Satin has a sleek and glossy finish. It is made of silk, cotton and wool. It is well draping and is popularly used in dresses, bridal wear and bedding. Thicker wool satin is used for coats. It also makes a great lining fabric. Its slippery nature makes it very difficult to work with.

Corduroy

Corduroy is normally made from Cotton. It is very similar to Velvet. It is a thick fabric which is very warm and durable. It is normally used in making coats, trousers and winter wear. Corduroys are machine washable.

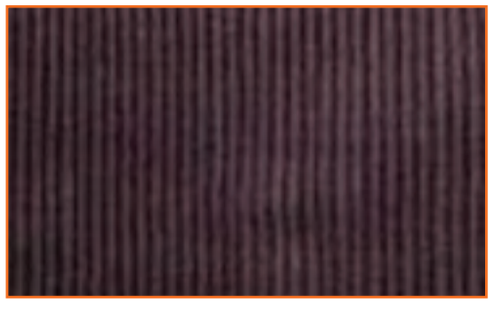

Fig.2.2.6: Corduroy

Linen

Linen is very popular in summers because it releases and absorbs perspiration easily. It is very soft, cool and comfortable. Linen wrinkles very easily and has to be ironed on high temperature to remove the creases. It has very little elasticity. Linen is most popularly used in household goods such as bedding, towels and table clothes.

Fig.2.2.7: Linen

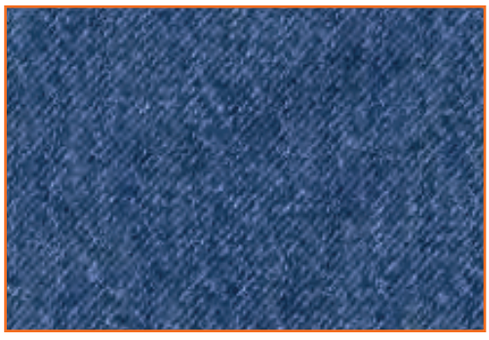

Fig.2.2.8: Denim

Denim

Denim is made from tightly woven cotton. It is a very heavy weight fabric with very little drape or stretch. Denim is very durable and that is why most commonly used in jeans. It is machine washable.

Polyester

It is a synthetic fabric. It is strong and durable but does not absorb heat, so it is not a very popular fabric for hot temperatures. It does not wrinkle and dries very easily.

Fig.2.2.9: Polyester

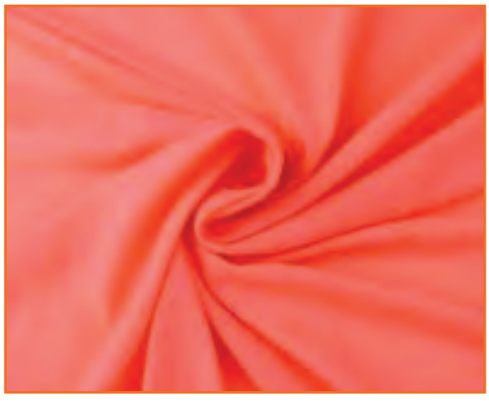

Fig.2.2.10: Rayon

Rayon

Rayon is a manufactured fibre made of cellulose. Like polyester, Rayon is also strong and durable but it wrinkles very easily. It is very soft and comfortable and drapes very well. Hand washing is best for washable rayon garments

Flannel

Flannel is made from wool, cotton or synthetic fibre. It is a soft and light weight fabric. Flannel maybe brushed to create extra softness. It is popularly used for shirts, pants and jackets suitable for colder temperatures

Fig.2.2.11: Flannel

Organza

It is made of either silk or polyester. It is a delicate and sheer fabric and very popularly used in evening wear and bridal apparel. The delicate nature of this fabric makes it very difficult to sew.

Fig.2.2.12: Organza

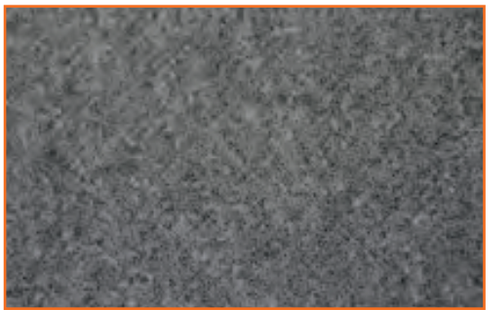

Fig.2.2.13: Wool

Wool

Wool is made from variety of animal coats. There are around 200 different types of wool. It absorbs and realises moisture quickly and is a very popular fabric used for cold weather garments. It is hardwearing and resists wear and tear.

Leather

Most commonly made of animal hide. Leather is very durable and absorbs and releases heat quickly so it is very popularly used in winters for jackets and skirts. It is also used in upholstery. Most leather garments require special care in storing and cleaning.

Fig.2.2.14: Leather

Exercise

1. _____ is a sheer fabric with a free flowing drape and crepe like structure.
   a) Velvet
   b) Chiffon
   c) Satin
   d) Silk
2. Corduroy is a thick fabric which is very warm and durable.
   a) True
   b) False
3. Denim is made from tightly woven cotton.
   a) True
   b) False
4. Why we use wool fabric?

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5. What is Organza fabric made of?

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UNIT 2.3: Trims and Accessories

Unit Objectives

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

1. Recognise the trims and accessories
2. Understand the importance and use of trims and accessories

2.3.1 Trims and Accessories

Trims and accessories are a considered as an important part of any garment. Apart from enhancing the look of the garment it also increases the usability of the garment.

Sewing Thread

The sewing thread holds the garment together. It is a specially designed yarn which passes through a sewing machine easily and makes the sewing process smother and easier.

Fig.2.3.1: Sewing Thread

Fig.2.3.2: Interlining

Interlining

It is fabric which is placed under the main fabric. It is used to enhance the look and retain the shape of the garment. Lining should be chosen carefully as it can influence the colour of the garment if it is different from the colour of the main fabric.

Lace

Is a delicate fabric which is made either of thread or yarn. It is used on garments for ornamental purpose.

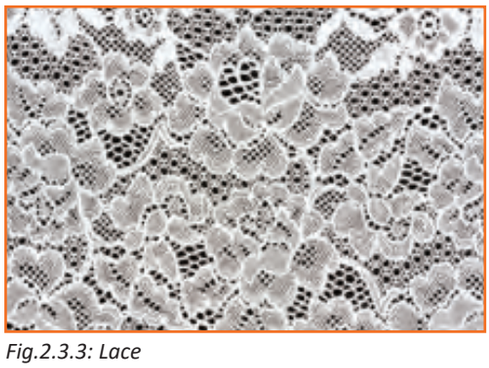

Fig.2.3.3: Lace

Buttons

Button is a fastener which is used to temporarily secure two pieces of fabric together. It is an accessory which is commonly used in garments. It can be used for both functional and decorative purpose.

Fig.2.3.4: Buttons

Fig.2.3.5: Label

Label

It is used in every garment. More than one label can be found in every garment and each label provides different required information. Size label, Main label (Name of the company), Price tag label, Composition label, Fabric Care label etc. are some of the labels you can find on garments.

Zipper

Zipper is also a fastener and is used to temporarily join two ends of a fabric together. It is mainly used in clothing and bags.

Fig.2.3.6: Zipper

Fig.2.3.7: Elastic

Elastic

A band which is capable of resuming original shape after stretching or compression. This property of elastic makes its useable in various kinds of garments.

Draw string

It is a long rope with a stopper and is used to tighten a part of a garment. Draw string is also used in bags and pouches.

Fig.2.3.8: Draw string

Fig.2.3.9: Hook and eye

Hook and eye

It is also a fastener. One part of it works like a hook which is placed into the eye which is like a loop. Both the parts are made of metal and Is used to close the waist of skirts and pants.

Rivets

It is a metal part with pin which is used for decorative purpose usually in denims and canvas pants.

Fig.2.3.10: Rivets

Fig.2.3.11: Piping

Piping

It is used to stabilize seams, outline components and absorb the wear and abrasion to the seam

Rib Trims

It is used in collor and cuff of tshirt and polo shirt.

Fig.2.3.12: Rib Trims

Fig.2.3.13: Adjustable waist band

Adjustable waist band

It is an elastic band with holes and uses a button to tighten or loosen the waist of a garment.

Beads

These are embroidered on to the formal wear as motifs or spread over as individual pieces on the garment.

Fig.2.3.14: Beads

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Know and recognize the different types of fabric.
- Know about the commonly used fabrics for garment sewing.
- Understand the importance and use of trims and accessories.
- Ask questions to Tailors/shop owners if you have any query.

Exercise

1. Trims and accessories increase the usability of the garment.
   a) True
   b) False
2. _____ is a delicate fabric which is made either of thread or yarn.
   a) Interlining
   b) Lace
   c) Label
   d) None of the above
3. Piping is used to stabilize seams, outline components and absorb the wear and abrasion to the seam.
   a) True
   b) False
4. What are beads?

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5. What is elastic?

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UNIT 2.4: Size Chart

Unit Objectives

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

1. Understand the different size chart comparison tables
2. Know the different terms used in size charts

2.4.1 Size Charts

Each country formulates and follows its own size charts taking into account the body type and measurements of the general population in the country.

- Womens size chart comparison table
- Mens size chart comparison table
- Kids size chart comparison table
- Terms used in size chart

Womens size chart

Women's dresses and suits

United States	0	2	4	6	8	10	12	14	16	18	20	22	24
UK	4	6	8	10	12	14	16	18	20	22	24	26	28
Germany	30	32	34	36	38	40	42	44	46	48	50	52	54
France	32	34	36	38	40	42	44	46	48	50	52	54	56
Italy	36	38	40	42	44	46	48	50	52	54	56	58	60
Korea	44	44	55	55	66	66	77	77	88	88			

Fig.2.4.1(a): Womens size chart

Bust	32"	34"	36"	38"	40"
	81 cm	86 cm	91 cm	97 cm	102 cm
Waist	24"	26.5"	29"	31"	33"
	61 cm	67 cm	74 cm	79 cm	84 cm
Hip	35"	37"	39"	41"	43"
	89 cm	94 cm	99 cm	104 cm	109 cm

Fig.2.4.1(b): Womens size chart

Mens size chart

Men's shirts

UK & other EU / Japan	36	37	38	39	40	41	42	43	44	45	46
UK / US / AUS	14	14½	15	15½	15¾	16¼	16½	17	17½	18	18½
Japan[6]	S	S	M	M	L	L	LL,XL	LL,XL	LL,XL		
Korea[6]	90		95		100		105		110		

Fig.2.4.2(a): Mens size chart

Men's jeans, slacks, pants, trousers: Waist

EU	64/68	68/72	72/76	76/80	80/84	84/88	88/92	92/96	96/100	100/104	104/108	108/112	112/116
Italy	43	44	45	46	47	48	49	50	51	52	53	54	55
UK / US	27	28	29	30	31	32	33	34	36	38	40	42	44

Men's jeans, slacks, pants, trousers: Length

EU	34	36	38	40	42	44	46	48
UK / US	25/26	27/28	29/30	31	32	33	34	36

Fig.2.4.2(b): Mens size chart

Children size chart

Children's Clothing Sizes

UK	European	US	Australia
12 m	80 cm	12-18 m	
18 m	80-86 cm	18-24 m	18 m
24 m	86-92 cm	23/24 m	2
2-3	92-98 cm	2T	3
3-4	98-104 cm	4T	4
4-5	104-110 cm	5	5
5-6	110-116 cm	6	6
6-7	116-122 cm	6X-7	7
7-8	122-128 cm	7 to 8	8
8-9	128-134 cm	9 to 10	9
9-10	134-140 cm	10	10
10-11	140-146 cm	11	11
11-12	146-152 cm	14	12

Fig.2.4.3: Mens size chart

Terms used in size charts

Terms	Meaning
XXS	Double extra small
XS	Extra small
S	Small
M	Medium
L	Large
XL	Extra large
XXL	Double extra large

Fig.2.4.4: Terms used in size charts

Women's sizing terms

- **Petite:** Refers not only for short women but also a small framed woman (Women between the height of 4'11- 5'3 ")
- **Tall:** This is for taller women between 5'8"-6' ½" and men 6'1" and taller.
- **Plus size:** This is for women sized 12-24, and XL-4XL (instead of small, medium, and large).

Men's sizing terms

- **Big and Tall:** This term is primarily used for men's plus sized clothing — sizes 12 and up, and XXL-4XL

Fits

- **Relaxed:** Relaxed fit clothing, also known as oversized or boyfriend-style clothing for women
- **Slim:** Fit clothing is meant for a closer fit to the body and is often used to describe men's dress shirts
- **Rise:** The term rise usually used as "low-rise," "high-rise" or "mid-rise" is used to describe the distance from the waist to the crotch on pants.

2.4.2 Using a Measuring Tape and Understanding Fractions

Measuring tape is a common measuring tool used by all tailors. It is a flexible ruler with linear measurement markings on it. It consists of a ribbon of cloth, plastic, fibre glass, or metal strip. Its flexibility allows for a measure of great length permits one to measure around curves or corners.

For taking measurements in garments, generally fibre made measuring tapes are used which have inch markson one side and inch as well centimetre markson the other side.

Understanding the markings on the measuring tape

Inches: Inches are the long lines that cross either half of, or all of the 1" width of the measuring tape. They usually are preceded or followed by numbers

- 1/2 of an inch is half of 1 inch.
- 1/4 of an inch is every four marks on the measuring tape
- 1/8 of an inch is twice as big as the 1/16 of an inch. It is every other mark
- 1/16 of an inch is usually the smallest

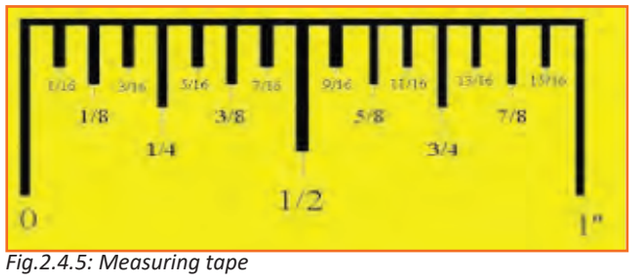

Fig.2.4.5: Measuring tape

Measurement on a tape measure. The distance between every line on the tape measure is 1/16 of an inch 1/32 of an inch is even more smaller which only certain measuring tapes indicate. The distance between every line on the tape measure is 1/32 of an inch

Understanding Fractions

To dived the measuring tapes into inches, various fractions are used on the measuring tape (1/16, 1/8, 1/4, 1/2 etc.). The figure indicates the various fractions of an inch of measurement

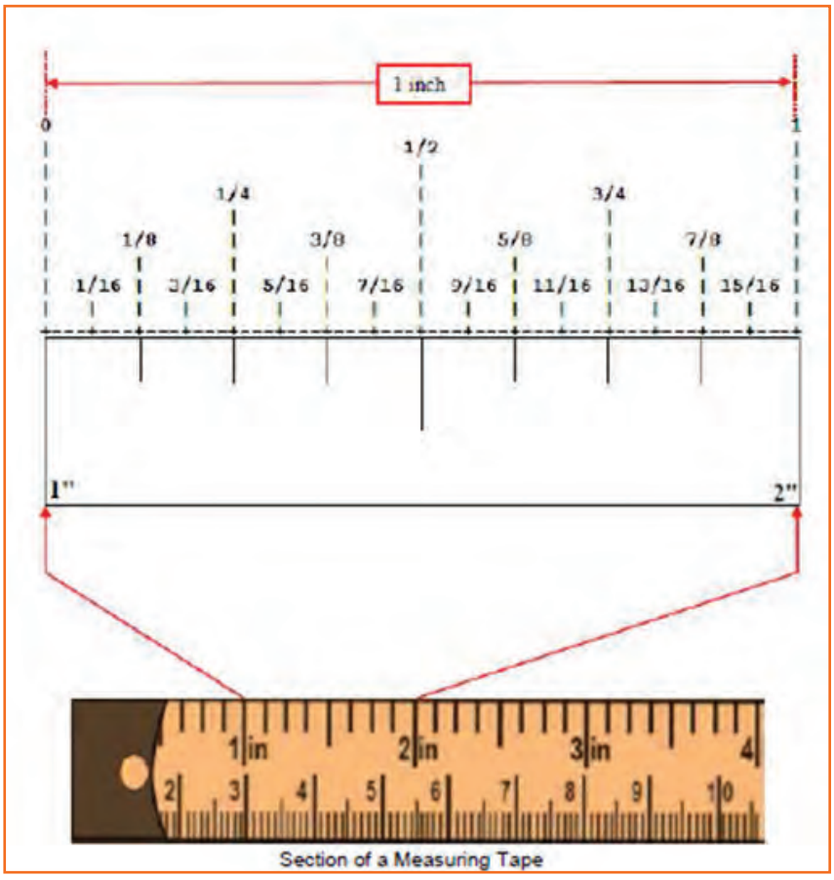

Fig.2.4.6: Fractions in a Measuring tape

Conversion of inches to centimetres

The below image and conversion table will help us understand how to convert inches into centimetres and centimetres into inches.

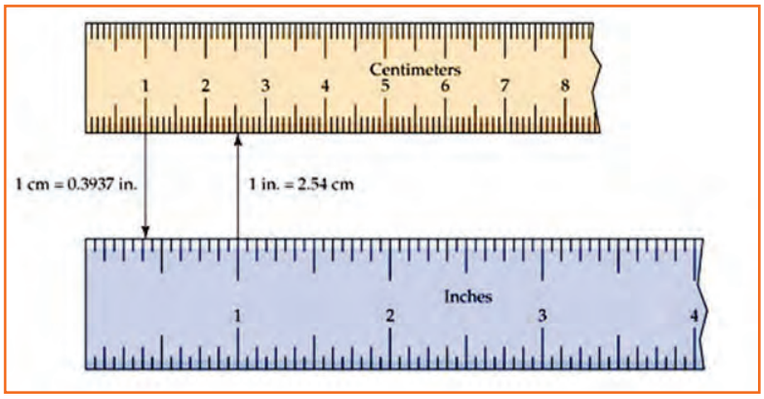

Fig.2.4.7: Different measuring units on a Measuring tape

1 inch = 2.54 cms

2 inch = 2.54 cms x 2

3 inch = 2.54 cms x 3

Inches To Centimeters Conversion Table

Inch	Centimeter	Inch	Centimeter	Inch	Centimeter	Inch	Centimeter
1	2.54	26	66.04	51	129.54	76	193.04
2	5.08	27	68.58	52	132.08	77	195.58
3	7.62	28	71.12	53	134.62	78	198.12
4	10.16	29	73.66	54	137.16	79	200.66
5	12.7	30	76.2	55	139.7	80	203.2
6	15.24	31	78.74	56	142.24	81	205.74
7	17.78	32	81.28	57	144.78	82	208.28
8	20.32	33	83.82	58	147.32	83	210.82
9	22.86	34	86.36	59	149.86	84	213.36
10	25.4	35	88.9	60	152.4	85	215.9
11	27.94	36	91.44	61	154.94	86	218.44
12	30.48	37	93.98	62	157.48	87	220.98
13	33.02	38	96.52	63	160.02	88	223.52
14	35.56	39	99.06	64	162.56	89	226.06
15	38.1	40	101.6	65	165.1	90	228.6
16	40.64	41	104.14	66	167.64	100	254
17	43.18	42	106.68	67	170.18	125	317.5
18	45.72	43	109.22	68	172.72	150	381
19	48.26	44	111.76	69	175.26	175	444.5
20	50.8	45	114.3	70	177.8	200	508
21	53.34	46	116.84	71	180.34	250	635
22	55.88	47	119.38	72	182.88	300	762
23	58.42	48	121.92	73	185.42	500	1270
24	60.96	49	124.46	74	187.96	750	1905
25	63.5	50	127	75	190.5	1000	2540

Fig.2.4.8: Units conversion table (Inches to Centemeters

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Understand the different size chart comparison tables
- Know the different terms used in size charts.
- Understand the difference between US, UK, European and Australian size charts.
- Analyse how a tailor take measurement of man, woman and a child.
- Ask questions to Tailors/shop owners if you have any query.

Exercise

1. Measuring tape is a common measuring tool used by all tailors.
   a) True
   b) False
2. Inches are the long lines that cross either half of, or all of the 1" width of the measuring tape.
   a) True
   b) False
3. What are the terms used in size chart?

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UNIT 2.5: Taking Measurements

Unit Objectives

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

1. Take measurements for different garments.

2.5.1 Details on How to Take Measurements

Bust: Raise the arm to the shoulder level. The measuring tape should cross around the fullest part of the bust. The measuring tape should run directly over the nipples and across the shoulder blades on the back.

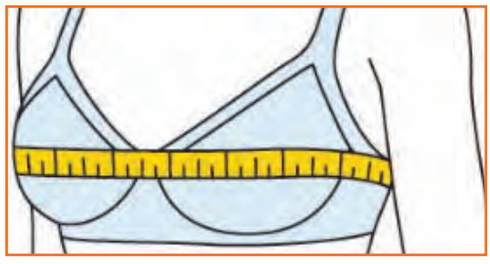

Fig.2.5.1: Bust

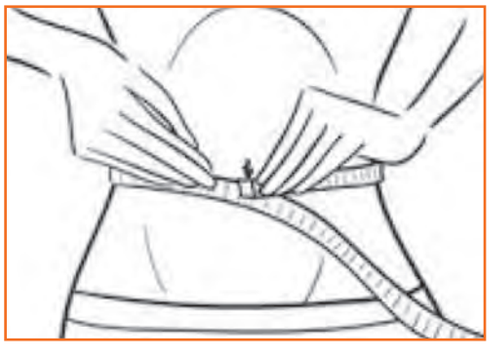

Fig.2.5.2: Waist

Waist: The measurement should be taken around the narrowest point of the waistline allowing 2 fingers between the waist and the tape measure.

Hips: Standing with the knees together, the measurement should be taken around the fullest part of the hips.

Fig.2.5.3: Hips

Fig.2.5.4: Shoulder to Bust

Shoulder to Bust: Run the measuring tape from the tip of the shoulder to the centre of bust.

Front Shoulder to Waist: Measure from tip of shoulder over bust to natural waistline.

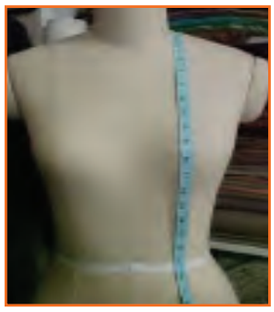

Fig.2.5.5: Front Shoulder to Waist

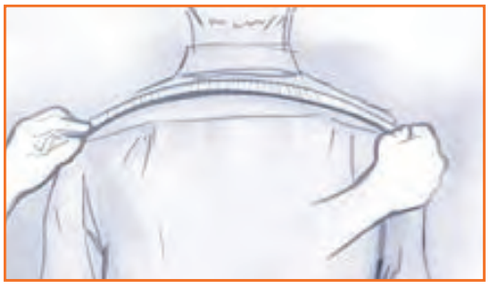

Fig.2.5.6: Shoulder to Shoulder

Shoulder to Shoulder: Measure across the back of neck from the socket of one shoulder to the socket of the other shoulder.

Shoulder to Neck: Measure from base of neck along top of shoulder to the shoulder socket.

Fig.2.5.7: Shoulder to Neck

Fig.2.5.8: Down Centre Back

Down Centre Back: Measure from nape of neck to natural waist.

Back Shoulder to Waist: Measure from tip of shoulder to natural waist line.

Fig.2.5.9: Back Shoulder to Waist

Fig.2.5.10: Across Back

Across Back: Measure from armhole across back to armhole positioning tape measure + - 8cm down from nape of neck.

Full Back: Measure from side seam, under armpits to side seam across back, positioning tape measure +- 4cm down under armpit.

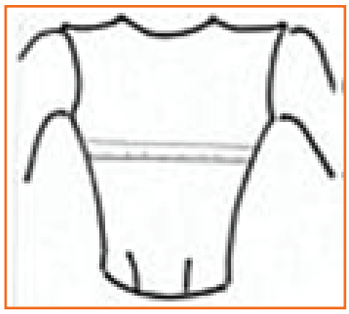

Fig.2.5.11: Full Back

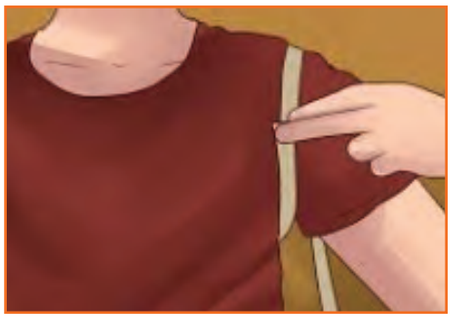

Fig.2.5.12: Sleeve Hole

Sleeve Hole: Measure around the shoulder under the armpit.

Bicep: Measure around the fullest part of the upper arm.

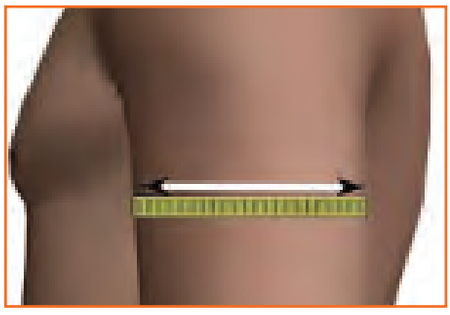

Fig.2.5.13: Bicep

Fig.2.5.14: Elbow

Elbow: Do a fairly loose measurement around the bent elbow.

Under Arm - Measure from under the arm. Start at the armpit to the wrist.

Fig.2.5.15: Under Arm

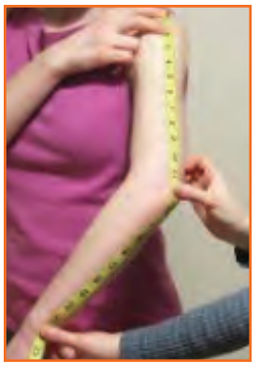

Fig.2.5.16: Over Arm

Over Arm: Measure from outer shoulder socket on outside of arm, with a bent arm, to the wrist.

Side Seam: Measure from under armpit to natural waistline down.

Fig.2.5.17: Side Seam

Fig.2.5.18: Side Seam

Upper Arm: Measure from the outer shoulder socket on outside of arm to crook of elbow.

Fig.2.5.19: Upper Arm

2.5.2 How to Take Measurement of Basic Garment

Neck: The measuring tape should be held around the neck line and just below the Adam's apple

Fig.2.5.20: Neck (courtesy www.luxurazi.in)

Fig.2.5.21: Full chest (courtesy www.luxurazi.in)

Full chest: The tape should cover the fullest part of the chest. The tape should be held right under the armpits and shoulder blades and across the nipples.

Shoulder width: The tape is held from one shoulder point to the other.

Fig.2.5.22: Shoulder width (courtesy www.luxurazi.in)

Fig.2.5.23: Right sleeve (courtesy www.luxurazi.in)

Right sleeve: Taken from the shoulder tip point down to the desired sleeve length. (The same process is followed for both left and right sleeve measurement)

Bicep: Measure around the fullest part of the bicep in line with the armpit.

Fig.2.5.24: Bicep (courtesy www.luxurazi.in)

Fig.2.5.25: Wrist (courtesy www.luxurazi.in)

Wrist: Measure around the fullest part of the wrist.

Waist: Measure around the fullest part of the waist.

Fig.2.5.26: Waist (courtesy www.luxurazi.in)

Trouser measurement guide

Hip: Measure around the fullest part of the hip or buttock.

Fig.2.5.27: Hip (courtesy www.luxurazi.in)

Fig.2.5.28: Trouser waist (courtesy www.luxurazi.in)

Trouser waist: Taken around the smallest part of the waistline. Insert two fingers under the tape measure for ease or allowance.

Trousers Inseam: Measure from the lowest part of the crotch area to the floor.

Trousers Outseam: Measure from the top of the pants waistband to the desired length of the pants.

Fig.2.5.29(a): Trousers Inseam

Fig.2.5.29(b): Trousers Outseam

(courtesy www.luxurazi.in)

Thigh: Measure around your thigh at its widest point

Fig.2.5.30: Thigh (courtesy www.luxurazi.in)

Fig.2.5.31: Knee (courtesy www.luxurazi.in)

Knee: Measure around your knee at its widest point.

Crotch: Crotch Measure from the front top of the pants waistband to the back top of the pants waistband.

Fig.2.5.32(a): Crotch Back (courtesy www.luxurazi.in)

Fig.2.5.32(b): Crotch Front (courtesy www.luxurazi.in)

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Understand the different size chart comparison tables
- Know the different terms used in size charts.
- Understand the difference between US, UK, European and Australian size charts.
- Analyse how a tailor takes measurement of man, woman and a child.
- Ask questions to Tailors/shop owners if you have any query.

Exercise

1. Which of the followings are the types of measurement:
   a) Across back
   b) Shoulder to neck
   c) Hips
   d) All the above
2. For measuring the neck the measurement tape should be held around the neck line and just below the Adam's apple.
   a) True
   b) False
3. How will you measure crotch?

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4. How will you take the measurement of waist?

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UNIT 2.6: Drafting and Cutting

Unit Objectives

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

- Understand drafting and cutting
- Draft the garments
- Cut the garments

2.6.1 Introduction

Long sleeve shirt is a common wear of men used as upper body wear. Example shown in section 2.6.2 has subsequent specifics.

Selected fabrics: poplin,cotton, silk, crepe, polyester, oxford cotton.

Materials required: 2.50 mts cloth width is 36”

Measurement required:

- back length = 32”
- n.w length = 17”
- shoulder width = 17”
- chest = 36”
- waist = 32”
- hip or seat = 38”
- sleeve length = 24”
- cuff size = 2 ½” *11”
- pocket size = 5” * 5 ½”

2.6.2 Drafting and Cutting of Long Sleeve Shirt

Drafting details front part:

- 1-2 =full length + 1”.
- 1-3 = chest/4(-) ½” , arm depth.
- 1-4 = 1/6th neck measure.
- 4-4a = 1” as per draft.
- 4a-4b = ¾” for button stand.

- 4b-6 =1 ½" for placket.
- 4b-2b =draw a line as per draft.
- 6-6a =draw a line as per draft.
- 1-7 =1/2 shoulder width +1/2" for seam.
- 7-8 = draw a line.
- 3-9 = 1/3rd chest measure.
- 10-4 = 1/6th neck measure.
- 10 -11 = draw line as per draft.
- 10-12 = 1" as per draft.
- 13-7 = shoulders slope 1 ½".
- 14-2 = same as 9-3 measure.
- 14-15 = 4 ½" as standard measure.
- 14-16 =5 ½" as standard measure.
- 17-8 =1" as per draft.
- 18 is a middle measure of 13-8 distance
- 18-19 =3/4" as per draft.
- 13,19,17,19 = draw arm hole shape with arm curve.
- Cut the front part.

Back part:

- 20-21 = length +1"
- 22-24 = 1/4th chest (-) ½" (armhole depth).
- 20-25 = n.w length + ½".
- 22-23 = draw a line.
- 24-24a = 1/3rd chest (-) 1 ¼".
- 23-23a = 1 ¼" at 45˚
- 20-27 = 1" as per draft.
- 22-28 = 1" as per draft.
- 26-29 = 4 ½" as shown in draft.
- 26-30 = 5 ½" as shown in draft.

Shoulder part :

- 1-2 = 1/8th chest +1/2".
- 1-3 = ½ shoulder width +1/2" for seam.
- 3-4 = draw a line.
- 4-5 =1/2" as per draft.

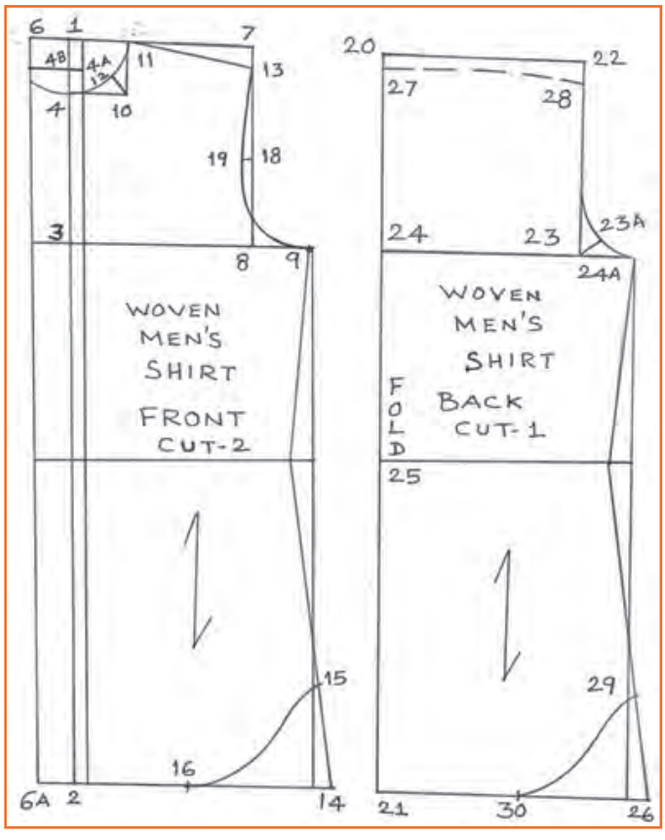

Fig.2.6.1: Drafting of front and back part

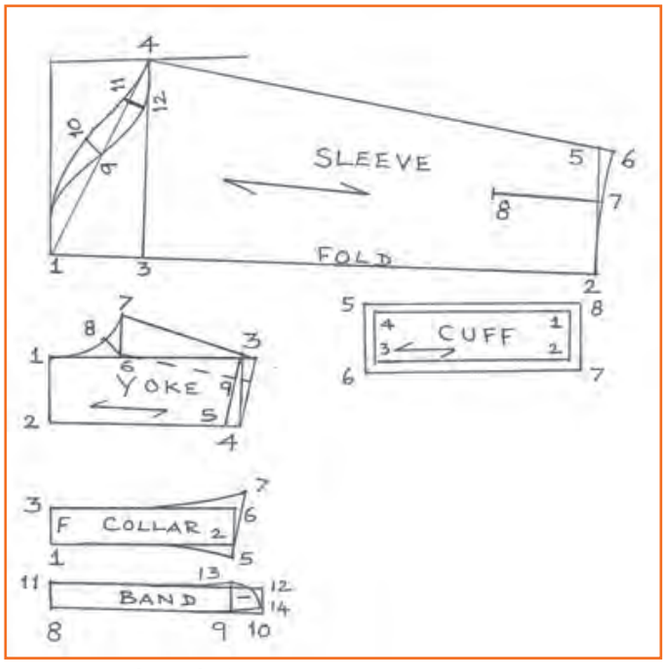

Fig.2.6.2: Drafting of other parts

- 1-6 = 1/6th neck + ¾".
- 6-7 = 2" noted as per draft.
- 6-8 = 1"as per draft.
- 3-9 = 2"as per draft.

Long sleeve part:

- 1-2 = sleeve length +1/2"(-) cuff with 2 ½" .
- 1-3 = 1/8th chest (-) ½".
- 3-4 = 1/4th chest +1/2".
- 5-2 =½ cuff + 1 ½".
- 5-6 =1/2" as per draft.
- 7 = middle or 5-2 measure.
- 7-8 =.4 ½" sleeve pocket open.
- 9 = ½ or 1-4.
- 9-10 = 1",4,10,1 back arm shape is to be drawn
- 11=middle of 9-4 measure.
- 12-11 =¾ " as per draft. 4, 12, 9, 1.draw the front arm as per draft.

Cuff draft:

- 1-2 = cuff width.
- 1-3 = cuff length to be cut on fusible interlining as stiffer portion.
- Sleeve pocket length 5".
- Width 1 1/4:".
- Box 1 ¼" as ready portion and added all around ½" for seam margin.

Collar part:

- 1-2 = ½ neck measure
- 2-4 = 2" as standarad.
- 2-5 = 3/8" as per draft.
- 4-6 =3/8" as per draft.
- 7-5 = collar point 3 1/8".

Neck band:

- 8-9 = ½ neck measure
- 9-10 = 1 3/8" as per draft.
- 11-8 =1 3/8" as per draft.
- 10-12 =1 3/8" as per draft.
- 10-14= 1/8" as per draft.
- To be cut fusible interlining allow to cut self fabric along with seam margin necessarily ½".

2.6.3 Drafting and Cutting of Saree Blouse

Measurements Needed

Shoulder Measurement:

- Taken between two shoulder ends or nape of the neck to one shoulder end and doubled. When neckline depth is more than 1/6th of the bust round, shoulder measurement is taken about 3cm to 4cm less on each side.

Armscye Depth or Armhole Depth:

- Taken by direct measurement or calculated from the Bust Circumference.
- It is the best to measure the armscye depth directly on the body for accurate measurement. It is measured straight from the shoulder end to about ½ an inch below the armpit. Armscye depth varies from 13cm – 18cm (or about 5 inch – 7 inch) in the increasing order from the small sizes to the larger ones.
- Armscye depth can be calculated from the bust circumference in many of the ways by different dressmakers for different outfits.
- For a sari blouse, following calculation is found to be the best:

1/6th of Bust Circumference

Front & Back Neck depths:

- Taken directly on the body or taken from an existing garment.

Bust Circumference:

- Taken around the fullest part of the bust.

Waist Circumference:

- Taken around the navel point.

Bust Point or Pivot Point:

- Taken straight down the shoulder to the bust point.

Waist Length:

- Taken from the nape of the neck to the desired length of the blouse.

Drafting & Cutting Instructions For A Basic Blouse With Waistline Dart

Front Part:

1. Square down centre front line and shoulder lines.
    - » Centre Front Line: Waist Length + 1cm for seam allowance at shoulder + 1cm seam allowance at waist
    - » Shoulder Line: ½ of Shoulder Measurement + 1cm seam allowance. Shoulder can be taken square or sloped. This depends up on the garment to be made. Since a sari blouse is usually of wide neck, no slope is suggested here.
2. Square Armscye Depth down the Centre Front Line. Take 1/4th of the Bust Circumference + 1cm ease + 5cm seam allowance, horizontally. This wide seam allowance is useful for alterations.
3. Drop a straight line from shoulder end on to Armscye Depth. Draw front armhole shape about 1cm inward this dropped line.
4. Square Waist Line at the bottom of the Centre Front Line. Take 1/4th Waist Circumference + 5cm dart allowance + 5cm seam allowance. Give a rounded shape at the sides.

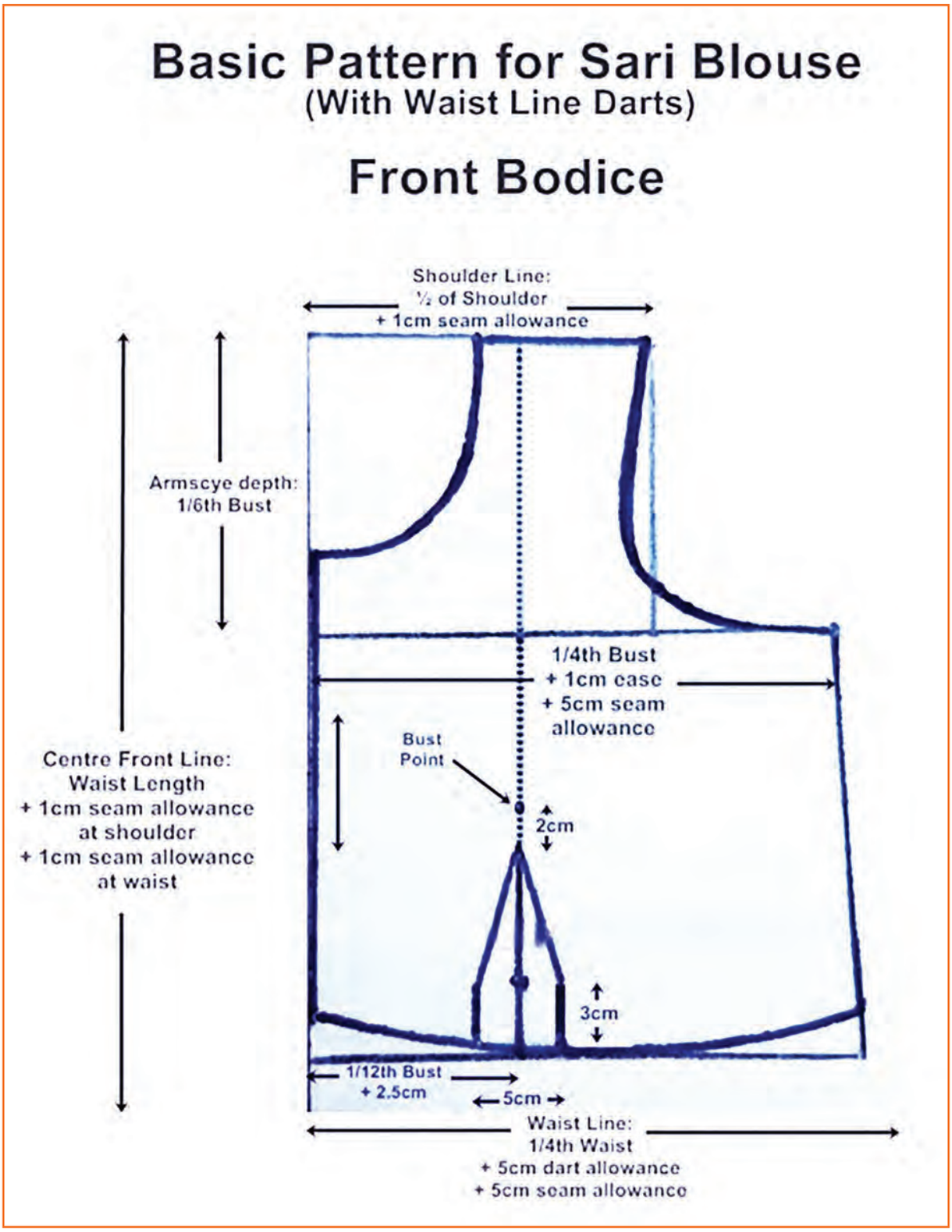

Fig.2.6.3: Front bodice of saree blouse

5. **Dart:** Take 1/12th of the Bust Circumference + 2.5cm at waist from the centre front. Draw an upright line. Measure a point at about 3cm from the waist. (Note: This will be the starting point of the waist, exactly under the bust part.)

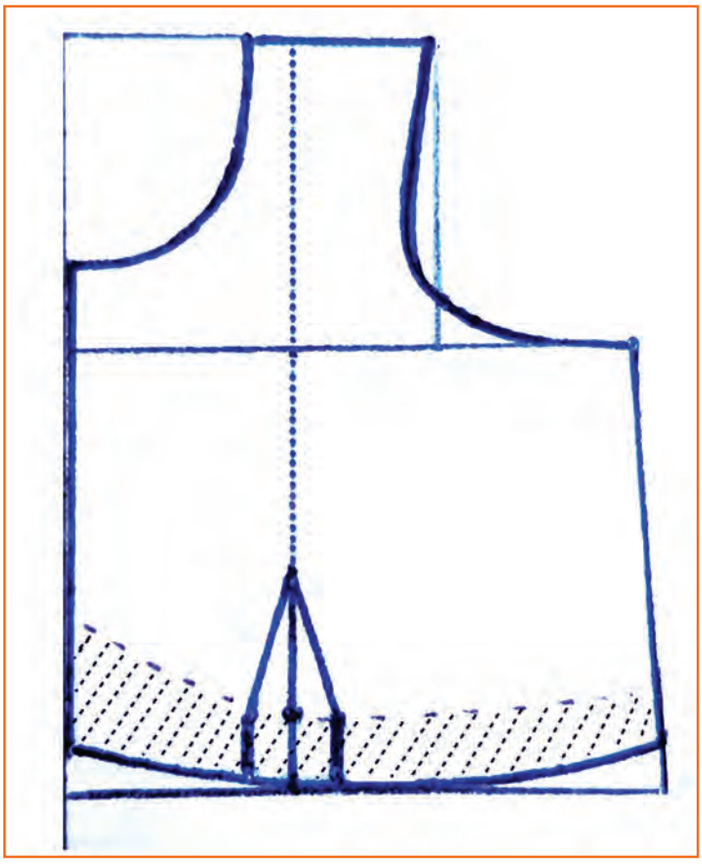

Fig.2.6.4: Waist band of saree blouse

» Mark a Dart of about 5cm here taking 2.5cm on each side. Measure and mark Bust Point on the same line from the shoulder. Dart point will be about 2cm below the bust point. Draw a dart as shown.

6. Join the end points of Armscye Depth line and waist line.
7. Draw desired front neckline.
8. Cut along the highlighted outline excluding the darts as shown.

Back Part:

1. Square down centre back line and shoulder lines.
   - » Centre Back Line: Waist Length + 1 cm for seam allowance at shoulder + 1cm seam allowance at waist
   - » Shoulder Line: ½ of Shoulder Measurement + 1cm seam allowance
2. Square Armscye Depth down the Centre Back Line. Take 1/4th of the Bust Circumference + 1cm ease + 5cm seam allowance, horizontally. This wide seam allowance is useful for alterations.
3. Drop a straight line from shoulder end on to Armscye Depth. Draw back armhole shape on this dropped line.
4. Square Waist Line at the bottom of the Centre Back Line. Take 1/4th Waist Circumference + 2cm dart allowance + 5cm seam allowance. You may need to shape the waistline a little to match it to the front.
5. Dart: Mark a dart on the waist line at 1/12th of Bust Circumference + 1cm. This dart is about 7cm in length with 1cm width on each side.
6. Join the end points of Armscye Depth line and waist line.

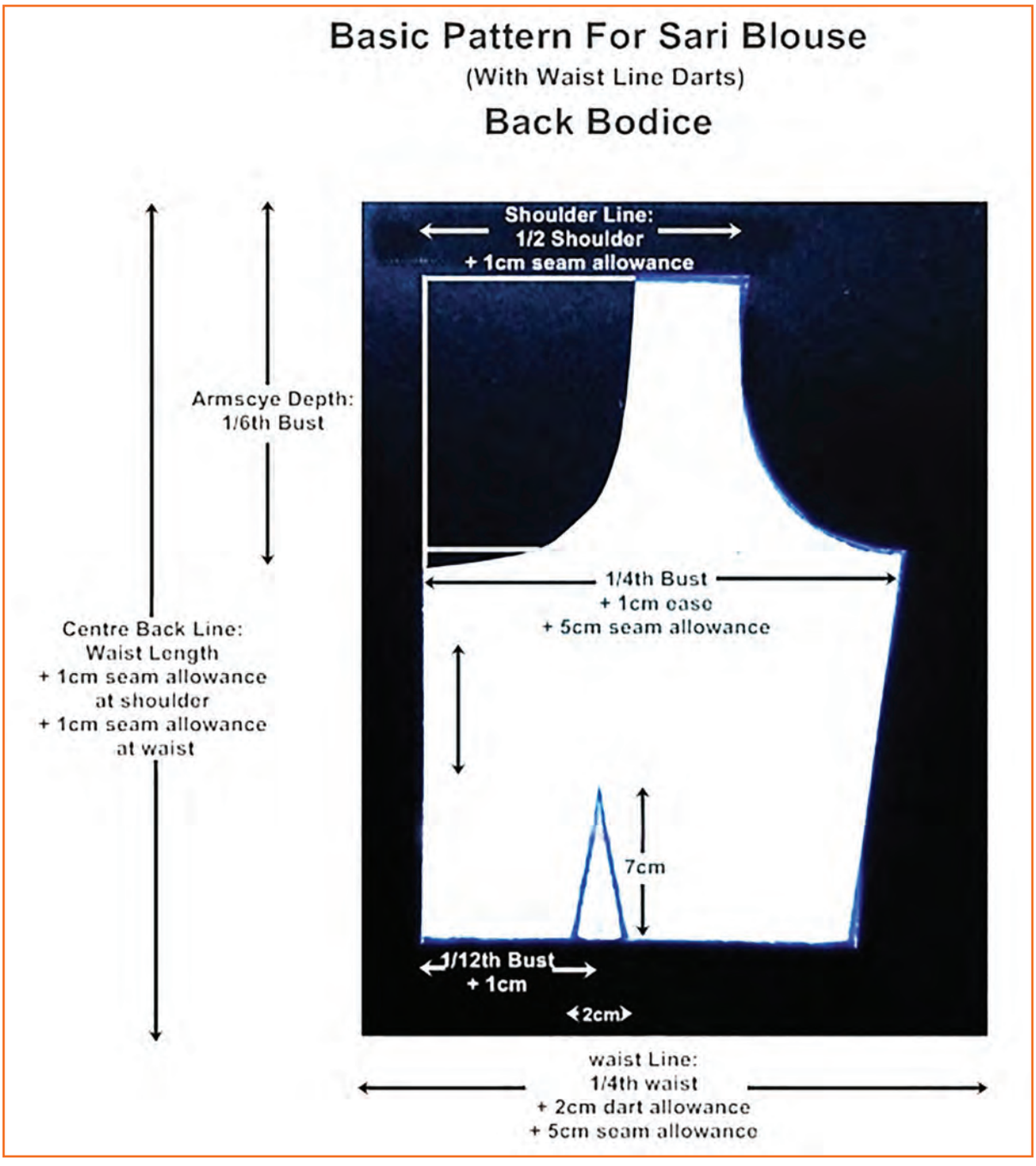

Fig.2.6.5: Back bodice of saree blouse

7. Draw desired back neckline. This is usually kept deeper than that in the front.
8. Cut along the highlighted outline as shown.

Fastening:

Fastening can be given in the centre front or in the centre back. Add 1cm seam allowance for the attachment of hook and eye fastening strips.

Significance of Having A Basic Bodice Pattern

- This is the basic most pattern for sari blouse exclusive of waist bands and extra darts. Assembling is simple for the apprentices.
- Any style variation in the neckline can be tried on this pattern. For high necks, a shoulder slope is given.
- This pattern helps as a base for all the types of princess lines. For details on princess lines, click here. Just eliminate the darts without a need to press the design as given here.
- Easy to increase length.
- Back or front clasp styles are easily modified. This pattern is without the seam allowance for fastening. 1cm seam allowance is to be added at the centre (front or back) to give an opening.

2.6.4 Drafting and Cutting of Kurta/Kameez

Kurta and/or Kameez are traditional costumes of India. It is used along with Salwar, Churidar or denim pants. The Collar or the neckline can be shaped according to style. This garment is cut into three pieces, the front, back and sleeve. Darts are used to give fit or shape to the garment. The creation of Kameez may look long but it is very easy, just follow the instructions and you will end up with your own Kameez top.

The construction of Kameez may look long but it is very easy, just follow the instructions and you will end up with your own Kameez top.

Measurement

- Square Neck: 14 Inches
- Across Shoulder: 14 inches
- Chest: 36 inches
- Waist: 28 inches
- Hip: 38 inches
- Length of Top: 25 inches

Material Required:

- 1¼ Mtrs of fabric

Construction - Front

(0-1) = Kameez length (desired length)

(0-2) = Armhole depth = ¼ chest – 1”(for Medium figure) or 2”(for heavier figure)

(2-3) = Chest line = ¼ chest + 1” (for Tight fit) or 2” (for loose fit)

(5-6) = Shoulder drop = 1cm

(0-5) & (2-6’) = ½ shoulder

(0-7) = Neck width

(0-9) = Front neck depth

X is mid point of 6-6’. (x-x’) = 1cm

Shape (6-x’-3) front armhole curve.

Measure 6-x'-3 it should be more than ½ armhole by 3 to 4cms.

(0-10) = waist length

(10-11)= ¼ waist + 1" or 2" (same as chest line)

(0-12) = Hip length

(12-13)= Hip line = ¼ hip+2"

(1-4) = same as hip line

(4-4') = 1" up for shaping. Join (1-4') hem line

(4'-13) = Slit opening (Slit should not cross the Hip line)

Cutting line:

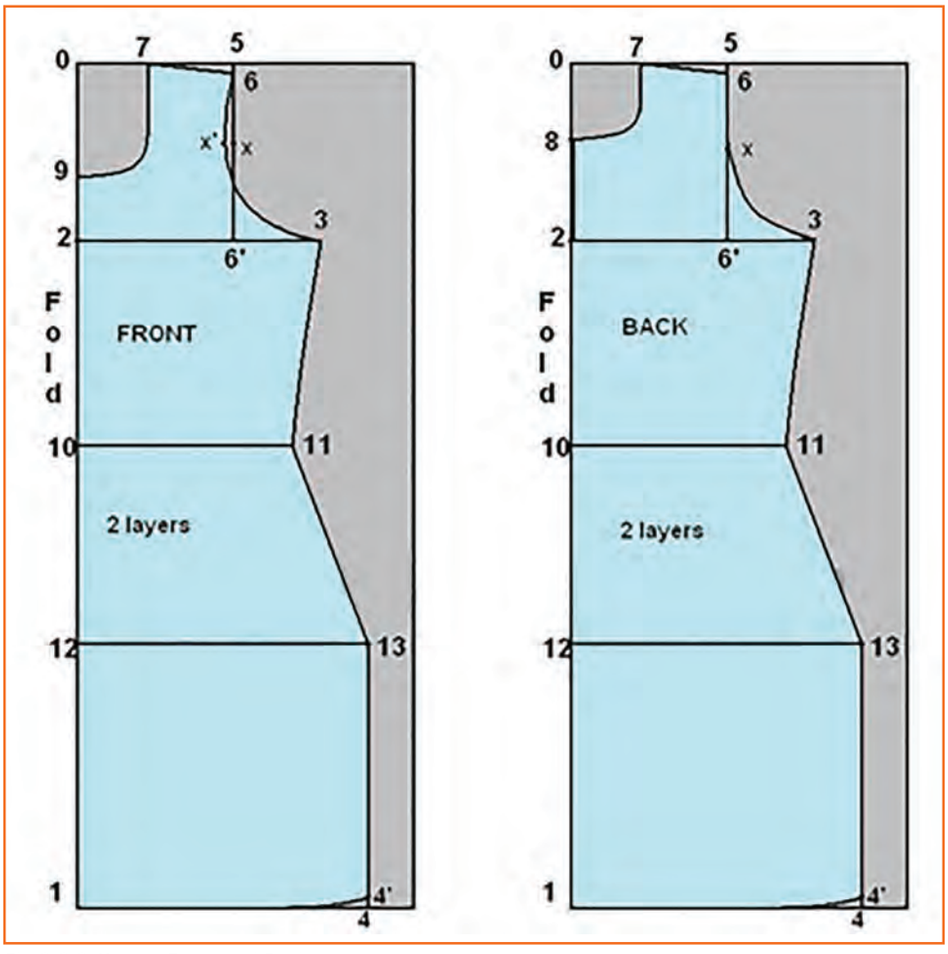

Fig.2.6.6: Kurta - Front and Back

9-7-6-x'-3-11-13-4'-1 (9-1) on fold

Construction - Back

(0-1) = Kameez length

(0-2) = Armhole depth = ¼ chest – 1"(for Medium figure) or 2"(for heavier figure)

(2-3) = Chest line = ¼ chest + 1" (for Tight fit) or 2" (for loose fit)

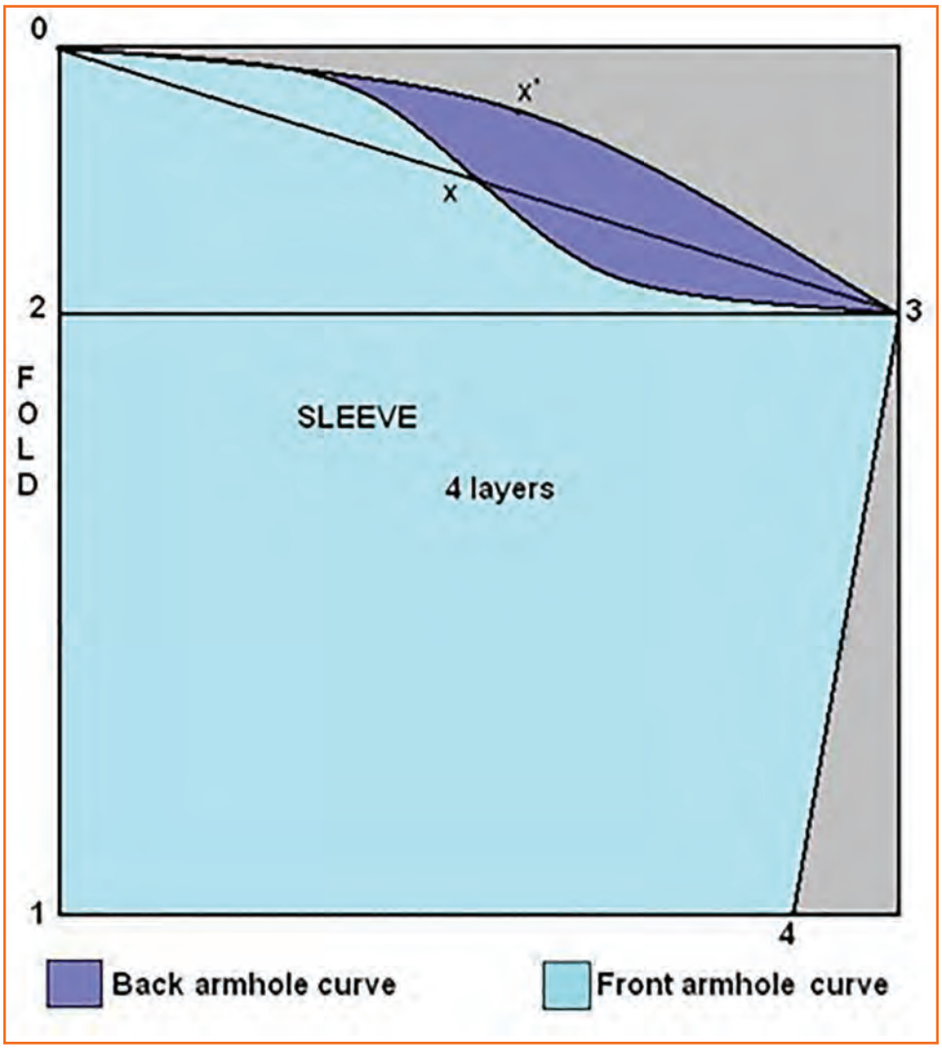

Fig.2.6.7: Kurta - Sleeve

(5-6) = Shoulder drop = 1cm

(0-5) & (2-6') = ½ shoulder

(0-7) = Neck width

(0-8) = Back neck depth

(8-8') = Back slit opening = 1/6 chest + 1"

X is mid point of 6-6'.

Shape (6-x-3) front armhole curve.

Measure 6-x-3 it should be more than ½ armhole by 3 to 4cms.

(0-10) = waist length

(10-11) = ¼ waist + 1" or 2" (same as chest line)

(0-12) = Hip length

(12-13) = Hip line = ¼ hip+2"

(1-4) = same as hip line

(4-4') = 1" up for shaping. Join (1-4') hem line

(4'-13) = Slit opening (Slit should not cross the Hip line)

Cutting line:

8-7-6-x-3-11-13-4'-1 (8-1) on fold

Cut 8-8' on fold for back neck slit opening (Neck slit opening need only at the circumference of head is lesser than neck circumference)

Construction: Sleeve

(0-1) = Sleeve length

(0-2) = 1/8 chest – 1½"

(2-3) = ¼ chest – ¾"

(1-4) = ½round arm

Join (3-4) under arm seam

Join (0-3)

X is the mid point of (0-3)

Take (x-x') = 2 to 2.5cms up

Shape 0-x-3 front armhole curve

Shape 0-x'-3 front armhole curve

Cutting line:

1-4-3-x'-0 then cut through the first 2 layers 0-x-3

Seam Allowance:

¼" on neck line, armhole and back neck slit open

1" on side seams

1½" on hemlines

2.6.5 Drafting and Cutting of Pant

To draft your pants, you'll need to do a little math. First, take your child's hip measurement and divide it by 2. Then add 9 inches. Call this number A. Next, add the rise plus the inseam. Call this number B. Draw a rectangle that is A wide by B tall.

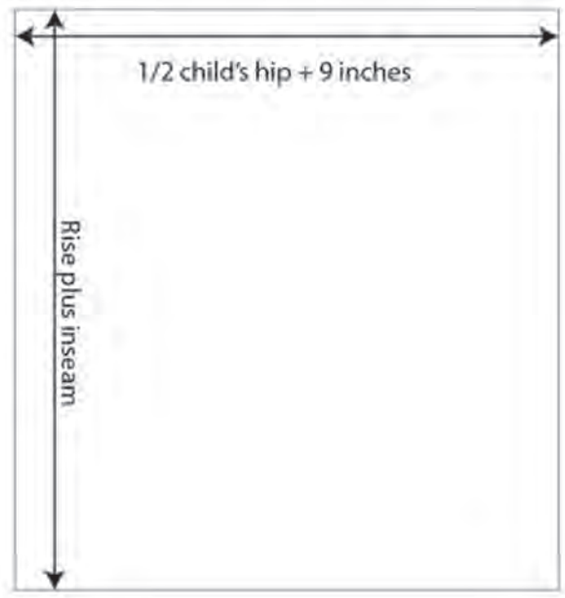

Fig.2.6.8(a): Pant Drafting

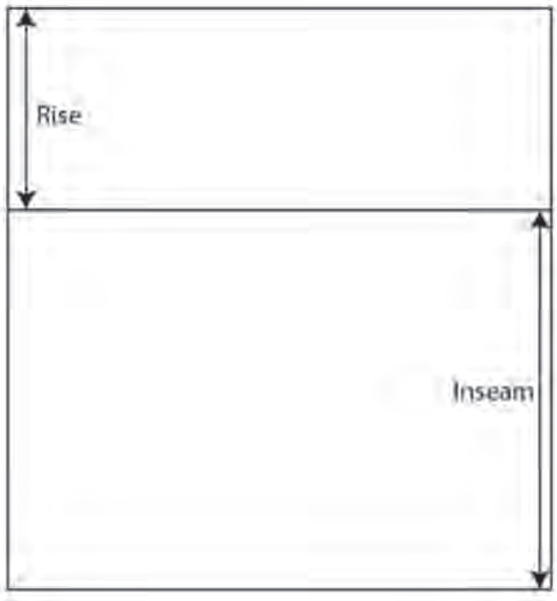

Fig.2.6.8(b): Pant Drafting

Draw a line across the rectangle between the inseam and rise lengths. Bring the sides of the rectangle in as shown at the rise line. The 1" side is the front of the pants, the 2" side is the back.

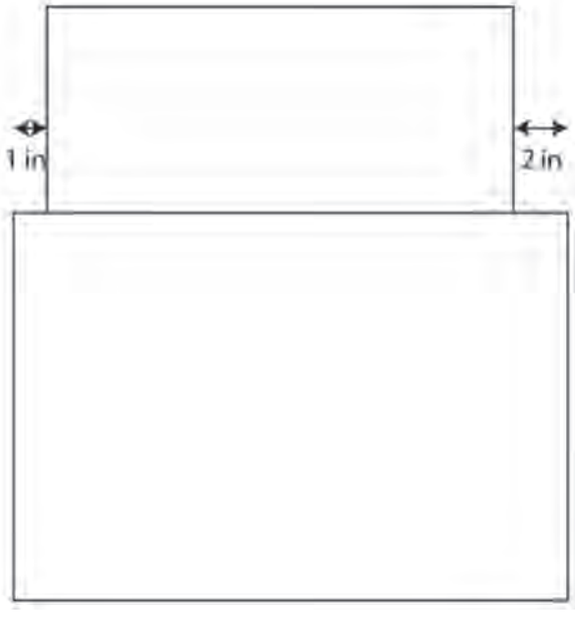

Fig.2.6.9(a): Pant Drafting

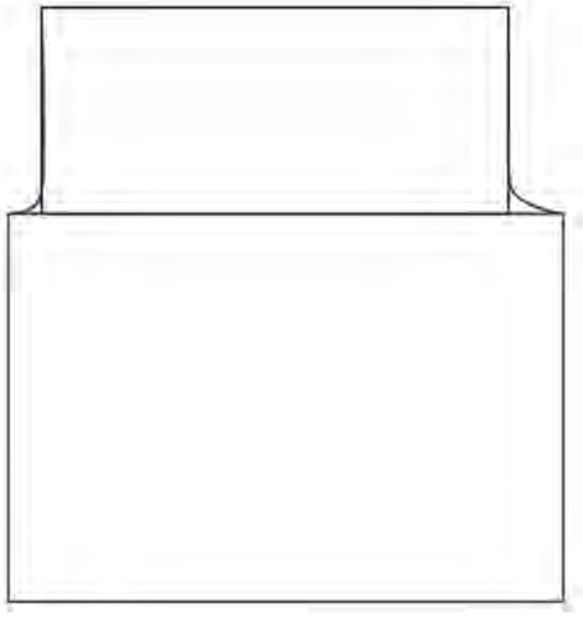

Fig.2.6.9(b): Pant Drafting

Curve the corners to create the crotch lines. At the front edge, drop the line 2 inches and redraw it - this way the waist will cover your kid's booty but not come up uncomfortably high in the front.

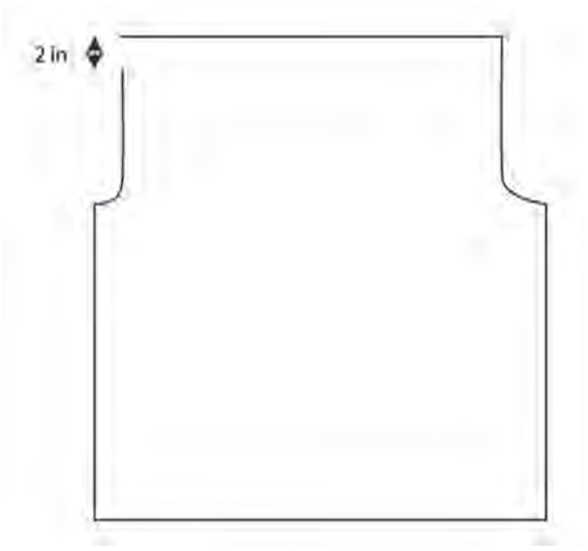

Fig.2.6.10(a): Pant Drafting

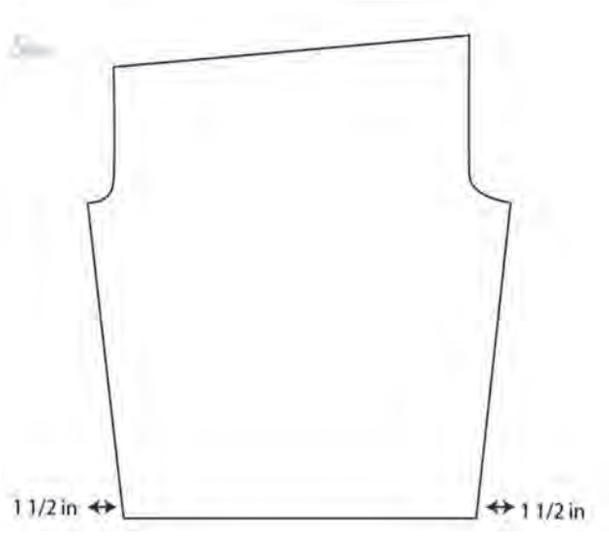

Fig.2.6.10(b): Pant Drafting

Bring the bottom corners of each pants leg in 1 1/2". Measure the waistline - you'll need that measurement to create the waistband.

Fig.2.6.11: Pant Drafting

If you want cuffs, trace out a rectangle that covers the part of the pants you want to be the cuff. Don't follow the angle of the pants leg at the bottom; keep your rectangle with 90 degree corners. Cut off your pants pattern at this line, separating the pants and the cuff. Add seam allowances all around the pants piece.

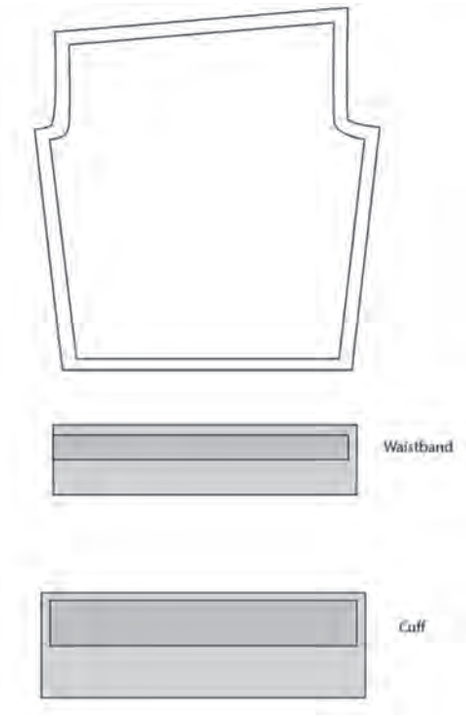

Fig.2.6.12: Pant Drafting

The waistband will be cut on the fold, so add a seam allowance to the top and side edge, then double this rectangle in height for the final waistband piece (because it will be folded in half to form the casing).

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Understand drafting and cutting.
- Gather the information about the material equipment and measurement required for drafting and cutting.
- Analyse how a tailor do drafting and cutting of long sleeve shirt, saree blouse, kurta/kameez and pant.
- Ask questions to Tailors/shop owners if you have any query.

Exercise

1. Darts are used to give fit or shape to the garment.
   a) True
   b) False
2. What is the significance of having a basic bodice pattern?

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3. What are the steps of drafting and cutting of pant?

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UNIT 2.7: Types of Fabric Defects

Unit Objectives

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

- Understand different types of defects
- Find and rectify the defects
- Identify different types of faults

2.7.1 Categories of Defects

Defects are categorised under three main areas

- **Critical defect:** A defect which makes the garment unsafe for individual consumption or it contravenes any mandatory regulations
- **Major defect:** An obvious defect in the appearance which reduces the usability and sale ability of the garment.
- **Minor defect:** A defect which is caused by a workmanship error beyond the quality standards but does not reduce the sale or consumption of the product.

Fabric Defects	Major	Minor
Different weight / handle of fabric than approved sample	HOLD	
Different weight / handle of fabric than approved sample	M	
Drill hole showing	M	
Fabric faults not evident on sample (eg: cuts, holes, tears, thin spots, runs, mispicks slubs, snags, nepping, weaving faults)	M	m
Hole created in fabric when ticketing	M	
Pattern, stripes, checks do not match as specified	M	m
Permanent creases on fabrics, streaks, barre	M	m
Bowing or skewing on plain fabrics more than 2.5 cm per garment width or length	M	
Bowing or skewing on plain fabrics up to 2.5 cm per garment width or length		m
Nap or pile deformation	M	

Shading Defects	Major	Minor
Shade variations between panels	M	m
Shade variation of garment fabric and trims within the garment	M	
Shade variation of garment fabric and trims within the garment	HOLD	
Dye streaks & barre marks at critical zone	M	
Different batches within the order	Comm't	
Cleanliness	**Major**	**Minor**
Spots, stains and soil marks	M	m
Threads ends untrimmed	M	m
Excessive fly or contamination on garment	M	
Component parts and assembly	**Major**	**Minor**
Missing parts	M	
Missing operation	M	
Operations not done per approved sample and specification	M	
Misalignment of parts, pockets, flaps, trims more than 7 mm	M	
Inconsistent nap directions if specified	M	
Seams and Stitching	**Major**	**Minor**
Open seam	M	
Skipped chain stitch	M	
Incomplete seams (two or more stiches)	M	
Double stitching gap 5 mm or more	M	
Needle holes		m
Needle damage	M	
Garment parts caught in unrelated seam distorting fit appearance	M	
Improper stitch tension that affects appearance	M	
Raw edges (other than specified) outside	M	
Edge stitching irregular affecting appearance	M	
Untidy mending	M	
Piecing or joining of binding on critical zone of garments	M	
Monofilament yarns being used as a sewing thread in any stitching / including label stitching	M	
Seam twisted, puckered or pleated affecting appearance	M	

Pressing	Major	Minor
Burned or scorched	M	
Over pressed to leave seam impression	M	
Stretched or distorted during pressing	M	
Excessive wrinkles that require pressing		m
Sericus shine caused by improper pressing	M	
Pressed poorly or not pressed at all	M	
Over pressed on improperly finished to deform shapes, designs	M	
Label, Hangtags and Embroidery	Major	Minor
Missing or wrong tags, hangtags, price tags etc.	M	
Missing care, content and country or origin and main label	Reject	
Hangtags insecurely attached or misplaced		m
Wrong main label	Reject	
Label sewn with monofilament yarn	M	
Label sewing thread does not match colour of the garment	M	
Label sewing seam uneven, puckered and 5 mm away from label edge		m
Harsh and stiff label compared to approved label (children wear)	M	
Harsh and stiff label compared to approved label (adult wear)		m
Label omitted or insecurely attached	M	
Fibre label does not meet Labelling legal requirement	M	
Pockets	Major	Minor
Not in specified location more than 7 mm	M	
Shaped poorly	M	
Sewn crooked	M	
Not of specified size and shape	M	
Edge stitching not uniform		m
Flaps not properly placed	M	
Puckers at flat joints	M	
Collars and Cuffs	Major	Minor
Fullness or puckers at collar attachment	M	
Collar points not uniform and balanced	M	
Serious puckers on collar joining	M	
Misaligned or crooked collar settings more than 2 mm	M	
Misaligned or crooked collar setting less than 2 mm		m
Puckered or crooked top stitching	M	

Closure	Major	Minor
Buttons missing or damaged	M	
Buttons misplaced or misaligned causing poor appearance	M	m
Buttons not sewn securely	M	
Buttons not in specified, type or colour	M	
Button holes omitted or added	M	
Button holes uncut	M	
Button holes not sewn securely (easily unravels)	M	
Defective snaps or fasteners that do not function	M	
Misalignments of fasteners causing bad appearance	M	
Snaps or grommets that are not properly set	M	
Snaps that do not fasten properly or release very easily	M	
Improper sippers setting causing wavy and bumpy appearance	M	
Wrong size, type or colour zippers	M	
Defective zipper slides	M	
Defective zipper stops on open front jackets	M	
Tight clearance between slides and seam edge causing difficult slider operation	M	m
Rivets not properly and securely set	M	
Rivets with rough edges	M	
Finishing and Hand-feel	Major	Minor
Permanent wrinkles or deformation on the garment	M	
Folding and Packaging	Major	Minor
Not as specified per product specification	M	
Measurements	Major	Minor
Any measurements beyond specified tolerance	M	m
Design and Colour way	Major	Minor
Not according to approved sample or specification	HOLD	
Weight	Major	Minor
Beyond specified tolerance	M	
Less than specified tolerance	HOLD	
Gauge	Major	Minor
Knitted on different gauge machine	M	

Shipping Carton Mark	Major	Minor
Wrong or incomplete shipping carton markings	HOLD	

Fig.2.7.1: Different types of defects

Examples of Critical Defects

S No	Critical Defects
1	Loose components: Trims and fasteners those are used in the garment but not secure properly. For example, buttons, snaps, stones etc
2	Sharp edges: During the processing of the garment it come in contact with various sharp metals such as needles, staples. Broken needles, damaged or broken snap buttons, rivets, wire and pins.
3	Drawstrings at head or neck for baby or kids products. Draw string must be avoided in kids clothes.
4	Thread or trims which are extensively long or loose

Fig.2.7.2: Examples of Critical Defects

2.7.2 Factors to be Considered

Factors to be considered for classification of defects

Fig.2.7.3: Classification of defects

2.7.3 Types of Faults and Defects

The different types of faults and defects found in garments can be catogorised as:

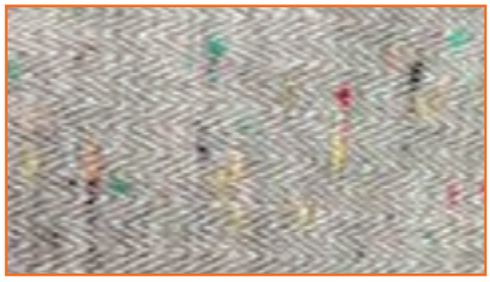
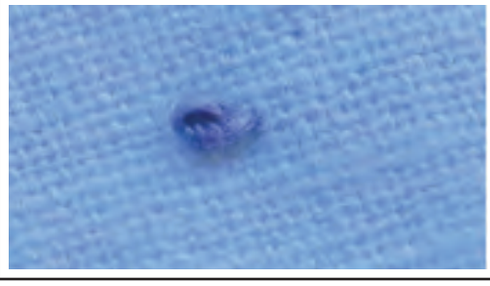
- Preproduction Defects
- Stitching Defects
- Fabric Defects

Preproduction Defects

Pattern Making Defects • Shaded parts • Mismatched Plaids • Marker too wide or narrow • Unsymmetrical pieces • Poor line definition (e.g., chalk line too thick or thin)
Spreading Defects • Improper matching or the material is facing the wrong way • Material too narrow or wide • Improper tension-Material spread too tight or loose • Narrow material-Marker width is not covered because the material is too narrow
Cutting Defects • Improper cutting: Not following the pattern and marker lines, • Frayed or unsharpened knife: Causes uneven or frayed edges. • Notches: Too deep or shallow or completely omitted. • Drill Marks: Not perpendicular, omitted or wrong drill used. • Mixed piles:Resulting in shaded garment part when assembled
Bundling and Ticketing faults It is very necessary to ensure numbering, sorting and bundling of the cut products is done properly. If it is not done accurately it might result in mismatched products. For example if the lining materials are not numbered and stacked properly, it might be wrongly used on a garment.

Fig.2.7.4: Preproduction Defects

Fabric Defects

Coloured flecks : This is caused due to the presence of foreign material in the yarn	
Knots: Knots are caused when the thread breaks during the process of winding or weaving of the yarn. This is a non-mendable defects.	

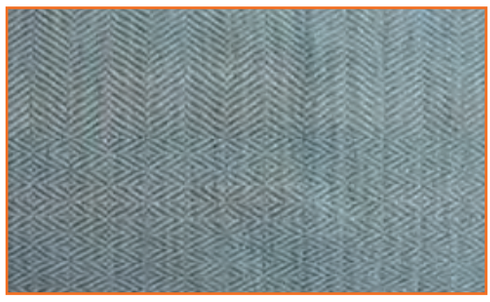
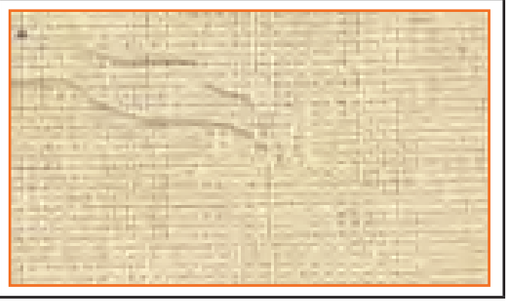
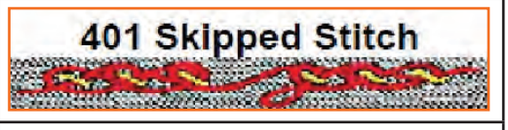
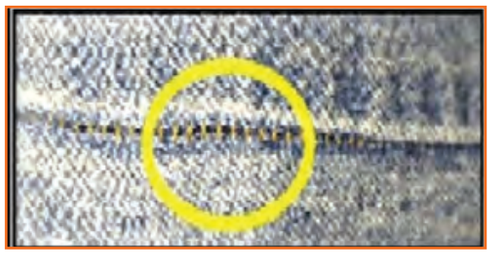
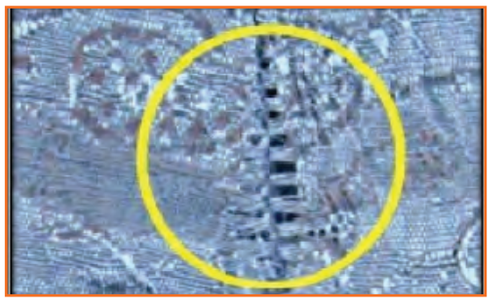
Broken pattern: When there is a non-continuity in the pattern, design or weave caused due to the non-drawing in of threads	
Hole, cut or tear: are caused due to various factors such as sharp edges on cloth roll, using the wrong kind of cutting material, hard substance between layers of fabric etc.	
Untrimmed loose threads: Is caused if the tail ends are not trimmed after piecing up. This defect can easily be rectified with the help of clippers.	

Fig.2.7.5: Fabric Defects

Stitching Defects

Skipped Stich: The common cause for this would be if the machine is incorrectly threaded, the needle is damaged, Needle is not suitable for the thread used, Thread is too fine or thick, Fabric is not held correctly.	
Thread Breaks: If poor quality thread is used, improper setting of needle and bad quality needle, Machine is dirty and thread is inserted incorrectly, Machine operator did not release tension before removing the material.	
Seam pucker : Happens if the fabric is very light, not held properly and too tightly woven. Also if the thread is of wrong size and is too tight. If the needle needs replacing, the thread and needle do not go together.	

Excessive Seam Grin: Occurs when the sewing machine thread is not inserted properly and there is a tension	
Re stitched seams/Broken Stitches: Is caused if the thread breaks or the machine runs out of thread during sewing or happens during the treatment of the finished product.	
Open seam: Is caused if the thread strength is inadequate and if there is not enough stitches per inch.	
Seam failure: Is caused if the fabric is week or loosely constructed.	
Improper stitch balance: Bad quality thread, the bobbin thread tension is not set correctly and the minimum straight to get a balanced stitch is not obtained.	

Ragged Edge: Caused when the sewing machine knives are not sharpened and changed often	

Fig.2.7.6: Stitching Defects

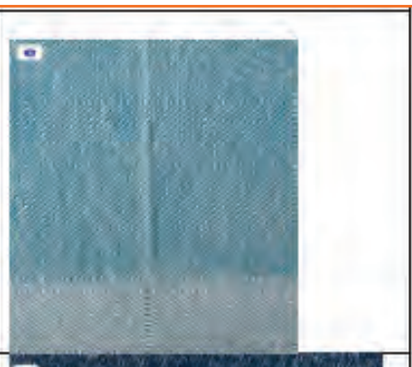
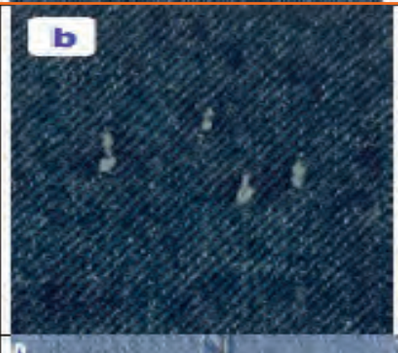
Example of faults and their remedies

Location	Defects	Causes	Remedies
Collar	Both points are not aligned.	Pattern mistake	Proper pattern marking
	strip or check is not match accurately/stitch	Pattern mistake	Proper mitering
	collar flat or not	Improper Stitch/seam	Proper folding & stitching
Size	Incorrect size parts	Improper ticketing & bundling	Proper ticketing & bundling
Button & button hole	Not placed in right place	Improper marking	Proper marking
	unevenness of gap between one button to other	Improper measuring & marking	Proper marking
	stitch is done correctly/ extra thread	Improper stitching/ machine settings	Proper setting of machines
	broken button	Improper inspection	Replace
Sleeve	Unequal size	Improper measurement/stitching	Proper measurement, marking, & stitch.

Fig.2.7.7: Shirt Inspection Checklist

Woven Fabric Defects

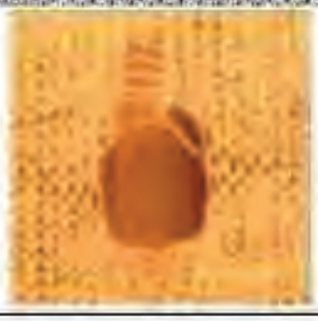
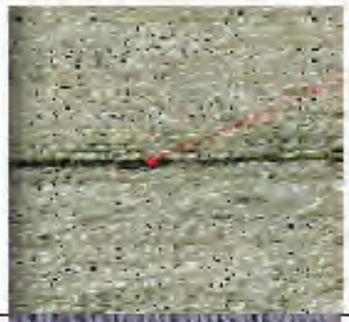
Defect	Explanation	Severity	Photograph
Defects of Woven Fabric			
Dropped Pick	Caused by the filling insertion mechanism on a shuttle less loom not holding the filling yarn, causing the filling yarn to be woven without tension. The filling yarn appears as "kinky."	Major	

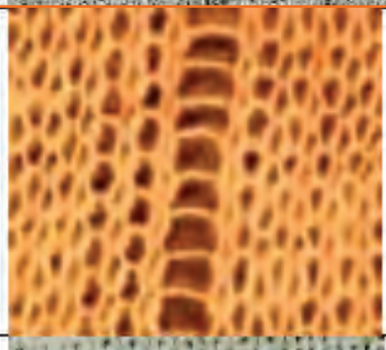
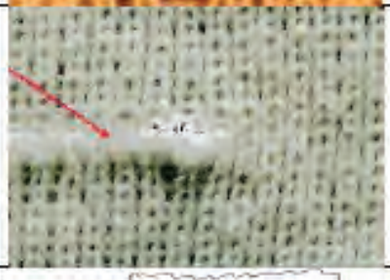
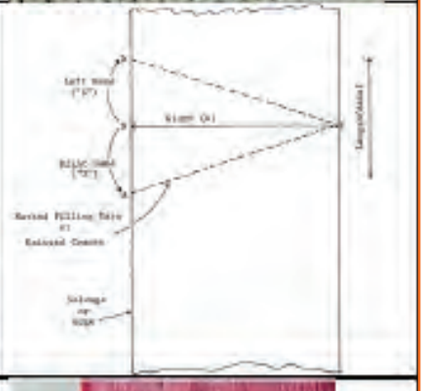
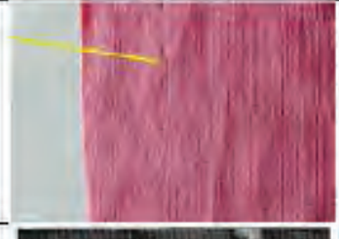
End Out	Caused by yarn breaking and loom continuing to run with missing end.	Major	
Slub	Usually caused by an extra piece of yarn that is woven into fabric. It can also be caused by thick places in the yarn. Often is caused by fly waste being spun in yarn in the spinning process.	Major or Minor	
Knots	Caused by tying spools of yarn together	Usually Minor	
Mixed End (Yarn)	Yarn of a different fiber blend used on the wrap frame, resulting in a streak in the fabric.	Usually Major	
Mixed Filling	Caused by bobbin of lightweight yarn or different fiber blend used in filling. Will appear as a distinct shade change	Major	

Soiled Filling or End	Dirty, oil looking spots on the wrap or filling yarns, or on package-dyed yarn	Major	

Fig. 2.7.8: Woven Fabric Defects

Other Knitted Fabric Defects

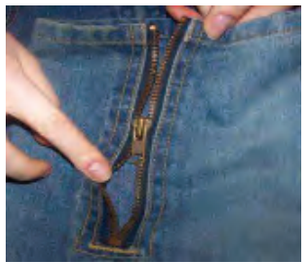
Drop Stitches	Results from malfunctioning needle or jack. Will appear as holes or missing stitches.	Major	
Hole	Caused by broken needle.	Major	
Missing Yarn	Occurs in circular knit. Caused by one end of yarn missing from feed and machine continuing to run.	Major	
Mixed Yarn	Occurs in wrap knit. Results from wrong fiber yarn (or wrong size yarn) placed on wrap. Fabric could appear as thick end or different color if fibers have different affinity for dye.	Major	

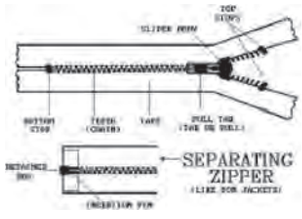
Needle Line	Caused by bent needle forming distorted stitches. Usually verticals line.	Major or Minor	
Runner	Caused by broken needle. Will appear as vertical line. (Most machines have a stopping device to stop machine when a needle breaks.)	Major	
Slub	Usually caused by a thick or heavy place in yarn, or by lint getting onto yarn feeds.	Major or Minor	
Askewed or Bias	Condition where filling yarns are not square with wrap yarns on woven fabrics or where courses are not square with wale lines on knits.	Major or Minor	
Pin holes	Holes along selvage caused by pins holding fabric while processes through stenter frame	Major if extents into body of fabric	
Straying End	Caused when an end of yarn breaks and loose end strays and is knit irregularly into another area.	Major	

Bowing	Usually caused by finishing in knits ,the course lines lie in an arc across width of goods.	Major on stripes or patterns Minor on Solid color	

Fig. 2.7.9: Knitted Fabric Defects

Accesory Defects

ZIPPERS		
Slider defect	Won't Lock: Not apparent without testing by placing Zipper slider in locked position and applying tension. Faulty Dimension: Not readily apparent. May cause either a hard or a loose operating zipper. Either condition may result in zipper failure before garment is worn out. Crushed Slider: May be due to improper garment pressing or due to padding or compensating springs in the presses not being in best condition. Tarnished: Does not generally interfere with operating qualities but is a matter of appearance only. Judging" this as a defect depending upon degree of tarnish. Burn or Rough Spots Not immediately apparent. Can cause snagging and early wear on the upper tape. Lock Prong Interferes Indicated by pull-tab not staying in locked position or slider not moving freely after being released from locked position. Weak Slider Bodies: Can best be determined with proper testing equipment. However, manifests itself by slider becoming compressed or crushed under minimum pressure or becoming distorted enough to create hard operation.	 
Chain or Teeth Defect	Improper Dimensions: Not always apparent unless slider works with great difficulty or operates too easily. Zipper' may give initial satisfactory operation but fail after only moderate use and especially after laundering or dry cleaning. Miss meshed and Unmeshed Teeth: Readily Cord not	

	visible, particularly in large. Usually results in inoperable zipper. Missing Teeth: Readily visible, will result in early failure of the zipper. Misplaced Teeth: This refers to a tooth being out of position, and occasionally may involve two or three teeth. Seriousness ranges from trifling to almost as serious as a missing tooth depending upon the degree of misplacement and general design of zipper. Off color: This defect is quite apparent. Zipper manufacturers normally carry a complete range of tape colors. Due to similarity of different colors, one may be mistaken for another. It is also possible, because of color similarities or difference in dye lots that the two halves of the zipper will have two different shades of tape. Humpy Chain: Readily noticeable by its waviness. Causes difficulty at sewing operation and distorts finished garment's appearance. Attached to Tape: Due to skipped stitches during operation of sewing cord to tape. Not readily apparent but under strain, cord and teeth will rip away from tape and render zipper and garment unusable. Length: Improper zipper length for given opening.	 
Top or Bottom Stop Defects	Missing Top or Bottom Stop: Readily apparent and will result in zipper failure. If facilities for attaching a top or bottom stop are not available, then the entire zipper should be replaced. In some instances, bottom stops are attached at garment plant. An improperly or poorly attached bottom stop may be result of carelessness on part of the operator or of improper functioning of the bottom stop machine.	
Snap fasteners		
Hard Action:	In light-weight goods this may result in stud or socket pulling through the material. The snap fastener manufacturer can be of help in recommending proper tension of stud in socket for weight of garment material.	
Light Action:	Snap fastener does not stay closed because of lack of proper tensions. Same comment applies as for tight closure.	

Hooks & Eyes	Improperly Applied: This is usually caused by a careless operator or improperly adjusted attaching equipment, and corrections are usually simple when apparent. Improper Alignment: Gauges are available for attaching equipment to assure proper alignment in positioning. This is a necessary if garment is to have a properly tailored look. If the top of the zipper is extended into the waistband of the trouser, than the hook and eye should be offset to prevent it from hitting the zipper material. Poor Finish: May be the result of improper finishing or pocking of the metal surface and, while this defect dose not interferes with the functional operation, it may not leave the desired finished appearance of the garment. Tight/ Loose Closure: Attaching equipment ill fitted with an adjustable feature permitting secure application of hook and eye to either light or heavyweight goods. If closures seem too tight, then one should immediately check the attach.ing equipment for proper adjustment.	
Buttons		
Rough or Dull Surfaces	This is not a serious fault except in cases of extreme roughness or poor surface appearance.	
Non-Uniform. Inaccurately Spaced Chipped or Blocked Sew Hole:	This type of defects cannot be noted during the garment manufacturing operation and can slip inspection unnoticed but it frequently causes needle breakage or cut thread.	

Fig.2.7.10: Accessory Defects

2.7.4 Rectification of Defects

Few common stitching defects encountered by in-line checkers and their causes are listed below:

Improper Stitching	Incorrect threading Bent needle head
Improper feeding	Insufficient or too much pressure on pressure foot. Stitch length too short.
Skip stitching	Incorrect threading Damaged needle Larger needle hole Improper thread tension- too tight /thread stretches when heated.
Skip stitching (overedge machine)	Loopers are incorrectly set Needle to looper setting is incorrect Wrong thread type
Wavy Seam	Stitch length too short Pressure too heavy or light
Wavy Seams (overedge machine)	Different feed needs increasing
Piles Feed unevenly	Incorrect pressure on the pressure foot Piles lock or stitch together Feed dog at incorrect height Inappropriate pressure-foot Inappropriate needle plate
Unbalanced Tension	Different thread on needle and bobbin Thread slipped out of tension disc Incorrect threading Poor quality thread Bent, rusted or incorrect bobbin/improperly or unevenly wound bobbin/ bobbin have several layer of thread/bobbin case screw has worked out.
Unbalanced Tension (overedge Machine)	Low power tension needs adjustment
Uneven Stitches	Thread does not feed smoothly/thread has wrong twist/thread incorrectly threaded between tension discs. Pressure too tight
Cracked Seam	Lint between the tension discs, guides or eyelets Bobbin or looper thread tension too tight Needle too small or wrong point Threads not moving smoothly through guides or eyelets. Threads are too thick for needle or machine has rough spots.

Thread Breakage	Poor quality thread Tension too tight Needle set improperly Needle needs replacement Pressure bar not down Rough needle eye, throat plate or thread spindle
Seam grin	Stitch length too short Thread not set into tension discs properly Tension on needle thread too loose
Machine Jam	Machine is incorrectly threaded Needle set incorrectly or damaged Static electricity pulls fabric into needle hole Bobbin inserted incorrectly
Unthreading of needle	Thread end too short Take-up lever is not at highest position
Needle Breakage	Needle needs replacment or set incorrectly Pressure foot too loose Bobbin or bobbin case incorrectly set Pulling fabric while stitching or without raising pressure foot. Fabric too thick
Bobbin Thread breakage	Improperly threaded machine Bobbin tension too tight Bobbin too full Bobbin pigtail caught in bobbin-case Bobbin screw not working properly

Fig.2.7.11: Common stitching defects

Process to Rectify Few Defects

Re-stitched Seams / Broken Stitches	Using better quality sewing threads Ensure proper machine maintenance
Open Seam – Seam Failure – Stitch	Better quality threads Proper size thread for application Proper tension
Seam Slippage	Change seam type if possible Increase seam width Optimize the stitches per inch.
Excessive seam Puckering	Correct thread type and size. Sew with minimum sewing tension to get a balanced stitch Machine needle, bobbin and threads are set properly according to the fabric to be sewn.
Knits & Stretch woven puckering	Set the machine properly according to the fabric Minimum pressure foot pressure
Improper Stitch balance – 301 Lockstitch	Use quality thread Properly balance the stitch so that the needle and bobbin threads meet the middle of the seam. Always start by checking bobbin tension to make sure it is set correctly, so that minimum thread tension is required to get a balanced stitch
Improper Stitch balance – 401 Chain stitch	Use quality thread Properly balance the stitch so that when the looper thread is unravelled , the needle loop lays over half way to the next needle loop on the underside of the seam
Improper Stitch balance – 504 Overedge Stitch	Use Quality thread Properly balance the stitch so that when the looper thread is unravelled, the needle loop layover half way to the next needle loop on the underside of the seam
Raggeded/Inconsistent Edge	Make sure the sewing machine knife are sharpened and changed often The knives should be adjusted properly in relationship to the “stitch tongue” on the needle plate to obtain the proper seam width

Fig.2.7.12: Process to Rectify Few Defects

2.7.5 Fabric Care

The proper care of clothes ensures that the garments last longer and gives one value for money and look great after a number of washings

Safe Ironing temperatures limits for fabrics

Cotton	400 o -425o F
Linen	450 o F
Silk	300 o F
Wool	300 o F
Nylon	300 o -350 o F
Polyester	325 o F
Rayon	350 o -375 o F (Reverse and iron)
Rubber	Do not iron

Fig.2.7.13: Safe Ironing temperatures limits for fabrics

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Inspect stitched products against specifications.
- Analyze how tailors:
  - » Inspect stitched products against specifications
  - » Carryout alterations
  - » Sew and apply trims by hand and machine
- Also Understand the inspection and possible defects.
- Ask questions to Tailors/shop owners if you have any query.

Exercise

1. Which of the followings are the types of faults and defects:
   a) Stitching
   b) Fabric
   c) Preproduction
   d) All the above
2. Knots are caused when the thread breaks during the process of winding or weaving of the yarn.
   a) True
   b) False
3. What are the stitching defects?

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.....

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.....

4. What are the cutting defects?

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.....

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Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

APPAREL MADE-UPS HOME FURNISHING
SECTOR SKILL COUNCIL

3. The Sewing Process

Unit 3.1 - The Sewing Process

Unit 3.2 - Stitching

Unit 3.3 - Knowledge of Basic Embroidery Stitches

AMH/N1948

Key Learning Outcomes

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

1. Recognize the different types of sewing machine and understand the different parts of a sewing machine
2. Thread a sewing machine
3. Understand the different hand sewing methods
4. Understand flat stitches, loop stitches and knotted stitches
5. Carry out flat stitches, loop stitches and knotted stitches

UNIT 3.1: The Sewing Process

Unit Objectives

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

1. Recognize the different types of sewing machine and understand the different parts of a sewing machine
2. Thread a sewing machine
3. Understand the different hand sewing methods

3.1.1 Types of Sewing Machines

In accordance with the job requirement, the tailor uses different types of sewing machines. These machines have to be chosen and handled with care to provide best results.

Lockstitch sewing machine: Also called the domestic sewing machine, this is a regular and popular machine which is used at home and also in schools. It is run manually but also can be converted to electric power machine.

Fig.3.1.1(a): Hand driven Domestic sewing machine

Fig.3.1.1(b): Peddle driven Domestic sewing machine

Fig.3.1.1.2: Single needle lock stitch machine

Single needle lock stitch machine: It is modern high quality the color LCD touch panel sewing machine which reduces the disposition of the thread ends.

Embroidery Machine: This is used in making diverse kinds of embroidery and fancy stitches on fabrics. This machine is popularly used in making pillow cases, linen, and other novelty.

Fig.3.1.1.3: Embroidery Machine

Fig.3.1.4: Button Holer Machine

Button Holer Machine: As the name of the machine suggests. This is used in making buttonholes on garments.

Button Attachment Machine: This machine is used in attaching buttons to the garments

Fig.3.1.5: Button Attachment Machine

Fig.3.1.6: Bartacking Machine

Bartacking Machine: This is used in reinforcing the opening and closing of pockets.

Double needle lock stitch Machine: It works similar to the single needle lock stitch machine, using double needles and bobbins thus resulting in two parallel rows of lockstitch. The distance between the two stitches lines depends upon the distance between the two needle bars which can be adjusted.

Fig.3.1.7: Double needle lock stitch Machine

3.1.2 Parts of a Basic Sewing Machine and Their Functions

It is important for the beginner to know and recognize the different parts of the sewing machine. The basic structure of a hand operated or electric sewing machine are the same.

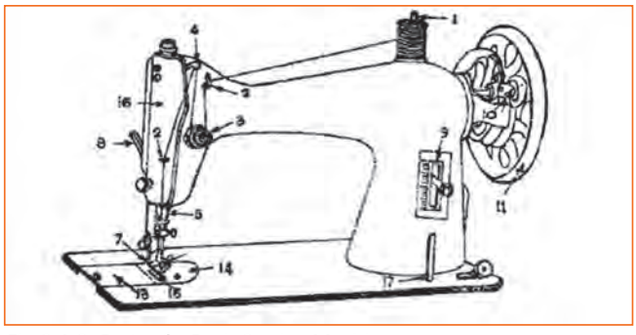


Fig.3.1.8: Parts of a Basic Sewing Machine

Parts of Sewing Machine:

1. **Spool pin:** While the thread feeds through the machine, the spool pin keeps the spool in place. Some machines have both horizontal and vertical spool pins.
2. **Thread guide:** It holds the thread in position from the spool to the needle.
3. **Tension disc:** The thread passes between the two concave discs put together with the convex sides facing each other. There is a spring and nut which increases or decreases pressure thus adjusting the tension of the thread
4. **Take up lever:** It is a lever fitted to the body of the arm. It's up and down motion feeds the thread to the needle and tightens the loop formed by the shuttle.
5. **Needle bar:** Its main function is to give motion to the needle. The steel rod holds the needle at one end.
6. **Bobbin case:** This moves into position to catch the top thread and form the stitch as the needle is lowered into the bobbin chamber.
7. **Presser foot:** It is fixed to the presser bar and holds the cloth firmly in position when lowered.
8. **Presser foot lifter:** It is a lever attached to the presser bar for raising and lowering the presser foot.
9. **Stitch regulator:** This controls the length of the stitch.
10. **Bobbin winder:** A simple mechanism used for winding thread on the bobbin.
11. **Fly Wheel:** When this is made to revolve, it works the mechanism of the motion
12. **Clutch or Thumb Screw:** This is in the centre of the fly wheel and it engages and disengages the stitching mechanism.
13. **Slide Plate:** A rectangular plate, which facilitates the removal of the bobbin case without lifting the machine.
14. **Needle Plate or Throat Plate:** A semi-circular disc with a hole to allow the needle to pass through it.
15. **Feed dog:** This consists of a set of teeth fitted below the needle plate. It helps to move the cloth forward while sewing.
16. **Face plate:** A cover which on removal gives access to the oiling points on the needle bar, presser bar and take-up lever.
17. **Spool pin for bobbin winding:** Spool of thread is placed on this at the time of bobbin winding.

Few more parts of the sewing machine are as follows:

1. **Arm:** The horizontal upper part of the head which has the mechanism for handling upper thread and driving the needle.
2. **Back Stitch Lever:** A lever located at the lower right hand side of the machine and its basic function is to form the stitches in reverse direction.
3. **Bed:** The lower portion of the machine i.e. stands under which the mechanism for handling lower thread including the shuttle and feed are mounted.
4. **Bobbin:** A small metal spool that holds the lower thread supply.
5. **Hand Wheel:** Handel is located on the right side of the machine. It is driven by hand or belt in the domestic machine and with the help of belt in the industrial machine. It controls the movement of the needle bar and drives the machine.
6. **Hand Lifter:** To lift the presser foot by hand.
7. **Head:** The upper part of the machine above the stand. It is a complete sewing machine without the bed.

8. **Pan:** It is the metal pan under the head that catches oil, lint, broken threads.
9. **Shuttle:** A device that carries the needle thread around the bobbin and forms the lock on the lock stitch.
10. **Tension Regulator:** It is a mechanism which controls the tension of upper thread and the quality of stitches. The tension of the thread is adjusted with the help of spring and nut which controls the pressure on the disc.
11. **Thread Stand or Spool Pin:** It is a metal rod fitted either on top or on side of the stand to hold the thread spool.
12. **Thread Take Up Lever:** A bar/lever which is located above the tension regulator. It moves up and down. It has a hole through which the thread passes. It feeds thread to the needle and it also tightens loop formed and locks it.

3.1.3 How to Thread a Sewing Machine

1. Put the presser foot in the ascendant position. Place a reel of thread on the spool holder. Roving from the spool holder, diagonally through the top of the machine, look for a smallest of one thread guide. Insert the thread in the thread guide.
2. Look for a tension apparatus. Bring the thread down to the tension mechanism, slip the thread amid the metal disks of the tension mechanism, and port back upwards with the thread.

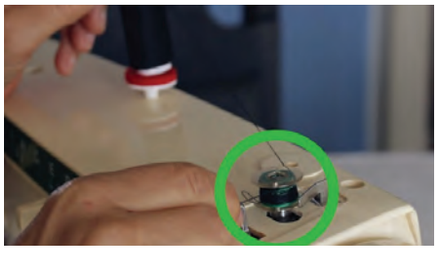


Fig.3.1.9: Threading a machine

3. Look for a take up mechanism. This is the area on the anterior of the machine which will go up and down, when you turn the hand wheel. Place the thread over the take up lever. Some machines are set up so the thread will slip into this; others require you to place the thread through a hole.
4. At this time the thread will go downward on the left side of the take up lever.
5. Locate and thread any thread guides, leading down to the sewing machine needle.
6. Thread the sewing machine needle. Grip the thread with your left hand and turn the hand wheel.
7. Watch for any thread to flap about. If this chances, you have probably missed a thread guide.

3.1.4 Common Sewing Machine Problems

A Tailor should know how to tackle simple sewing machine problem. Below is the checklist for machine problems and the best ways to solve them.

Machine troubles	Causes	Remedies
Skipped stitches	• Defective machine needle • Low pressure on the presser foot	• Replace the needle • Increase pressure on the presser foot.
Knotting or breaking thread	• Bad quality thread • Machine is threaded wrongly • Bobbin and Bobbin case is threaded incorrectly.	• Completely un-thread your sewing machine and re-thread it. • Thread it correctly.

Machine runs noisily	• Insufficient oil • Loose screw	• Oil the sewing machine • Tighten the screws
Thread bunching or "Birds nesting "	• Tension setting is too low • The thread is positioned wrongly • The bobbin case is positioned incorrectly	• Reset the tension • Re-thread the top thread ensuring the threading line indicator on the hand wheel is positioned to the top • Check the position of your bobbin case and reset as per instruction manual
Fabric not feeding	• Feed has not been accidentally lowered. • Stitch regulator not set on zero • Too tight pressure on presser foot	• Raise the feed to ensure the fabric will move forward. • Adjust stitch regulator to desired stitch length • Add pressure to presser foot by adjusting the pressure regulator screw

Fig.3.1.10: Common Sewing Machine Problems and their Solutions

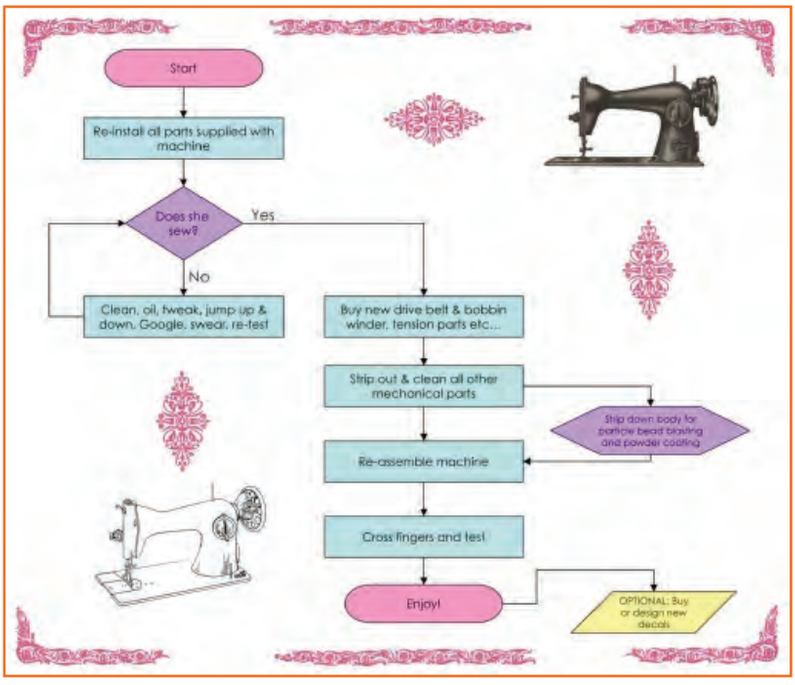


Fig.3.1.11: Solving common problem of a sewing machine

3.1.5 Different Hand Sewing Methods

Every tailor should know a few of the basic hand stitching methods. The popularly used hand stitching methods are listed below.

Running Stitch: Push point of needle in and out of fabric until you have several stitches on the needle. Hold fabric taut with left hand, pull the needle through. It's the basic stitch in hand-sewing and embroidery, on which all other forms of sewing are based.

Fig.3.1.12: Running Stitch

Fig.3.1.13: Back Stitch

Back Stitch: It is used in strengthening a seam made by hand.

- Make a running stitch
- Take a back stitch to the beginning of the first stitch, overlapping each running stitch

Basting: This stitch holds the fabric temporarily in place, until permanently stitched. It is a longer version of a running stitch.

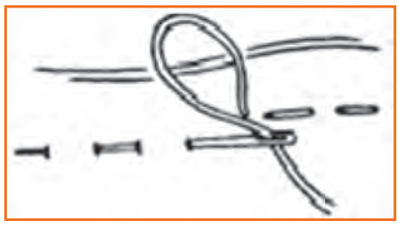


Fig.3.1.14: Basting

Fig.3.1.15: Outline Stitch

Outline Stitch: It is the slated version of the back stitch. Start with a straight stitch in the fabric, and pull the thread through until you are left with a small loop. This stitch is used to mark outlines in an embroidery pattern.

Blanket Stitch: Put your needle in 1/4 inch from the edge of the fabric, put the thread under the point of the needle and pull through. It is used for edging material of table-covers, mantel valances, blankets etc.

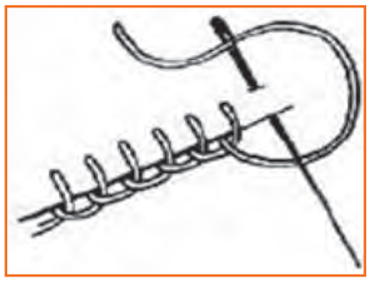


Fig.3.1.16: Blanket Stitch

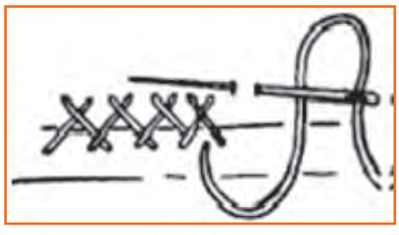


Fig.3.1.17: Catch Stitch

Catch Stitch: It is one of the hemming stitches. The catch stitch is an ideal stitch for when you need to hem knit garments. Working from left to right, Take a stitch in the hem, then a tiny stitch to the right just beyond edge of hem with the point of needle to the left. This makes diagonal lined that cross each other.

Chain Stitch: Chain stitch is a series of looped stitches forming a chainlike pattern. It is adapted to all different techniques, even lace making. Insert the needle in and out of the fabric (as in the running stitch). Bring the thread under the tip of the needle while still in the fabric, then pull the needle through.

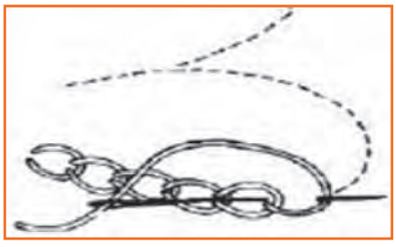


Fig.3.1.18: Chain Stitch

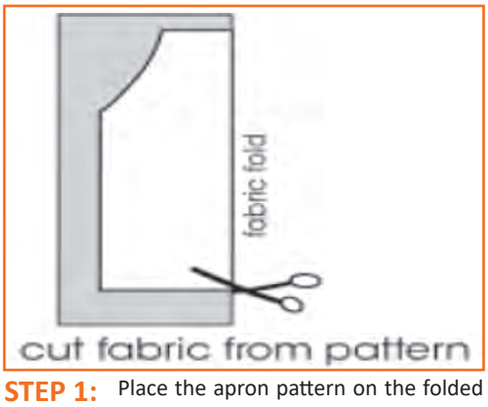
Padding stitch: Put at an angle this stitch resembles a temporary stitch. The first line is taken at a certain angle and in the next line the angle is in the opposite direction. Used to set layers of cloth. It is used mainly in coats.

Fig.3.1.19: Padding Stitch

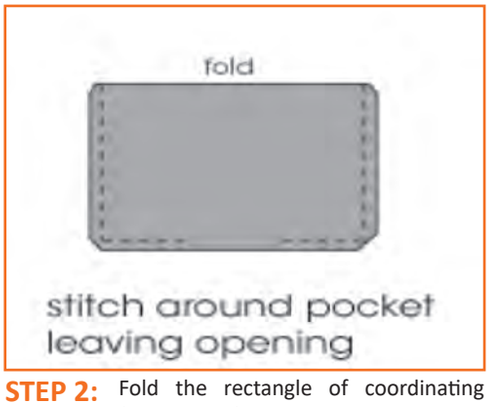
3.1.6 Sequence of Sewing (A Basic Apron with Pocket)

Materials, Tools and Equipment Required:

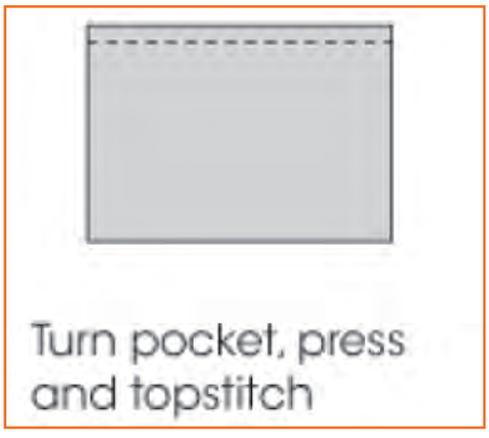
- 1 yard of fabric
- Piece of coordinating fabric for the pocket
- 7/8" ribbon
- Apron Pattern



STEP 1: Place the apron pattern on the folded fabric and cut out.



STEP 2: Fold the rectangle of coordinating fabric in half with right sides together. Stitch around three sides of the pocket using a 1/2" seam allowance, leaving a 3" opening at the bottom. Clip the corners.



STEP 3: Turn the pocket right side out and push out the corners of the pocket with an item like a chopstick. (Don't use something too sharp or you will poke a hole through the fabric.) Press the pocket flat, folding in the raw edges of the opening. Topstitch along the fold, which will be the top of your pocket.

STEP 4: Place the pocket on the centre of the apron approximately 12" from the top. Stitch the sides and bottom of the pocket to the apron.

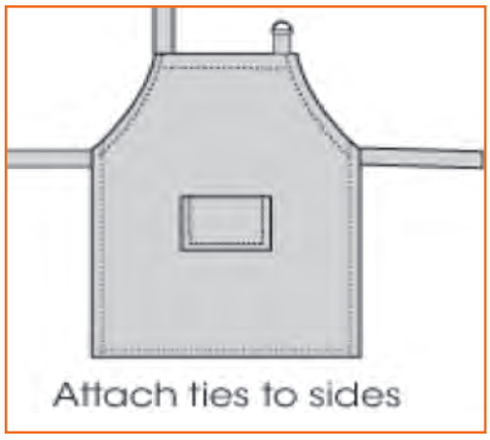
(Placement of the pocket may vary).

STEP 5: Using a double fold hem (folding fabric in 1/2", pressing, then folding 1/2" again and pressing for a 1" hem), pin and stitch the sides and bottom of the apron.

STEP 6: Using a double fold hem (folding fabric in 5/16", pressing, then folding 5/16" again and pressing for a 5/8" hem), pin and stitch the curved side of the apron.

STEP 7: Fold down 1/4" along top and press. Fold 1" again and press. Stitch facing down.

STEP 8: Using a double fold hem (folding fabric in 5/16", pressing, then folding 5/16" again and pressing for a 5/8" hem), pin and stitch the curved side of the apron.



STEP 9: Fold down 1/4" along top and press. Fold 1" again and press. Stitch facing down.

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Recognize the different types of sewing machine and understand the different parts of a sewing machine.
- Analyse how a tailor threads a sewing machine.
- Understand the different types of hand sewing methods.
- Recognize the different sewing machine problems.
- Understand the different sewing methods.
- Ask questions to Tailors/shop owners if you have any query.
- Observe the sequence of sewing of a basic apron.

Exercise

1. Lockstitch sewing machine also called the domestic sewing machine.
   a) True
   b) False
2. _____ machine is used in reinforcing the opening and closing of pockets.
   a) Button attachment
   b) Bartracking
   c) Embroidery
   d) Button Holer
3. What are the parts of a basic sewing machine?

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UNIT 3.2: Stitching

Unit Objectives

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

1. Recognize the different parts of a trouser and a shirt.
2. Stitch trouser and shirt.

3.2.1 Trouser Stitching

Parts of a trouser

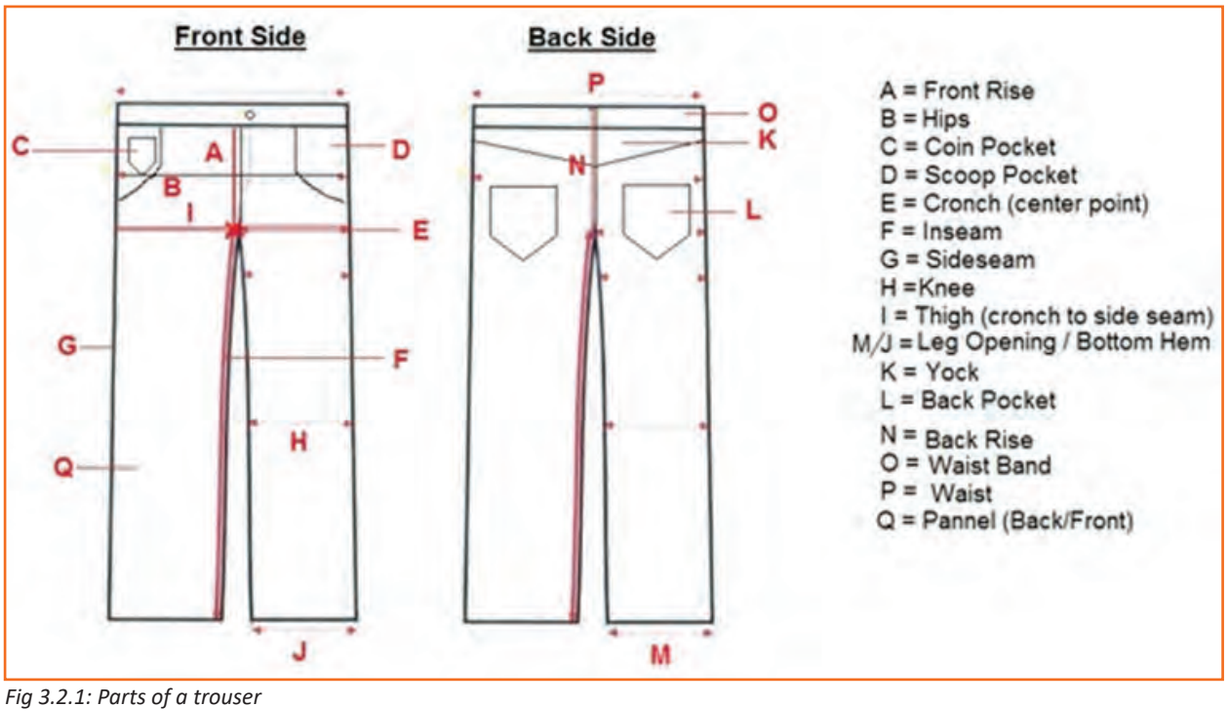


Fig 3.2.1: Parts of a trouser

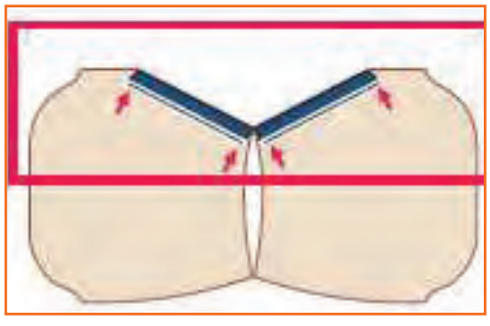
3.2.1.1 Preparation of Pocket Bag (front)

Step 1: Take both the upper facing pieces and put overlock stitch on the longer straight sides. Make sure the face side of the pieces is on top.

Step 2: Take both the lower facing pieces and put overlock stitch on the curved sides. Again, make sure that the face side of the pieces are on the top.

- Note the notch martks on the lower facing pieces.
- Note that the overlock stitch is on the curved side.

Step 3: Take both of the pocket bag pieces and both upper facing pieces. Keep the upper facing piece over the pocket bag in such a way that the overlock part is facing inside and the stitch is facing upwards.



Step 4: Put lockstitch at the edge of the overlock stitch.

Step 5: Take both the lower facing pieces and keep them over the other side of the pocket bag.

Step 6: Put the lockstitch at the edge of the overlock curved stitch.

3.2.1.2 Pocket Attaching (front)

Step 1: Take the two front pieces and keep them on the sewing Fig with the face side up.

Step 2: Take the pocket bag and place it over the left front piece aligning with the mouth of the pocket.

Step 3: Put 6 mm stitch taking ¼ line on throat plate as guide, starting from the top to bottom.

Step 4: Turn the piece and put 4 mm stitch at the mouth of the pocket.

Step 5: Match the lower facing and upper facing at thenotch marks.

Step 6: Put 2 mm stitch starting from the waistline to the outer side of the left front piece.

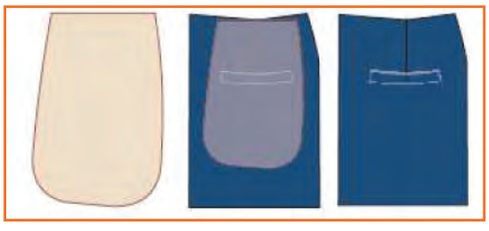
Step 7: Put 5 thread overlock stitches on the curved portion of the pocket bag.

Step 8: Take the other pocket bag and place it over the right front piece aligning with the pocket bag (face to face).

Step 9: Repeat steps 3-7 for the right hand side pocket.

3.2.1.3 Pocket Attaching (Back)

Step 1: Take a note of the notch marks and the pocket marking on the back piece.

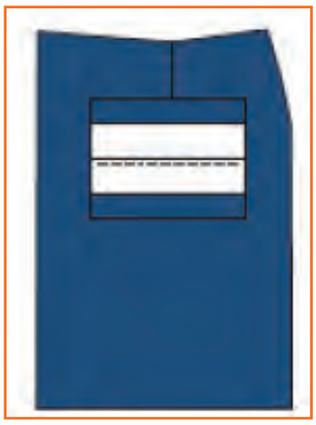


Step 3: Take one of the back pocket bags. Place it belowthe back piece in such a way that the top end of the back piece and the pocket bag are perfectly aligned. Make sure that pocket bag is aligned centrally to the dart.

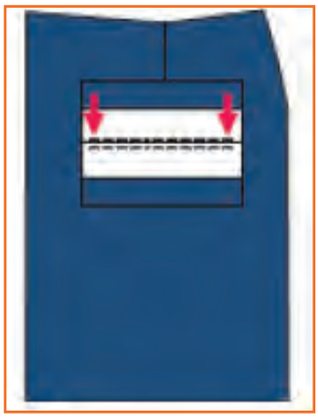
Step 2: Fold the fabric at the centre notch mark and make a dart by starting to stitch on the notch mark till the centre marking.

Step 4: Take one of the fused bone pieces and place it over the pocket markings in such a way that the top marks are visible and the bottom marks are covered by the bone pieces and are at equal distance from both sides.

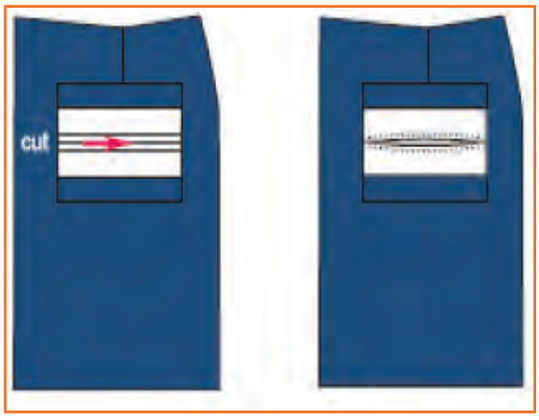
Step 5: Now put a 6 mm stitch starting from back rise side towards the side seam side. The first stitch should be at the notch mark side. Put back tack, both at the beginning and end of the stitch.



Step 6: Take the second fused bone piece and place it next to the stitched bone piece on the waist side.

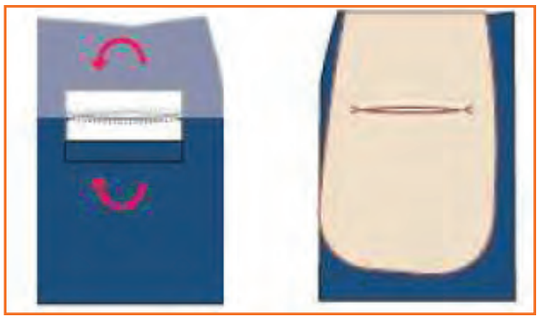


Step 7: Put 6 mm stitch starting from the side-seam side towards the back rise side.



Step 8: Cut the fabric between the two bones leaving 10–12 mm on both sides.

Step 9: Put 6 mm stitch starting from the side-seam side towards the back rise side.

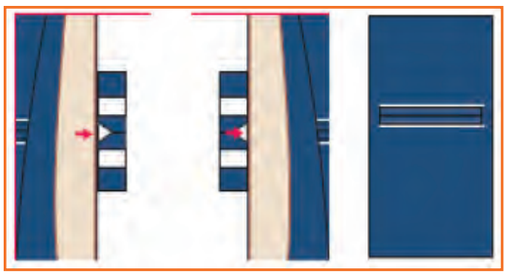


Step 10: Cut the fabric between the two bones leaving 10–12 mm on both sides.

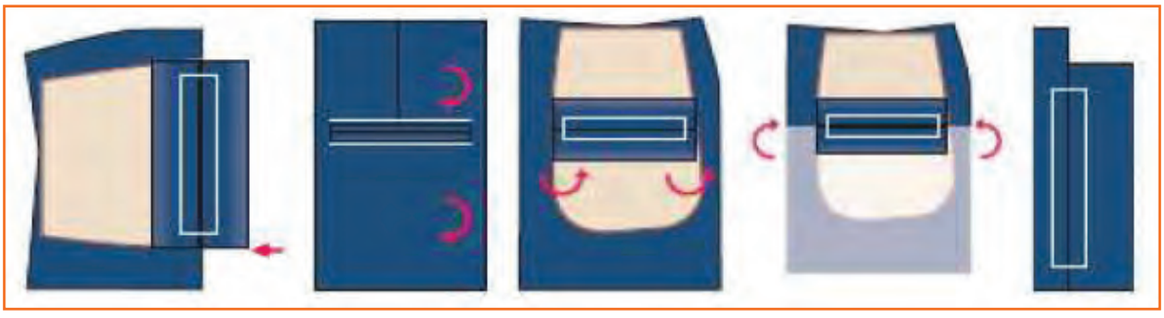
Step 11: Put a stitch on the edge of the folded portion next to the stitched portion.

Step 12: Repeat steps 10 and 11 for the other bone.

Step 13: Push the balance fabric inside.



Step 14: Put a stitch at the end of the cut portion.

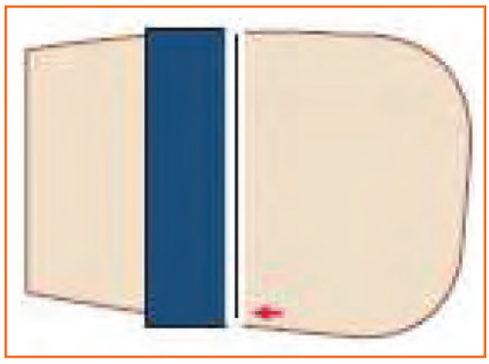


Step 15: Put overlock stitch at the loose end of the bottom bone piece.

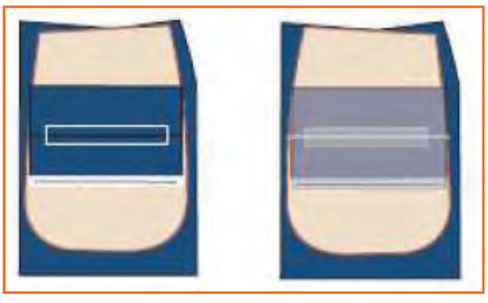
Step 16: Attach bone piece with the pocket bag using lockstitch.

Step 17: Put overlock stitch on the back pocket facing.

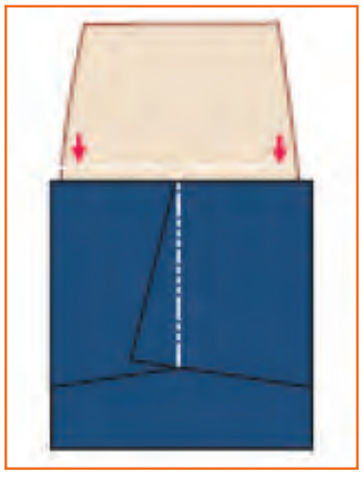
Step 18: Take the other piece of the pocket bag. Place the back pocket facing on top of the pocket bag at a distance of 2½ inches from top of the pocket bag.



Step 19: Put a lockstitch over the overlock portion.



Step 20: Take the fi rst pocket bag, which is already sewn to the back piece. Place the other pocket bag over it. Both the bags should match perfectly.



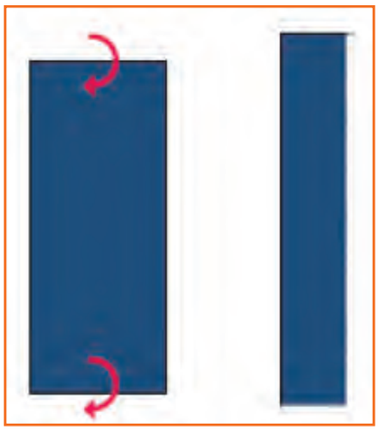
Step 21: Now put a stitch at the inner side to join the two pocket bags together.

Step 22: Put 5-thread overlock stitches starting from right (back rise side) to the left side.

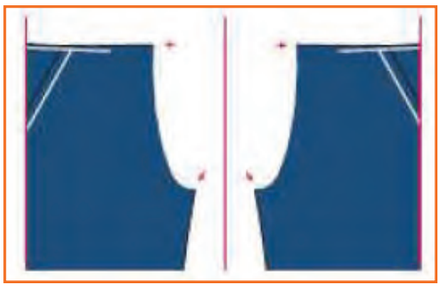
Step 23: Put 3 mm lockstitch at the waistline, starting from the left towards the right, to stitch the loose top end of the pocket bag with the fabric.

3.2.1.4 Fly Making and Attaching

Step 1: Take the fused J-fly piece and put overlock stitch on the face side of the fabric starting from bottom of the curved side till the top.



Step 2: Take the fl y supportive part. Fold it into two equal parts and put over lock stitch on the long open side and one on the short open sides.



Step 3: Take the fused J-fly piece and put overlock stitch on the face side of the fabric starting from bottom of the curved side till the top.

Step 4: Take the left front piece and place the J-fl y piece over the left front piece. Align the straight end of the J-fl y with the front rise along with the backside of the J-fl y facing up.

Step 5: Put a 6 mm lockstitch starting from the bottom to the top (waist line).

Step 6: Turn the J-fl y piece and put an edge stitch on top of the fl y from bottom to top. Make sure that the raw edges are facing towards the fly.

3.2.1.5 Zipper Attaching

Step 1: Take the zipper, open it and bring the slider down.

Step 2: Place the zipper with slider facing down over the fly piece at 8 mm from the straight edge at the top and 6 mm at the bottom. Align the bottom edge ofthe zipper with the curved portion of the fly piece.

Step 3: Put an edge stitch on the left side of the zipper from top to bottom.

Step 4: Close the zipper and turn the piece 180o clockwise.

Step 5: Now put a 4 mm stitch starting from bottom to top.

Step 6: Take the fl y supportive part. Place the zipper with slider facing up on the fly supportive part. Properly align the zipper end and the overlock side of the fly supportive part.

Step 7: Turn the fabric and put edge stitch on the zipper starting from bottom to top.

Step 8: Take the right front piece and place the front rise side over the zipper. Make sure that the waistlines of both the left and right front pieces match.

Step 9: Put 6 mm stitch starting from bottom to the top.

Step 10: Turn the stitched panels and bring the face side up.

Step 11: Leave a gap of 1 mm between the zipper teeth and the edge of the fabric and put top-stitch.

Step 12: Open the zipper.

Step 13: Turn the left side front piece from the zipper side at the point of stitch.

Step 14: Place the ready pattern of J-fly over the left front piece on the front rise side.

Step 15: Put lockstitch along the ready pattern starting from top to the bottom.

Step 16: Close the zipper and complete the J-stitch along the J-pattern.

Step 17: Put a top-stitch on the edge of the fi nished J-piece starting from bottom to top.

Step 18: Reverse the fabric and put 6 mm stitch on the curved portion of the front rise.

Step 19: Turn the piece so that the front side of the fabric is facing up. Put an edge stitch on front rise starting from bottom till the end of J-stitch.

3.2.1.6 Back Rise Attaching

Step 1: Take both the left and right back pieces. Match them face-to-face.

Step 2: Put 1 cm stitch at the back rise starting from top to bottom with back tack at both the top and bottom.

Step 3: Now put overlock stitches at the back rise starting from top to bottom.

Step 4: Turn the raw edges towards the left side and put top-stitch at the edge of the back rise.

3.2.1.7 Front and Back Piece Attaching

Step 1: Place front and back pieces in such a way that the face sides of both pieces face each other.

Step 2: Put 1 cm stitch throughout the right side starting from top to bottom.

Step 3: Turn the raw edges towards the back. Put topstitches at the edge starting from top to bottom for the right side and bottom to top for the left side.

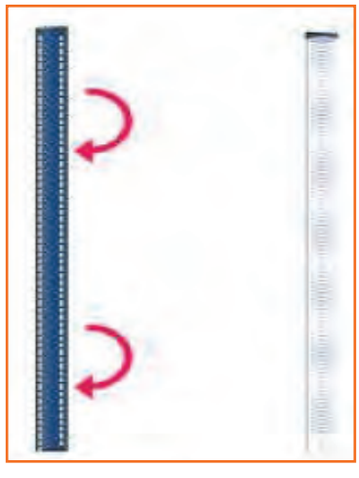
Step 4: Align the back and front rise seams and the open sides of the front and back.

Step 5: Put 5-thread overlock stitches starting from bottom to finish at other bottom side.

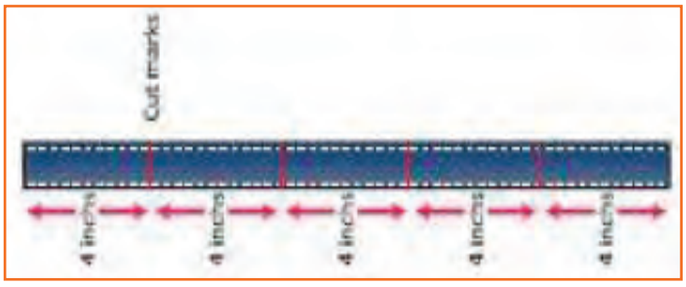
3.2.1.8 Belt Loop Making

Step 1: Take a long strap, 2.5 mm wide, of the fabric used in body.

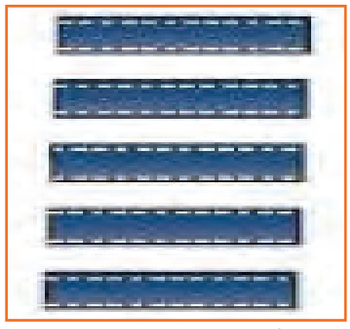
Step 2: Turn the raw edges towards the left side and put top-stitch at the edge of the back rise.



Step 3: Start sewing and feeding the fabric properly.

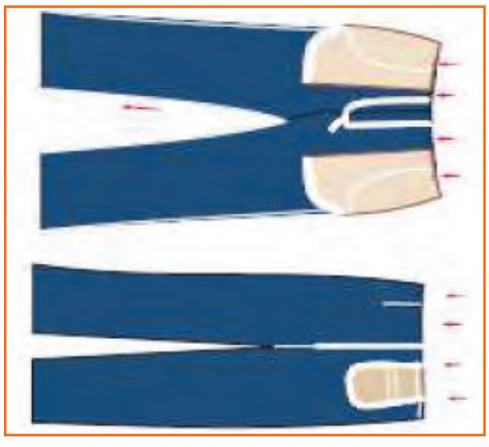


Step 4: Put the marking on the strap for the required length.



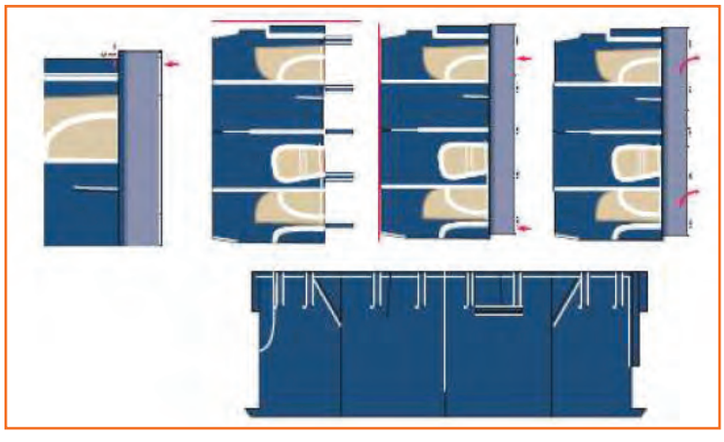
Step 5: Cut the strap of desired leangth.

3.2.1.9 Belt Loop Attaching



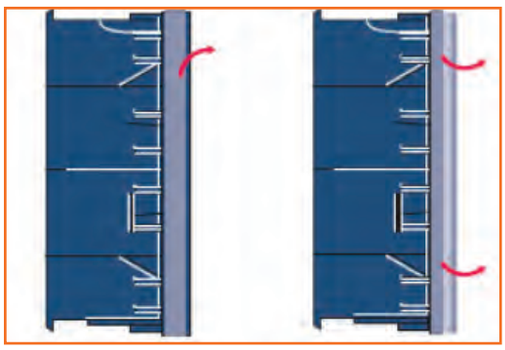
Step 1: Mark the positions on the waistline where the loops are to be attached.

Step 2: Place the belt piece, with the folded side up on the backside of the right front. Belt band should be extended by ½ inch.

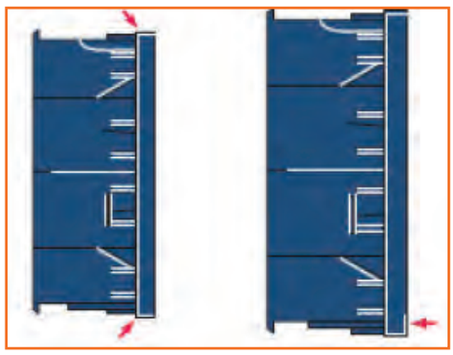


Step 3:

- Put a lockstitch adjacent to the folded part of the belt piece.
- Place the loop with the side facing the fabric and continue to stitch till the end by placing other loops at required positions.

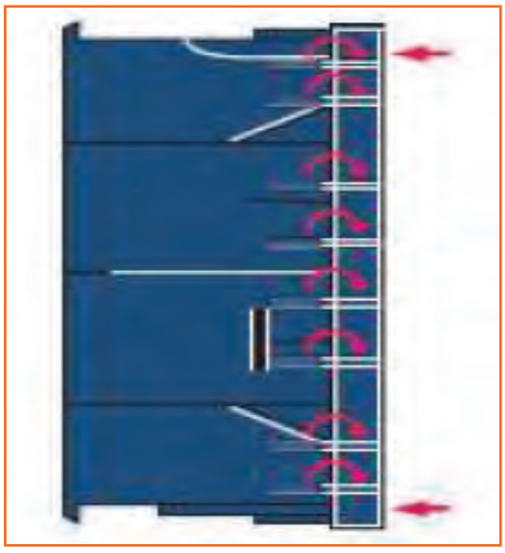


Step 4: Turn the belt piece in such a way that the fused side is up.

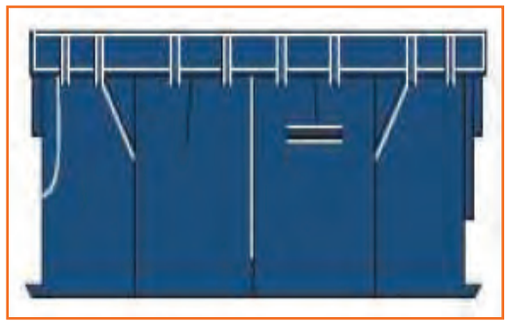


Step 5:

- Stitch the open vertical end on both sides starting with back tack.
- Now again turn the belt piece so that the face side is facing up.

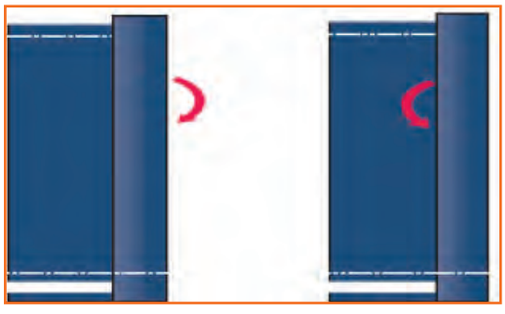


Step 6: Now put edge stitches throughout the length of the belt on the bottom side.



Step 7: Finally put edge stitches throughout the top side of the belt and stitch the loops at appropriate positions.

3.2.1.10 Bottom Hemming



Step 1: Fold the fabric as per the design requirement.

Step 2: Start putting the edge stitch from the inseam and fi nish at inseam. Repeat steps 1 and 2 for the other leg.

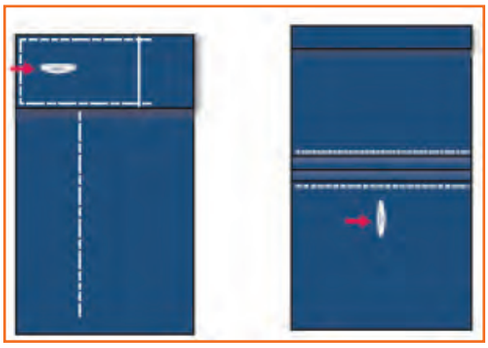
3.2.1.11 Bottom Hemming Using Folder

Step 1: Fold the bottom of right trouser leg 1 cm inside.Again fold the fabric to the required width and put 2 or 3 stitches.

Step 2: Place the attachment in such a way that the folded portion is fi tted into the groove of the folder and then start stitching. Feed the fabric properly.

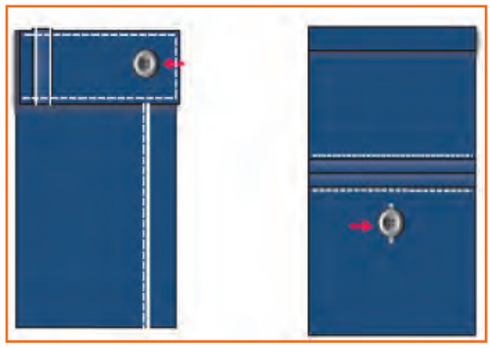
Step 3: Repeat steps 1 and 2 for the other leg.

3.2.1.12 Button Holing



Step 1: Make the buttonhole on the left hand side belt as per design requirement. Make another buttonhole on the back pocket.

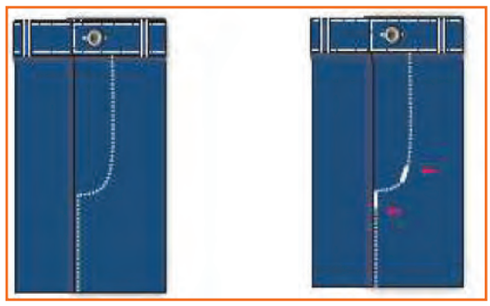
3.2.1.13 Button Attaching



Step 1: Sew the button on the right hand side belt as per the design requirement and sew one button at the back pocket.

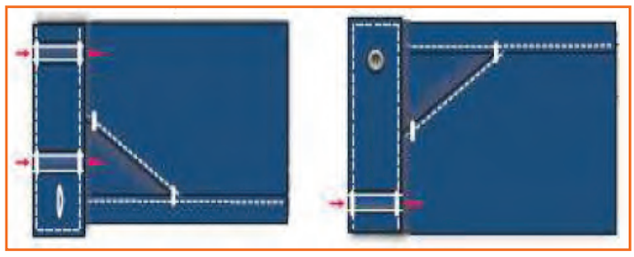
3.2.1.14 Bartacking

Step 1: Put bartack as per design requirement. Normally bartacks are put at both ends of left and right front pocket mouth and at the end of the front and back pocket joints.

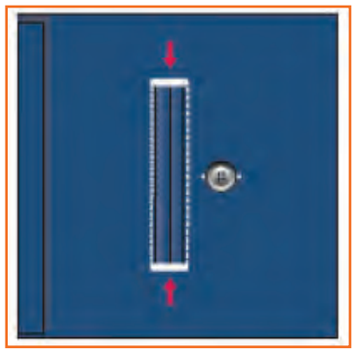


Step 2: Put the bartack at the end of the J-fly and at the curve of the J-fly.

Step 3: Put the bartack at the joining of front and back rise.



Step 4: Put the bartack at the top and bottom of each belt loop.



Step 5: Put the bartack at both ends of the back pocket.

3.2.2 A Traditional Shirt

Parts of a Shirt

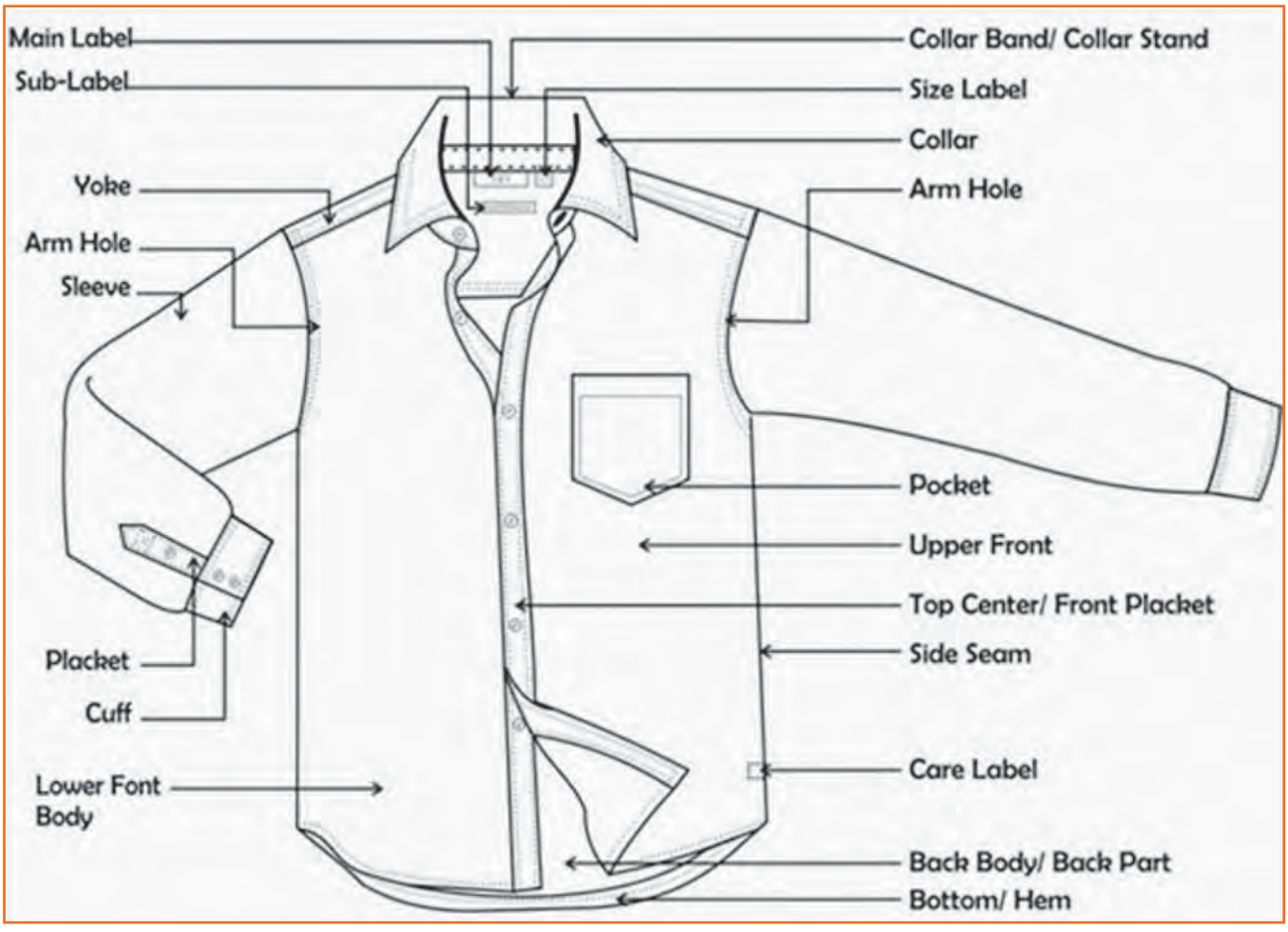
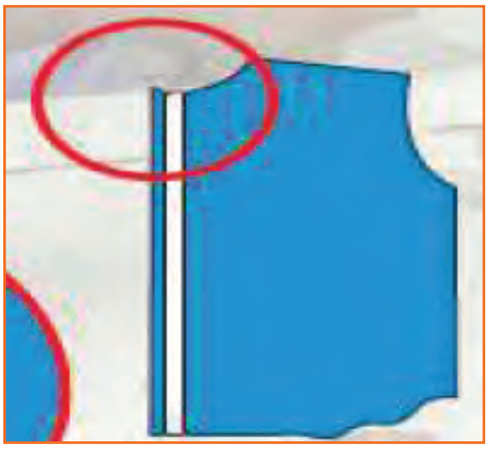
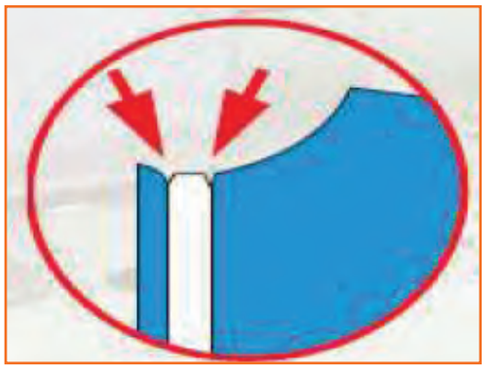


Fig 3.2.2: Parts of a Traditional Shirt

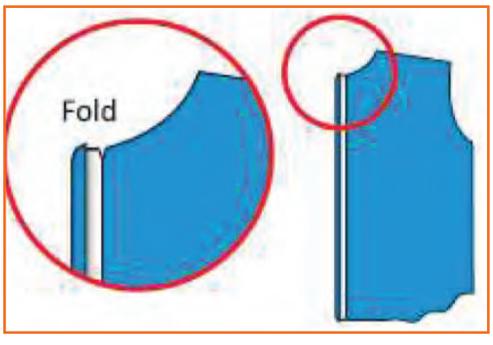
3.2.2.1 Left Hand Side Placket



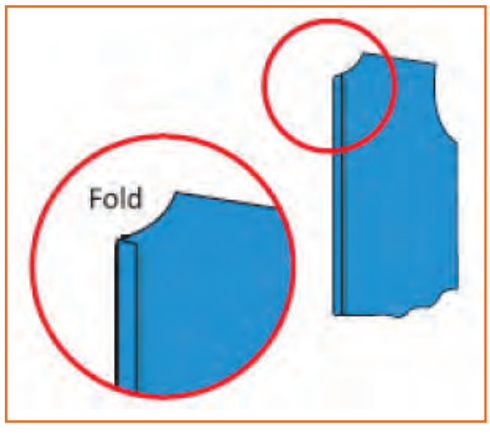
Step 1: Take the fused left hand side placket.



Step 2: Locate the two notch marks. There is one at 2.3 cm and the other at 5.5 cm from the edge.

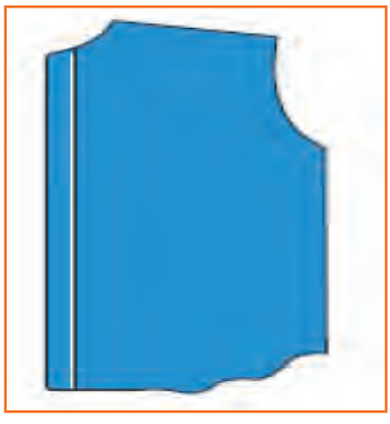


Step 3: Now, fold the fabric 2.3 cm till the first notch mark and press the folded part with an iron.

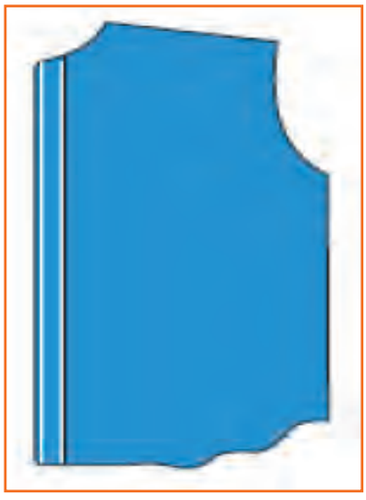


Step 4: Now, fold the fabric 4 cm to the second notch mark. Th e placket should be 4 cm wide.

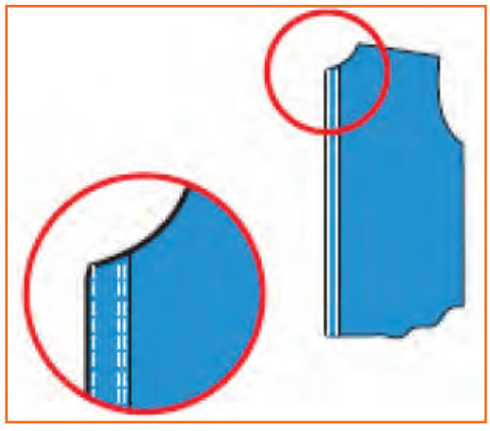
Step 5: Now, crease the folded part again with an iron.



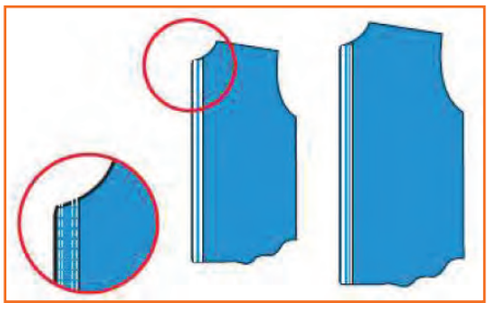
Step 6: Start from the bottom and stitch the inner side of the placket using edge stitch.



Step 7: Again from the bottom, stitch the outer side of the placket using edge stitch.

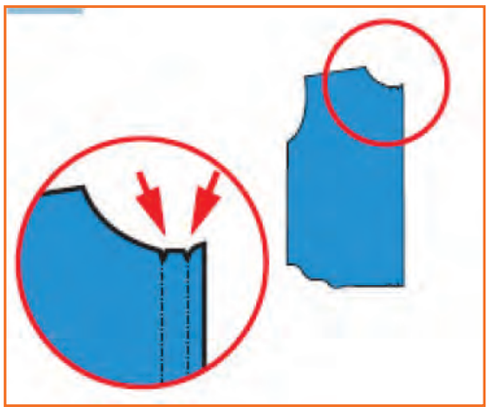


Step 8: Identify the reference mark on the throat plate and put a 4 mm stitch on the outer side of the placket from the bottom.



Step 9: Put a 4 mm stitch on the inner side of the placket from the top.

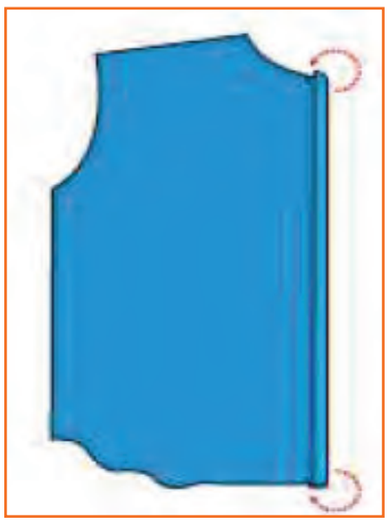
3.2.2.2 Right Hand Side Placket



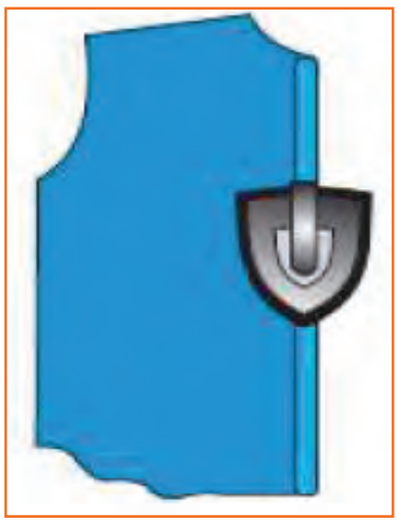
Step 1: Identify the notch marks on the back side of the fabric.

Step 2: Fold the fabric 1cm towards the notch mark or the neck, on the back of the fabric.

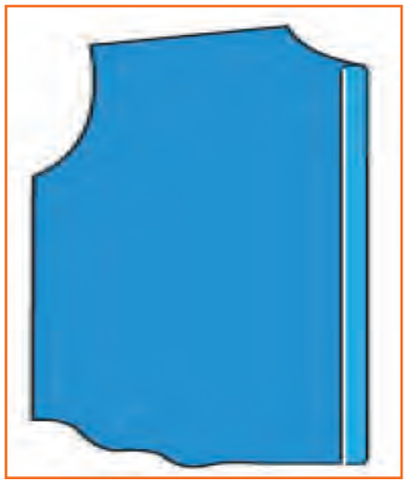
Step 3: Crease folded part.



Step 4: Now, fold the fabric 2.5 cm till the second notch mark.



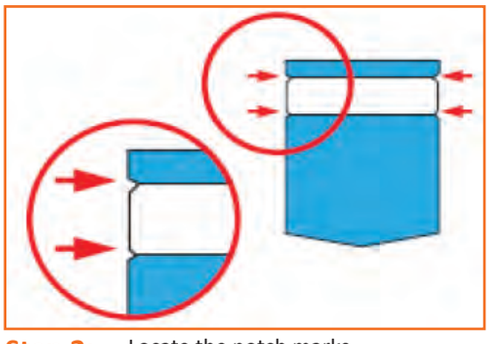
Step 5: Crease the fold with an iron again like in Step 3.



Step 6: Start from the top and stitch the inner side of the placket using an edge stitch.

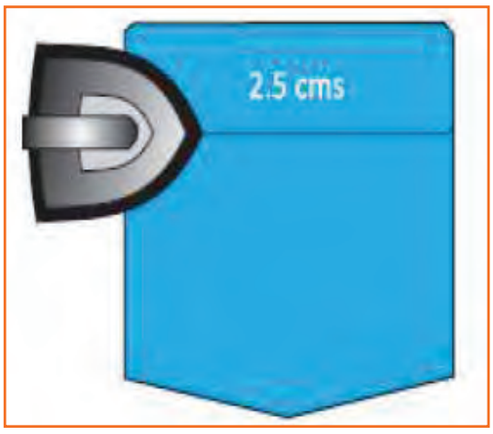
3.2.2.3 Pocket Making and Stitching

Step 1: Take the fused pocket piece.



Step 2: Locate the notch marks.

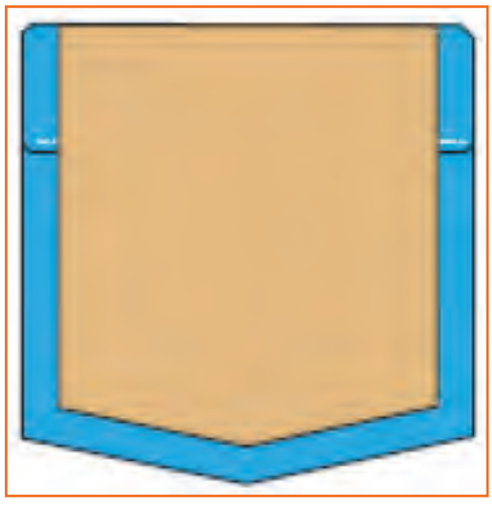
Step 3: Now, fold the top part of the fabric 1cm till the first notch mark and press the folded part with an iron.



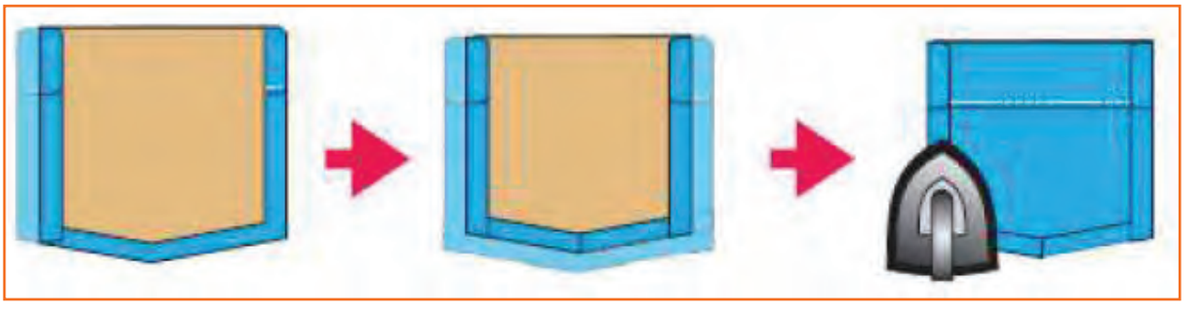
Step 4:

- Now, fold the fabric 2.5 cm to the second notch mark.
- Now, crease the folded part again with an iron.

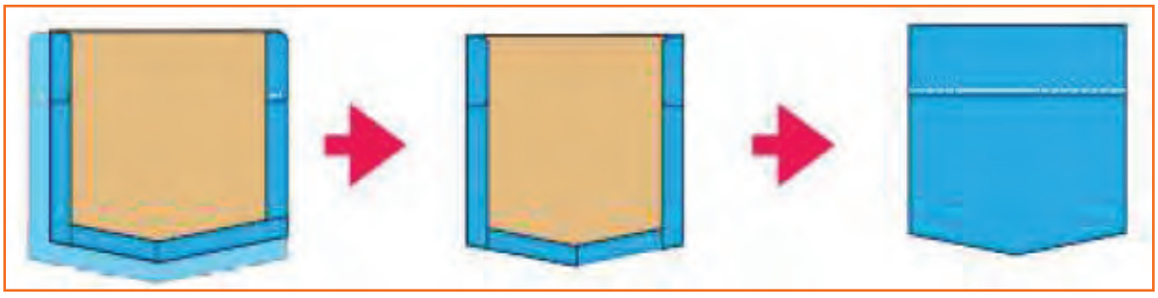
Step 5: Stitch the inner side of the pocket mouth using edge stitch.



Step 6: Take the ready pattern given and place it over thepocket.

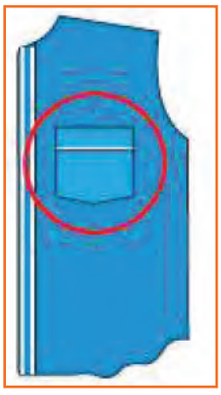


Step 7: Now, fold the three sides 1 cm each and crease them as you fold.

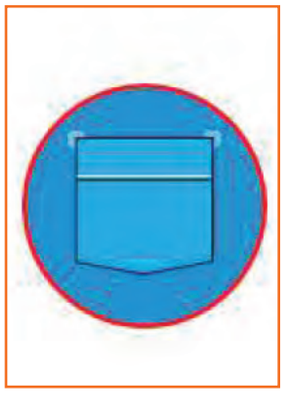


Step 8: The pocket is now ready to be attached.

3.2.2.4 Attaching the Pocket



Step 1: Place the pocket piece on the left half of the shirt front.



Step 2: Match the right side of the pocket with the markings on the front of the fabric.

Step 3: Sew the pocket from the placket side. Put 4 stitchesfollowed by a back tack.

Step 4: Now, sew till the top using 4 mm stitch.

Step 5:

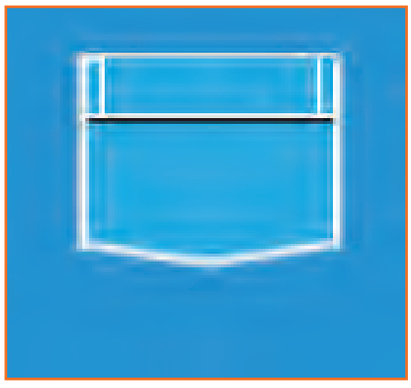
- Turn the fabric in a clockwise direction. Keep the needle in the fabric.
- Stitch at the edge of the pocket till the end.

Step 6:

- Again, turn the fabric clockwise.
- Put the stitch at the edge till the end.

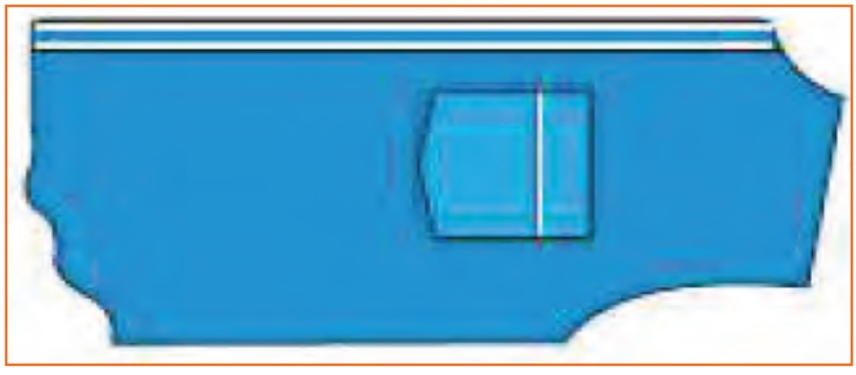
Step 7:

- Again, turn the fabric clockwise. Stitch the edge ofthe bottom part of the pocket.
- Step 10: Turn the fabric clockwise and stitch the edge of the other side of the pocket.



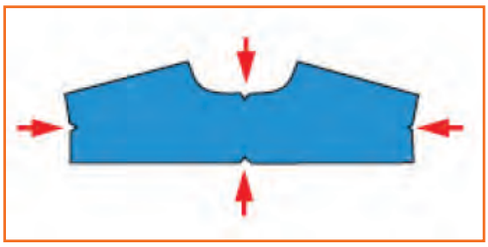
Step 8:

- Again, turn the fabric clockwise and stitch up to 4 mm.
- Turn the fabric. Stitch up to the pocket mouth and put a back tack.



Step 9: Now, the pocket is fully attached.

3.2.2.5 Attaching Yoke



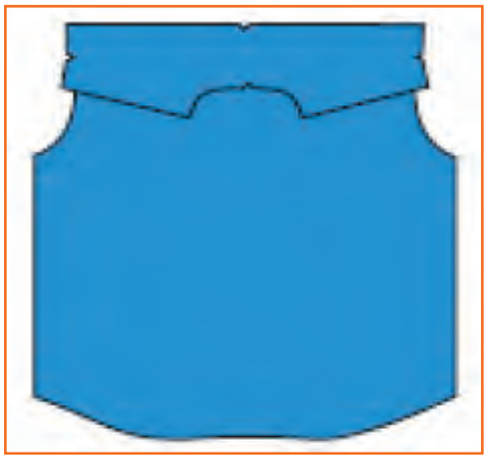
Step 1: First, check for the following notches:

- One notch at the centre of the back piece of the shirt.
- 4 notches in the yoke piece:
  - » One at the centre of the reverse side of the yoke piece.
  - » One at the centre of the neckline.
  - » One at the centre of the left armhole.
  - » One at the centre of the right armhole.

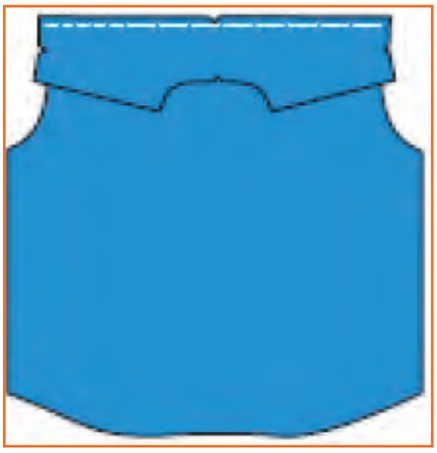
Step 2: Keep one piece of the yoke on the sewing Fig.

Step 3: Place the back piece of the shirt on top of the yoke in alignment with the two notches.

Step 4: The right side of the inner yoke piece should face the reverse side of the back piece of the shirt. Take the other yoke piece and place it on top of the back piece of the shirt and align with the notch.



Step 5: The alignment should be such that the right side of the outer yoke piece faces the right side of the back piece of the shirt.



Step 6: Put a stitch of 1cm on the edge of the 3 pieces—2 yoke pieces and the back piece of the shirt.

Step 7: Turn the yoke and crease it with your fi ngers.

Step 8: Now, put a top-stitch at the edge first.

Step 9: Finally, put a 4 mm stitch from the edge.

3.2.2.6 Attaching Yoke to the Front

Step 1: Keep the front side of the back piece of the shirt on the top.

Step 2: The alignment should be such that the right side of the outer yoke piece faces the right side of the back piece of the shirt.

Step 3: The pieces are stitched at a distance of 1 cm from the edge leaving the bottom-most ply of the yoke.

Step 5: Hold the edge of the yoke from the armhole side in one hand and the unstitched yoke piece in the other hand.

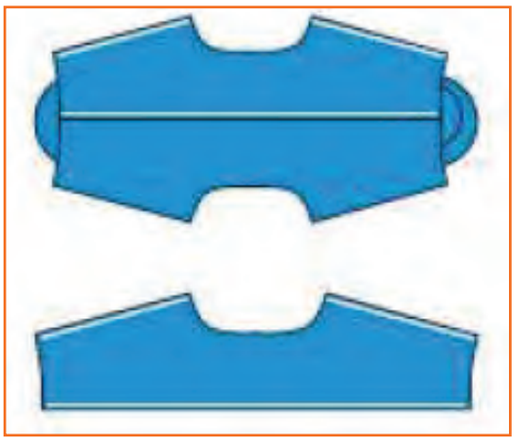
Step 7: Roll the body fabrics and insert it between the two yoke pieces.

Step 4:

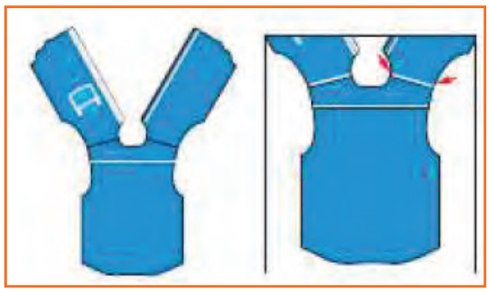
- The right side of the front and the right side of the back piece of the shirt are placed together by matching the yoke. The placket should be towards the centre.
- Repeat Step 3 for right side.

Step 6: Turn and match the unstitched yoke piece to the stitched yoke piece.

Step 8: Put a 1 cm stitch throughout.



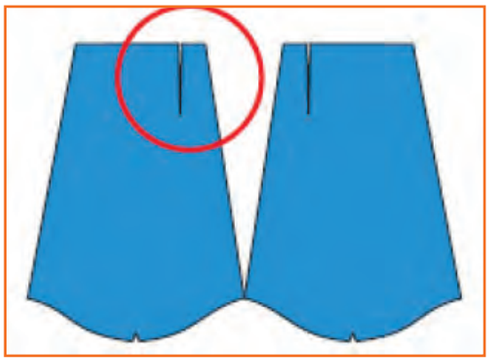
Step 9: Hold the front and the back pieces and stretch them.



Step 10: Put a top-stitch at the edge on both sides.

Step 11: Finally, put a 4 mm stitch on both sides.

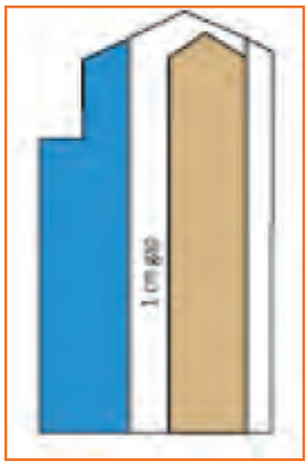
3.2.2.7 Upper Sleeve Placket Preparation



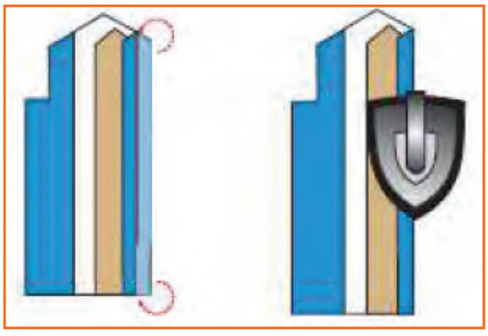
Step 1: Take the two sleeve pieces and identify the notch marks on the armhole side in each one of them.

Step 2: Look at the reverse side of the sleeve and ensure that there is a cut of 13 cms or 5 inches at the bottom.

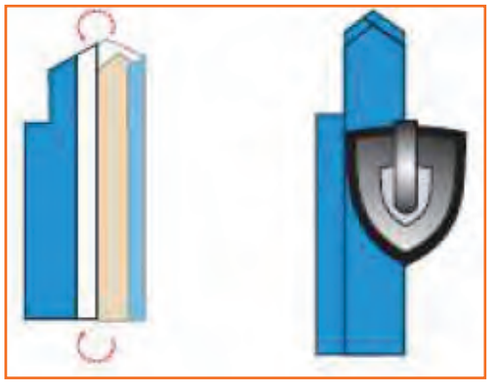
Step 3: Keep the two sleeve plackets with their straight sides facing each other.



Step 4: Take the ready pattern. Leave a gap of 1 cm and place it over the longer side of the placket.



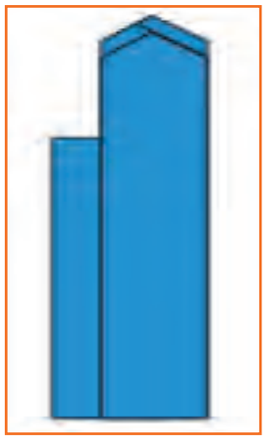
Step 5: Use the pattern and fold the longer side of theplacket 1 cm and iron it.



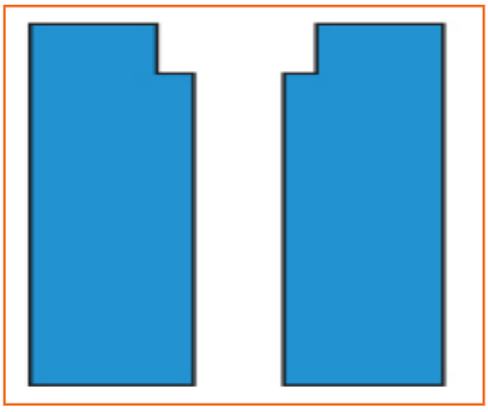
Step 6: Again, using the pattern, fold the longer side 3.5 cm and iron it.

Step 7: Use the pattern and fold the upper portion of the placket in a V-shape. Iron it well to form crease.

Step 8: Use the pattern and fold the upper portion of the placket in a V-shape. Iron it well to form crease.

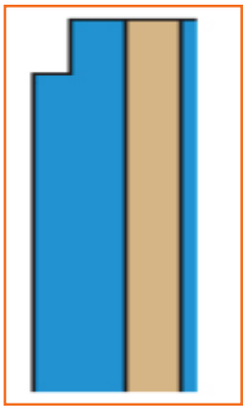


3.2.2.8 Lower Sleeve Placket Preparation



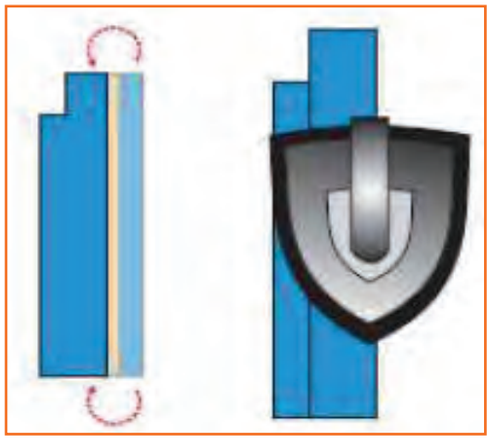
Step 1: Keep both the lower sleeve plackets on the Fig.

They are unfused and shorten in length than upper sleeve plackets.

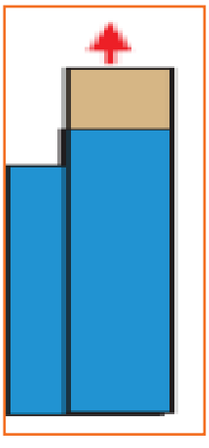


Step 2: Place the ready pattern on the placket.

Step 3: USe the pattern and fold 1 cm. Use the iron to crease it.



Step 4: Again, use the pattern and fold 2 cm. Use the ironto crease it.

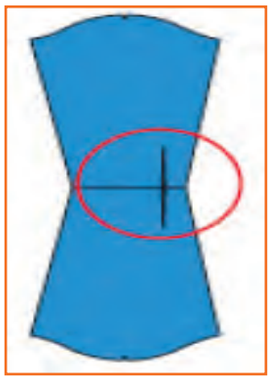


Step 5: Remove the ready pattern.

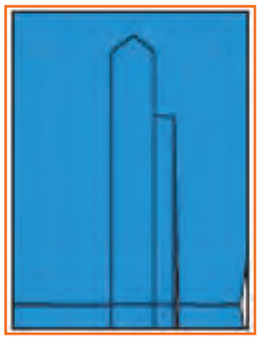
Step 6: Repeat Steps 2 to 5 for the other placket.

3.2.2.9 Attaching Plackets to the Sleeve

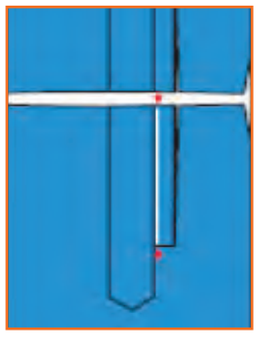
Step 1: Place the two sleeves on top of each other and align the cut sides.



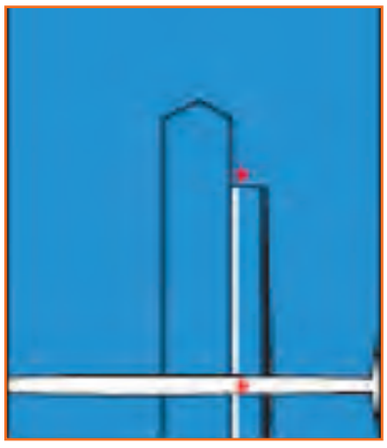
Step 2: Take the two upper sleeve plackets and place them on the longer cut side of the sleeves.Ensure that the folded side is on top.



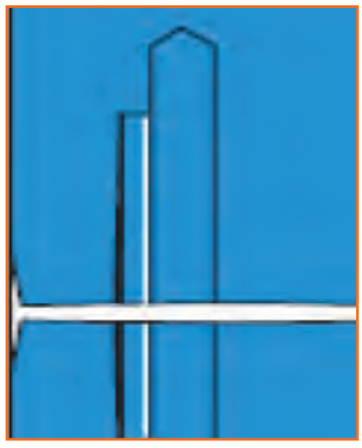
Step 3: Take a set of sleeve placket and sleeve. Align the edges of the sleeve placket with the longer cut part of the sleeve.



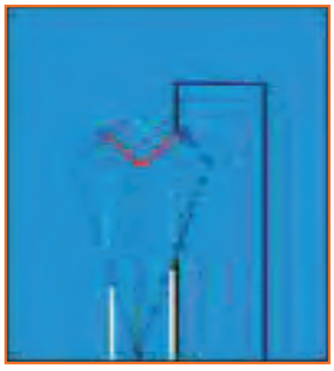
Step 4: Stitch the placket edge. Take the other set of sleeve and sleeve placket. Stitch the placket edge.



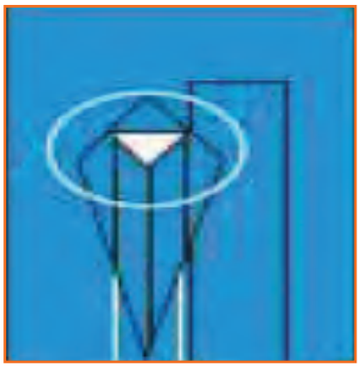
Step 5: Turn the fabric such that the cut part of it faces you.



Step 6: Now, place the lower placket on the shorter cut part of the fabric and stitch the edge along the length. Repeat Step 3 and Step 6 for the other set of sleeve plackets and sleeves.

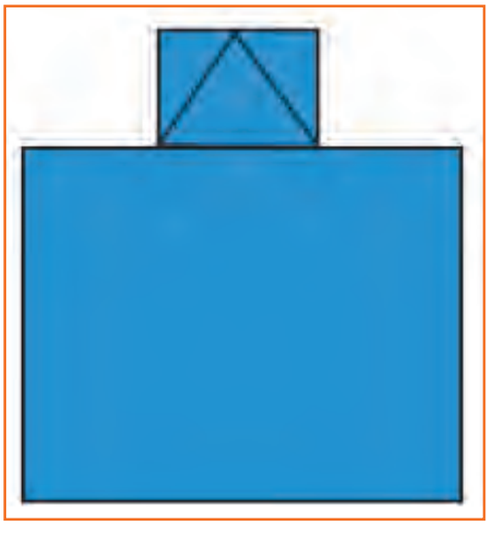


Step 7: Make two v-shape cuts on the top part of the placket-stitch.

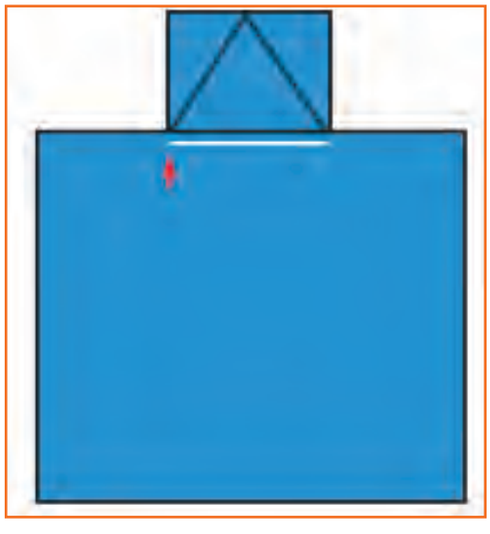


Step 8:

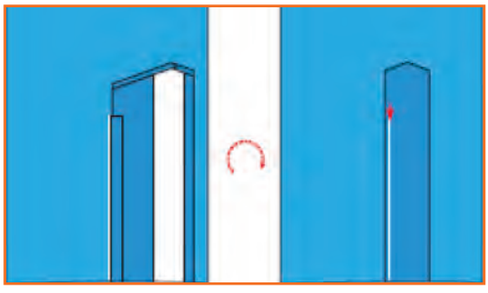
- Smoothen the lower placket and turn it to the reverse side.
- Stitch the edged side of the lower placket till the end.
- Turn the v-shaped cut to the upper side.



Step 9: Place the placket on top of the v-shaped cut.

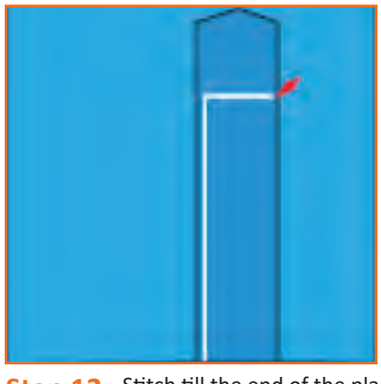


Step 10: Hold the placket and the cut, together and put a stitch at the bottom of the cut.

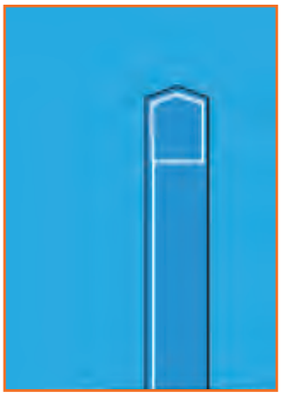


Step 11:

- Turn the upper placket over and put an edged stitch till the end.
- Turn the fabric clockwise. Align the upper and lower plackets.



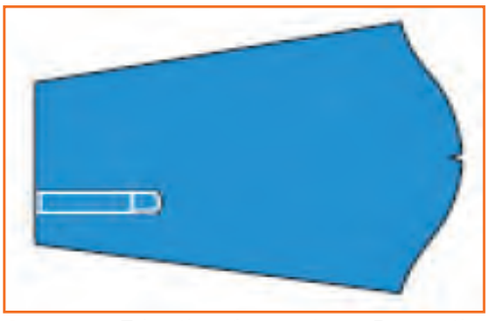
Step 12: Stitch till the end of the plackets.



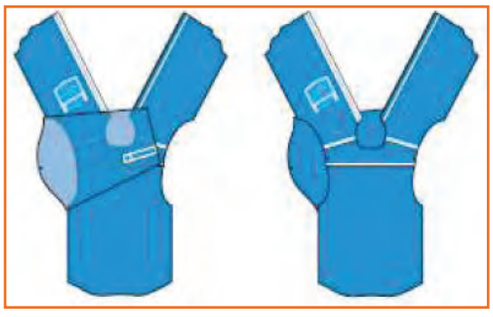
Step 13:

- Turn the fabric counter-clockwise. Put an edgestitch on all the edges of the box of the placket.
- Repeat Step 9 to Steps 7-13 for the other sleeve plackets.

3.2.2.10 Attaching the Sleeve



Step 1: Take the sleeve piece. Ensure the armhole faces you. Also, the longer cut edge should be on the right hand side. The sleeve should be attached to the left hand side armhole.



Step 2: Match the left front piece with the armhole. Placethe shirt front above and the sleeve piece below.

Step 3: Attach the left front with the left sleeve with a 1 cm stitch.

Step 4: Take the right sleeve and place it on the machine. Ensure that the longer cut portion is to the left and facing away from you.

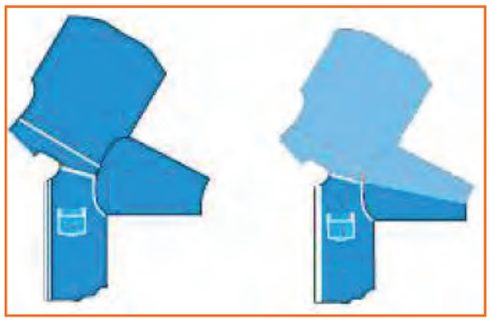
Step 5: Match the notch marks and attach the sleeve armhole with the body armhole by putting a 1 cm stitch.

Step 6: Put an over-lock stitch at both the armholes. If top-stitch is required on the armhole, the sleeve should be kept up and the body part of the shirt should be kept down while putting the over-lock stitch. In case top-stitch is not required, the body part of the shirt should be kept up and the sleeve down.

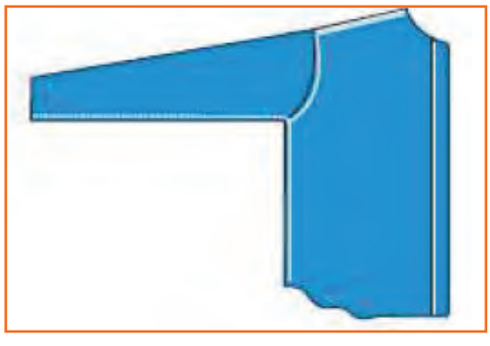
Step 7:

- While putting top-stitch, keep the margin towards the body. Put an edge stitch followed by a 4 mm top-stitch.
- Repeat the above steps for the other sleeve piece.

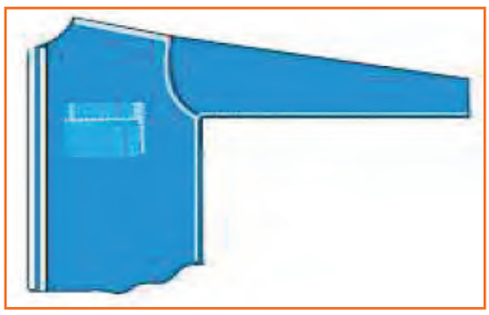
3.2.2.11 Side Seam



Step 1: Match the armhole and align the loose ends.

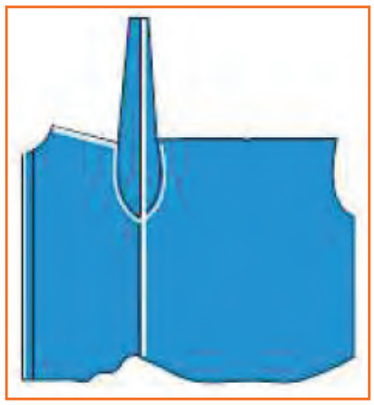


Step 2: Take the right hand sleeve. Stitch 1 cm from thesleeve bottom and continue till side bottom.



Step 3: Take the left hand sleeve. Stitch 1 cm from the sidebottom up to the sleeve bottom.

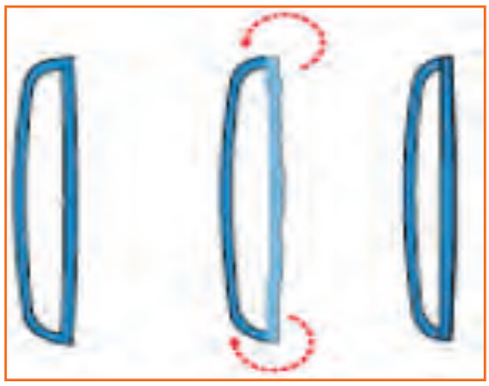
- Turn the fabric margin towards back side and sew the top-stitch by first sewing edge stitch and then 4 mm stitches on both the sides.



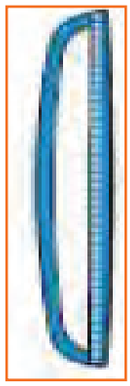
Step 4:

- Put the overlock stitch on both sides, keeping the front part on the top.

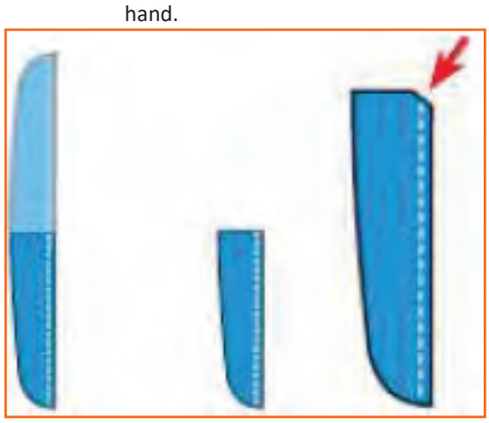
3.2.2.12 Collar and Neckband Preparation



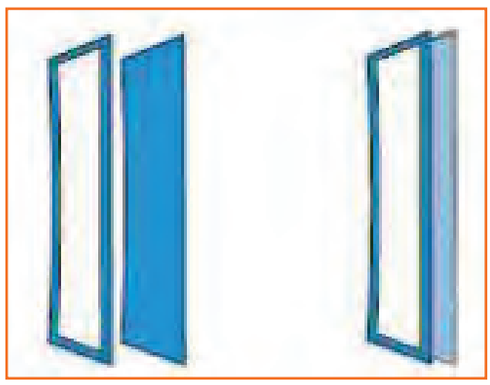
Step 1: Take the fused neckband piece. Turn the bottomend of the piece with your hand.



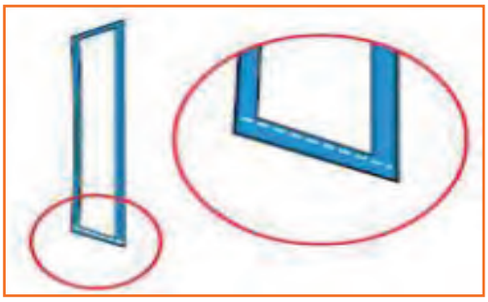
Step 2: Turn the fusing side down. Put a 4 mm stitch at the top.



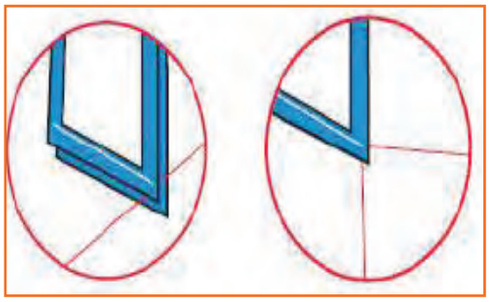
Step 3: Fold the neckband and cut a notch at the centre of the upper side.



Step 4: Take the fused collar piece and place it on the collar piece that is not fused. The right side of the fused collar should face the right side of the unfused collar.



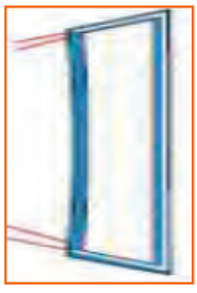
Step 5: Start stitching at a gap of 1 mm from the fusing material from the collar base side.



Step 6: Stop the sewing machine one stitch before the collar point with the needle down. Insert an extra thread between the two fabric layers touching the needle.

Step 7:

- Put one stitch and stop the sewing machine with the needle down. The thread will be at the back of the needle side.
- Hold both ends of the thread and bring it towards the other side of the collar.
- Put stitches at a distance of 1mm from the fused material on the remaining collar.
- Repeat steps 6, 7, 8, and 9.

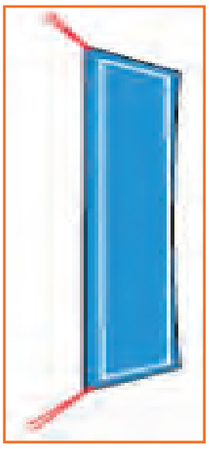


Step 8: Now, put stitches at a distance of 1 mm from the fused material.

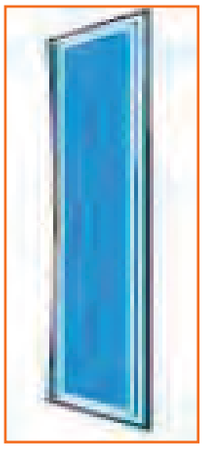
Step 9:

- Put back tack stitch at both the ends.
- Cut both the collar points and turn the collar.
- Stretch the threads to give proper shape to the collar.

Step 10: Put a 4 mm stitch on all three sides of the collar. Keep the lower fabric stretched to avoid wrinkles.



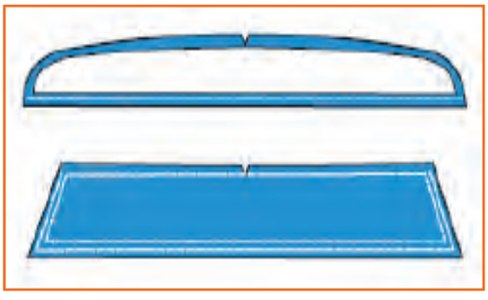
Step 11: Put a 2 mm stitch on the open side of the collar.



Step 12: Put edge stitch on the three sides of the collar.

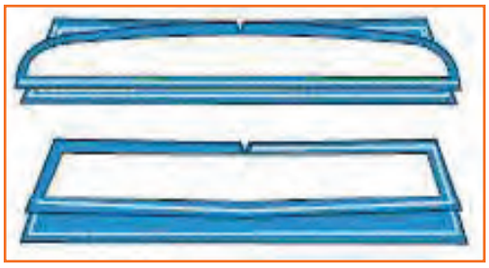
Step 13: Fold the collar and put a notch mark at the centre.

3.2.2.13 Collar and Neckband Attachment



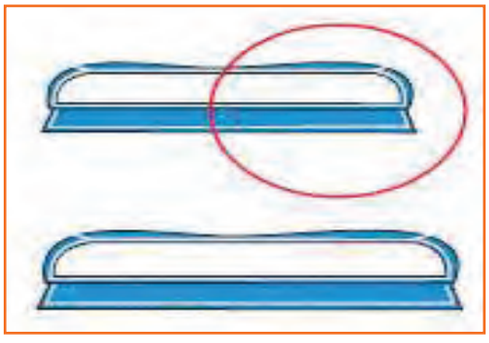
Step 1: Place the neckband and collar face to face.

Step 2: Align the notch and the band of the collar.

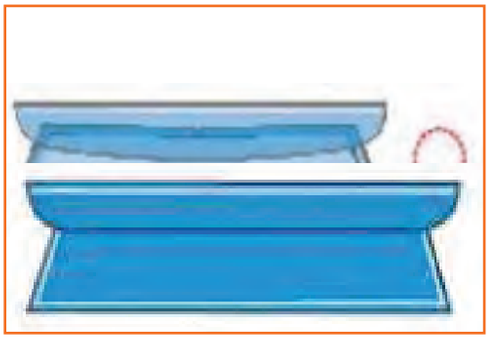


Step 3: Start stitching from the notch point leaving a gap of 1 mm. Repeat this stitch from the notch point to both ends.

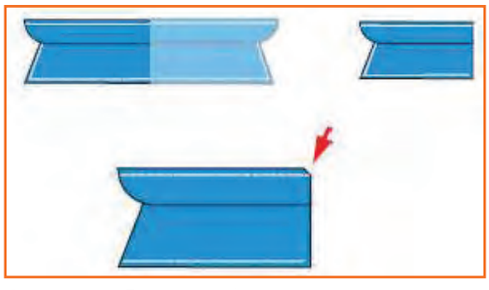
Step 4: Take the other neckband piece without fusing. Place it below the ready neckband collar piece.



Step 5: Now, start stitching from the neckband bottom portion, till the other end.

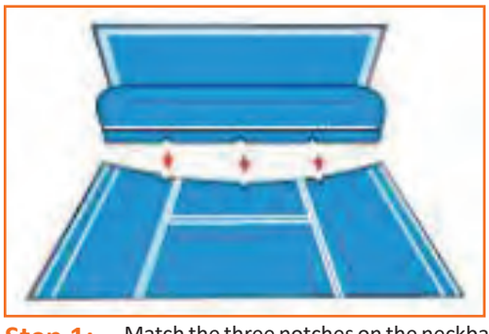


Step 6: Turn the neckband piece.

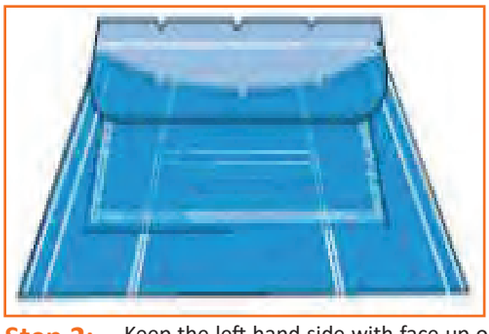


Step 7: Fold the piece and put a notch at the centre. The folded part is now refolded and another notch is put.

3.2.2.14 Collar Attachment to Body



Step 1: Match the three notches on the neckband with the two shoulder seams of the body and the centre notch.



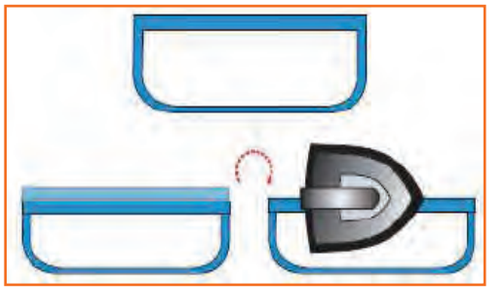
Step 2: Keep the left hand side with face up on the Fig. Match the edge of the front placket with the edge of the collar band.

Step 3: Put the stitch just below the fused portion of the band till the end.

Step 4: Starting from the neckband's centre, put edge stitch towards the right side.

Step 5: Turn and continue to put edge stitch till the other end.

3.2.2.15 Cuff Preparation



Step 1: Fold the fabric edges on the straight side of the cuff and iron it.

Step 2: Put a 4 mm top-stitch.

Step 3: Take the unfused piece of the cuff and place it below the fused cuff .

Step 4: Stitch the two curved and one straight side by leaving a 1 mm gap.

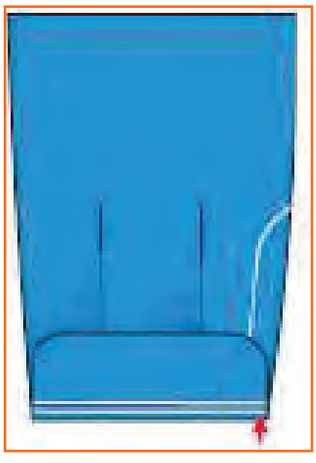
Step 5: Turn the cuff .

Step 6: The unfused cuff fabric should be 1 mm extra.

3.2.2.16 Cuff Attachment to Sleeve

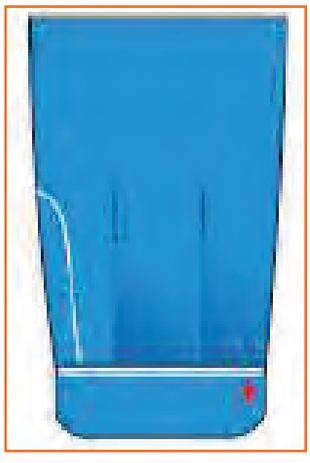
Step 1: First, check that there are 4 notches for sleeve pleatsand one notch at the centre of sleeve bottom.

Step 2: Make sleeve pleats by overlapping the notches and stitching it in such a way that the pleats remain open from the edges.



Step 3:

- Place the cuff with fused side up on the inner side of the sleeve.
- Stitch just below the edge of the cuff .



Step 4: Straighten the cuff . Put the excess fabric inside thecuff and put stitches at the edge.

Step 5: Now put the edge stitch throughout the cuff.

Step 6: Now put 4 mm stitch throughout the cuff. Repeat Steps 1 to 7 for the second cuff.

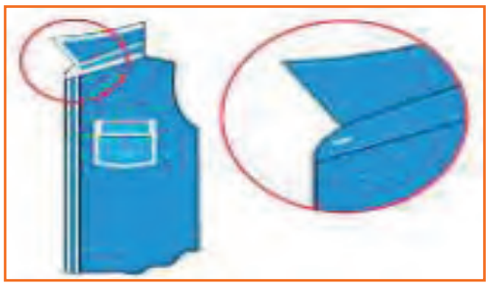
3.2.2.17 Bottom Hemming

Step 1: Match the collar band tip to bottom.

Step 2:

- Fold the bottom (as per requirement) and put edge stitch from the left front side to the right side.
- Close the two ends.

3.2.2.18 Button-holing



Step 1:

- Take the left hand side placket.
- Make one button hole on collar band parallel to theband at the centre and about 1 cm from the edge.

Step 2:

- Along the centre of the placket width, mark the button holes at a distance of 9 cm from each other from the collar band button hole.
- In case of cuff , mark button hole at the centre of the cuff on upper placket side.
- Make button holes using buttonhole machine. Themarking should come in the middle of the buttonhole.

3.2.2.19 Button Attaching

Step 1: Keep the left hand and right hand plackets on top of each other. They should be properly aligned.

Step 2: Put a mark at the centre of the button-hole using a chalk.

Step 3: Attach buttons at the marked positions using the button sew machine.

Step 4: Repeat the same procedure for the cuff.

3.2.3 Stitching a Saree Blouse

Measurements needed

- Chest
- Full length of the blouse
- Shoulder
- Sleeve length
- Sleeve round
- Front length-Measured from shoulder along the highest point of bust to where bra cup ends.

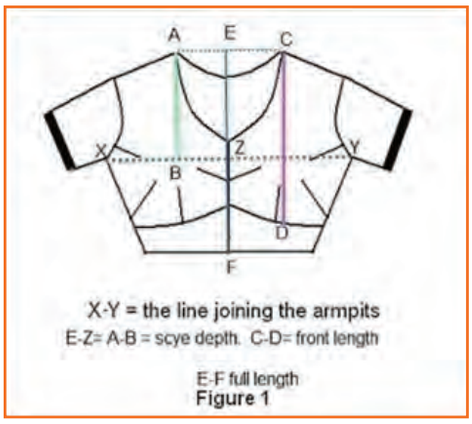


Fig 3.2.3(a): Drafting of a saree blouse

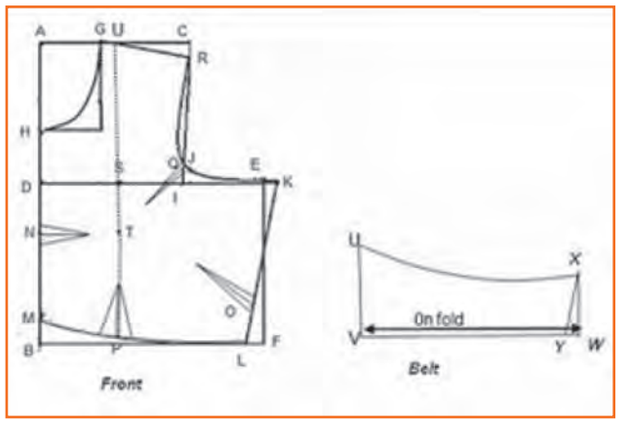


Fig 3.2.3(b): Drafting of a saree blouse

Process

- Front A to B= front length + ½".
- A to C = ½ shoulder + ¼".
- On the line A-B mark D such that A-D =¼ chest -1¼" or 1½".

A-D is called scye depth. It varies with chest measurement. It can be calculated using the chest measurement. It can also be measured directly on the body. It is measured from the nape of the neck downwards to a line that joins armpits.

Scye depth for various breast measurements:

- 28" to 30" =¼ chest-¾' to 1"
- 31" to 33" =¼ chest-1" to 1¼"
- 34" to 36" = ¼ chest-1½" to 2"
- 37 " to 39" = ¼ chest- 2¼" to 2¾"
- 40 to 42 = ¼ chest-3" to 3½"
- Draw perpendicular lines from the points D and B to the line A-B.
- On the line A-C mark G such that A-G =the neck width = 1/8th chest or to taste.
- Mark H on A-B such that A-H =neck depth =1/8th chest or to taste.
- Shape front neck curve H-G.
- Mark D-E=¼ chest +1 +1/2".
- Mark F such that B-F = D-E.
- Produce D-E to K such that E-K=. ½".
- Mark L on B-F such that L-F =½' Join K-L.
- On the line D-E mark point I such that D-I = ½" less than A-C. Join I-C .
- On the line I-C mark point R such that C-R =½" or ¾".
- Join G-R. On the line I-C mark a point J such that I-J =1".
- Shape the scye round R-J-E-K.

- On the line D-E mark a point S such that D-S =1/12th chest +¾".
- On the line A-B mark point M such that B-M =1".
- Join M-L by a curved line as shown in the figure.
- Drop a perpendicular from the point S.
- This line meets the curved line M-L at P. On this line Mark point T which is the bust point It can be marked in two ways:
    1. Mark T such that distance S-T=1/8th chest-1½".
    2. Actual bust length is measured from the shoulder line to the highest point of the bust. Mark T along the line U-T passing through S such that U-T is equal to is the bust length.

Darts:

- All the darts should point towards the bust point T and end 1/2" away from T.
- Mark N on the line A-B such that D-N =S-T. Take ½" or ¾" dart
- At point P a dart of 1¼" to 2" dart of required length is taken
- On the line K-L mark a point O such that O-L = 1" take a dart of ¾" wide and of required length.
- At the point J take a dart of ½" wide of required length.

Belt:

- U-V= Full length of the blouse –Front length +½".
- V-W =B to F -1½"(size of the dart taken).
- W –X =U-V -1".
- Shape the curve U-X identical to the curve M-L.
- Y-W= ½".
- Join X-Y.

Back:

- A-B =Full length of the blouse +1"
- A-D is scye depth = same as scye depth of front the blouse.

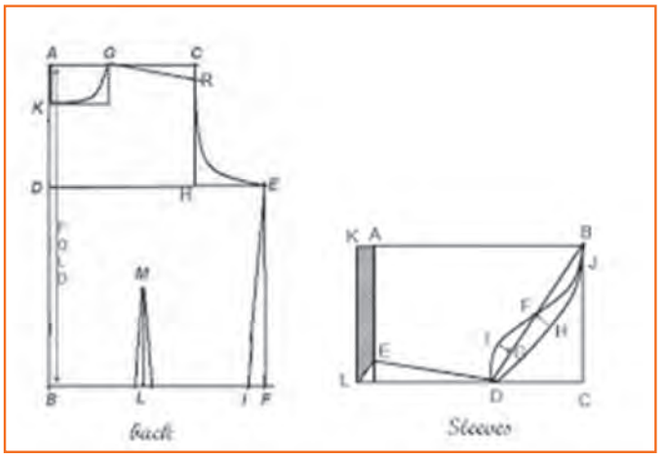


Fig 3.2.4: Back and sleeve of a saree blouse

- Draw perpendiculars from A,D and B.
- A-C= ½ shoulder + ¼". Mark D-E=¼ chest +1½".
- Mark F such that B-F = D-E.
- I- F=½" .Join E-I.
- On the line A-C mark G such that A-G =the neck width = 1/8th chest or to taste.
- Mark K on A-B such that A-K = Back neck depth =1/12th chest or to taste.
- Shape back neck curve K-G.
- On the line D-E mark H such that D-H = A-C.
- Join H-C. On the line H-C mark a point R such that C-R =1".
- Shape the Back scye round R-E. B-L=1/12th chest +½".

A dart L-M of ½" width and of required length is taken here.

- Sleeves A-B= sleeve length + ½".
- K-A =1"for folding.
- From the points B , A and K draw perpendiculars.
- B -C is as A-D = scye depth of the body taken while drawing body draft + ½" to 1½ ".
- For smaller sizes B-C is equal to the scye depth .
- B-C =K-L.
- Join C-L.
- Mark D on the line C-L such that D-C =1/8th chest -½". It should be between 3 to 3½" B-J = 1".
- Join D-B .F is the middle point of D=B . F-H =¾" G is the middle point of D-F. I-G= ½"
- Shape the front scye curve of the sleeves D-I-F- J-B and Back scye curve of the sleeves D-H-J-B. A-E = ½ sleeve round + 1" for seams.
- Join L-E.

Parts of a blouse:

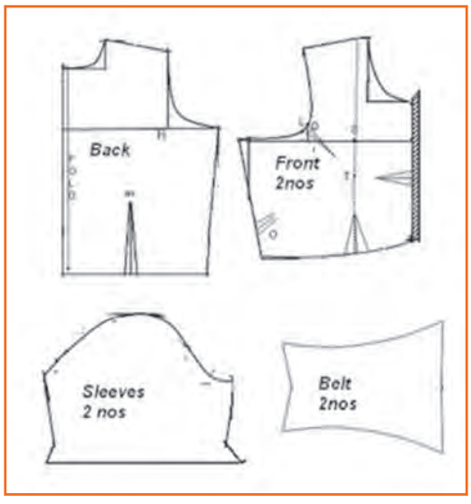


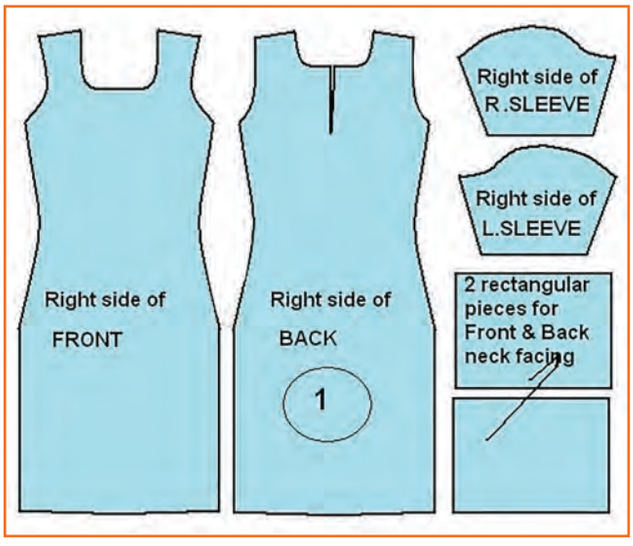
Fig 3.2.5: Parts of a saree blouse

- Prepare the draft and separate each part.
- Label all pattern pieces.
- Mark "place on fold" on the center-line of the back.
- Add 1/2" extension along the line of opening of the front to attach button-stands.(shown by shaded area)
- Mark the center of sleeve top.
- Place the parts of the draft on the fabric and cut the parts

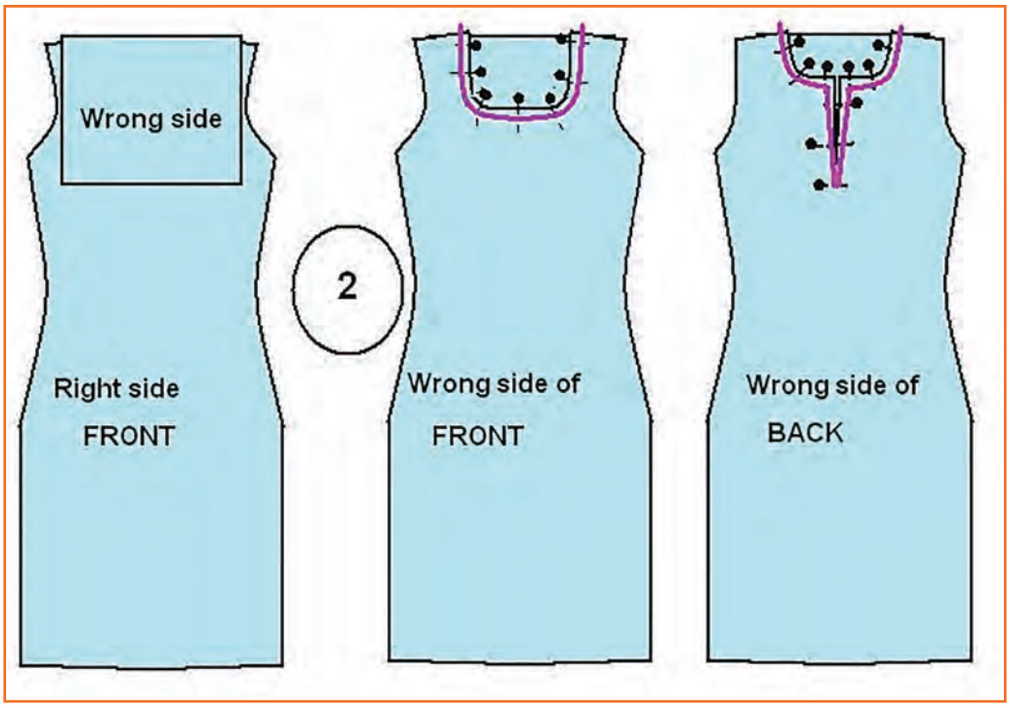
Stitching:

- **Step 1** Stay stitch neck, arm scyes and sleeve top.
- **Step 2** Stitch darts.
- **Step 3** Attach the belt to the body.
- **Step 4** Stitch button stands. Right side should overlap the left side. Extension is stitched to the left side and right side is finished with a facing.
- **Step 5** Join shoulders.
- **Step 6** Finish neck line with Piping or flat facing.
- **Step 7** Hem the lower edge of the sleeves and back.
- **Step 8** Attach sleeves to the body, matching center line of the sleeves to the shoulder line and easing wherever necessary.
- **Step 9** Stitch sides of the sleeves and body.
- **Step 10** Sew hook on the underside of right button stand and work eyes on the right side of left front facing.

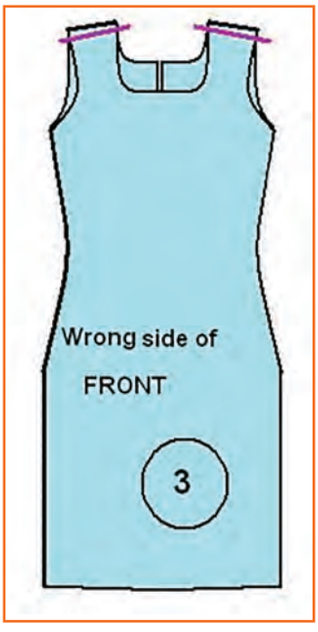
3.2.4 Stitching a Kurta/Kameez



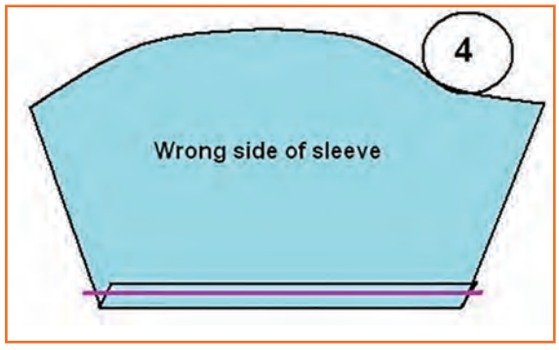
STEP 1: Take 2 Pieces of Kameez (Front and Back) 2 Pieces of Sleeve (Right and Left) and 2 rectangular pieces for Neck facing.



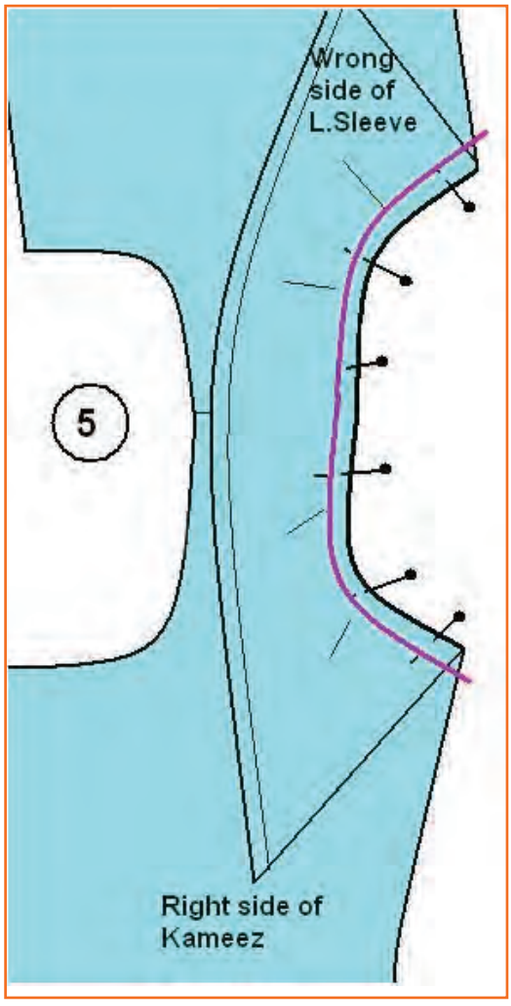
STEP 2: Place the neck facing rectangular pieces for the front and back Kameez pieces respectively. Make sure that the right sides are together. Pin and sew along the neck line with ¼" seam allowance. Cut the excess of facing pieces and make notches on seam. Then turn right sides out and press. Give topstitch at neckline.



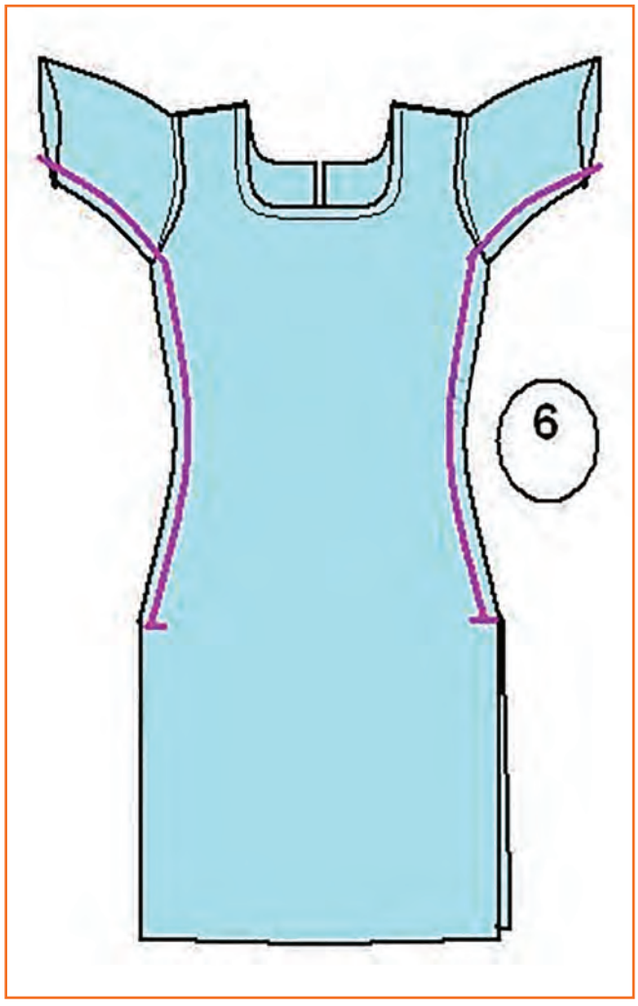
STEP 3: Place Kameez front and back pieces by facing right sides together and sew along the shoulder line to joint the two Kameez pieces together.



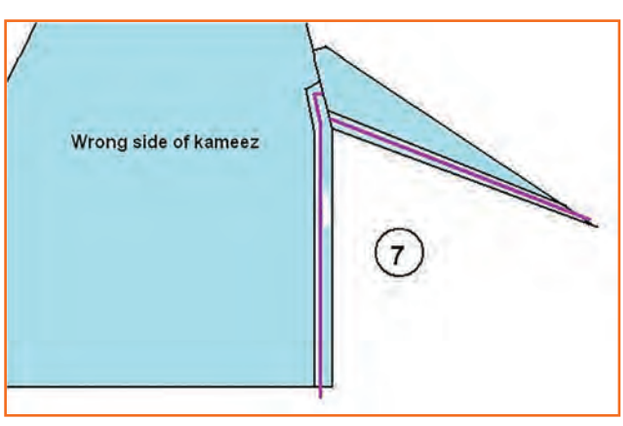
STEP 4: Fold the hemline of sleeve by ¼" inside and fold again ¾" inside and sew along the hemline at the edge of first folding.



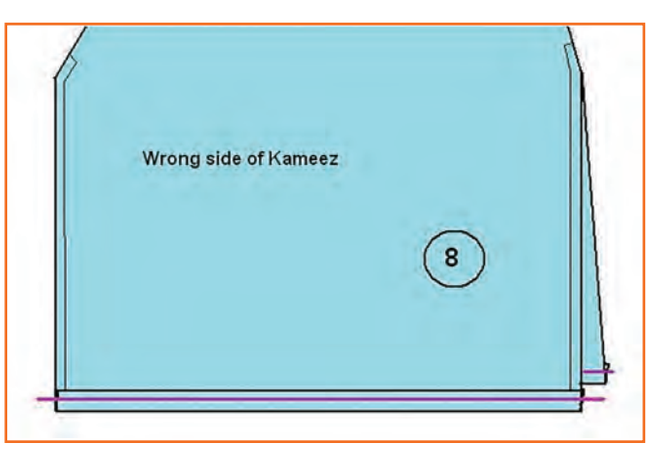
STEP 5: Place the Sleeves right side on the top of Kameez armhole area respectively. Pin it and sew along with ¼" armhole seam allowance.



STEP 6: Turn Kameez wrong side out and sew along with 1" side seam allowance as right sides together (Start from Sleeve's hemline and stop at the Hip line of Kameez).



STEP 7: Fold at the slit opening ¼" inside and fold ¼" again. Then sew along the slit opening of both sides. Press with iron.



STEP 8: Fold the hemline ½" inside and fold 1" again. Then sew along the edge of first fold on hemline.

3.2.5 Stitching Button and Button Holes

Buttons: The various types of buttons available in the market differ in that they have different number of holes – 2 or 4. The method for fixing them remains the same. The spot where the button needs to be fixed is determined and then the needle is taken out first from one and then the other to properly fix the button. There should be a little looseness in the stitch so that the button can be easily passed through the button hole.

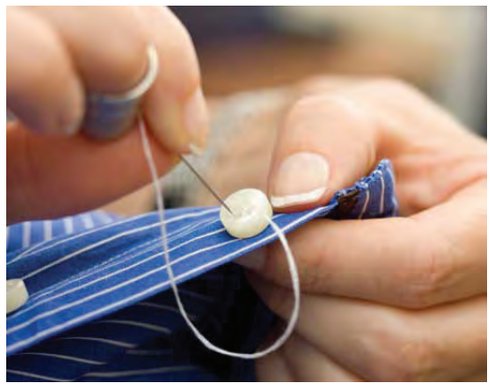


Fig 3.2.6: Button attaching

Button hole

Of utmost importance in the tailoring trade, as it is used on almost all types of garments – ladies, men's and children. There is a need to keep an opening somewhere on the garment for ease of wearing and taking off. Most of such openings are closed with the help of buttonhole stitches. The button hole is always made on the top portion. The buttonhole stitch is used to finish the button hole. It is made on two or more layers of cloth. The button hole has a slight curve on one side known as the fan and an edge on the other known as the bar.

Fig 3.2.7: Button hole making by machine

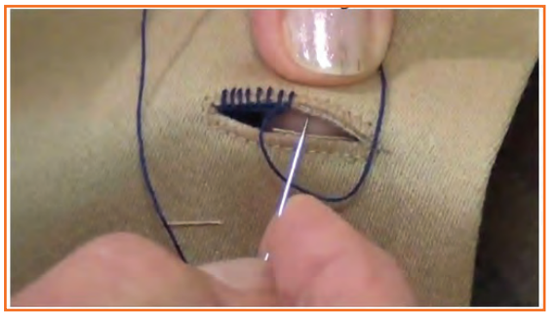


Fig 3.2.8: Button hole making by hand

Method: First choose the distance between each button hole. Then keeping the diameter of the button in mind, use the tip of a scissor to cut holes in the cloth. To ensure that no, loose strands come out finish the edge with a temporary stitch. Always cut the button hole in the direction of the grain line. Then using a single thread finish the edge with a buttonhole stitch keeping a little extra tension on the 'fan' side to make a kind of chain stitch is then pressed down once the buttonhole is finished.

Hook and eye

An opening can be closed with other methods apart from a button and buttonhole. One of these is the hook and eye. There are hooks of different sizes available to suit different purposes and garments like trousers or blouses. The hook is usually fixed half a point behind the edge of the belt. This is fixed using the buttonhole stitch. It is fixed from two edges below and one point above like a bow. The simple hooks are best used with an eye made from thread by hand, using a button hole stitch. The big hooks used for trousers usually come with a ready made eye of metal which is also affixed using a buttonhole stitch.

Fig 3.2.9: Attaching hook and eye

Press buttons: These are metal buttons with one part having a hole and the other a nail to fit into the hole. The nail part is always put on the top and the one with the depression on the bottom. This is also affixed using the button hole stitch.

Fig 3.2.10: Press button

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Recognize the different parts of a trouser.
- Analyze how an Tailor makes and attaches the pocket bag, fly, zip, back rise and front and back pieces to trouser.
- Also observe how he makes and attaches the belt loop, bottom hemming and button and button holes to a trouser.
- Recognize the different parts of a shirt.
- Analyze how an Tailor makes and attaches the left and right hand side placket, pocket, yoke, placket to sleeve, sleeve, side seam, collar and neckband, cuff and bottom hemming etc.
- Also observe how he makes button holes and attaches the buttons to shirt.
- Similarly observe other stitching operations like button hole making and attaching in different garment such as saree blouse, kurta etc.
- Ask questions to Tailors/shop owners if you have any query.

Exercise

1. Fold the bottom of right trouser leg 1 cm inside. Again fold the fabric to the required width and put 2 or 3 stitches, this is the last step of Bottom Hemming using Folder.
   a) True
   b) False
2. What are the steps of stitching a trouser?

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3. What are the steps of Bartracking?

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4. Which of the followings are the steps of Pocket Making and Stitching:
   a) Locate the notch mark
   b) Stitch the inner side of the pocket mouth using edge stitch
   c) Take the ready pattern given and place it over the pocket
   d) All the above
5. What are the parts of a shirt?

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6. What are the steps of cuff preparation?

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UNIT 3.3: Knowledge of Basic Embroidery Stitches

Unit Objectives

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

1. Understand flat stitches, loop stitches and knotted stitches
2. Carry out flat stitches, loop stitches and knotted stitches

3.3.1 Flat Stitches

Flat stitches are simple embroidery stitches in which individual stitches are made without crossing or looping the thread. These stitches are used to form broken or unbroken lines or starbursts, fill shapes and create geometric designs.

Commonly used types of Flat Stitches and their techniques are given below:

- Running Stitch
- Back Stitch
- Stem Stitch
- Satin Stitch
- Kashmiri Stitch
- Couching Stitch
- Cross Stitch
- Herringbone Stitch

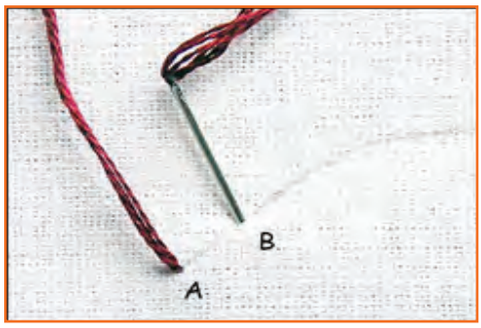
3.3.2 Steps of Carrying out Running Stitch

This stitch can be worked in straight or curved lines, or for assembly when finishing an embroidery project. The stitch is worked by passing the needle in and out of the fabric. Running stitches may be of varying length, but typically more thread is visible on the top of the sewing than on the underside.

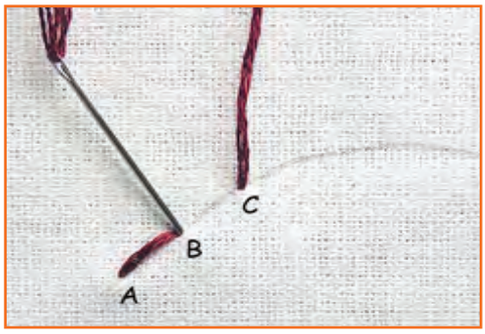
- **Step 1:** Work from right to left of the fabric and insert your needle through the back side of the fabric at your starting point
- **Step 2:** Bring thread up at 1 then down at 2, up at 3 and down at 4 and continue
- **Step 3:** The spaces between the stitches can be the same length as the stitches or shorter for a different look.

3.3.3 Steps of Carrying out Back Stitch

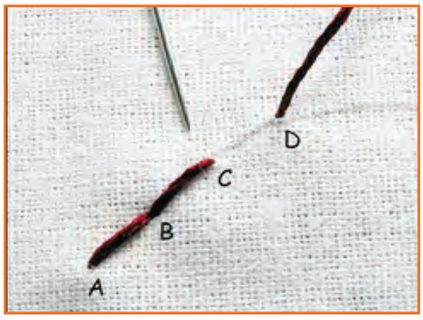
The back stitch is a basic embroidery and sewing stitch used to produce a thin line of stitching, to outline shapes that will be filled with satin stitch, or to stitch fabric pieces together.



Step 1: Bring the thread through A and take it in through B. This creates one stitch



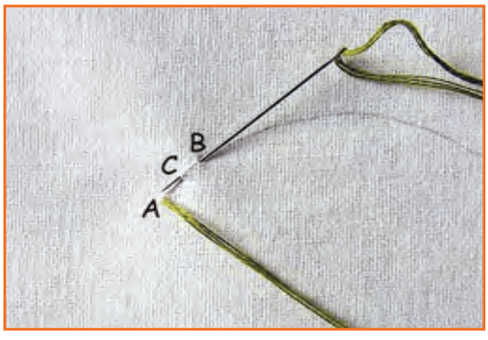
Step 2: Bring the thread through C and take it in through B. This way, we are creating a stitch by taking the thread backward



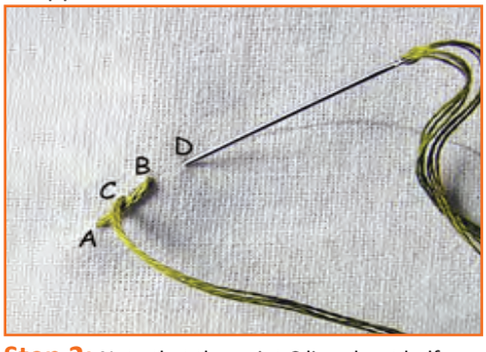
Step 3: Bring the thread through D and take it in through C. Continue this pattern to finish the design

3.3.4 Steps of Carrying out Stem Stitch

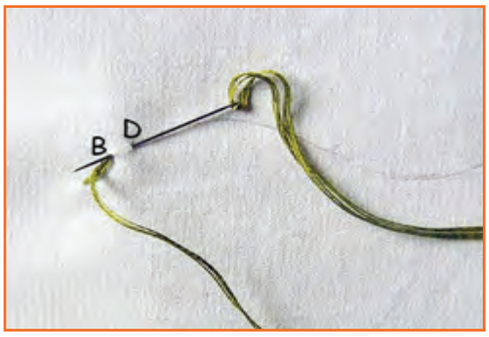
Stem stitch, and its variations, are worked as a thin line and can be used to outline embroidered shapes, stitch lines and curves, embroider letters. This stitch creates a rope like appearance



Step 1: Bring out the thread through A and take it in through B. Take the needle backwards and bring the thread out through C. Make sure the point C lies over the stitch A-B



Step 2: Note that the point C lies about half way through A and B. Also note that C lies on top of the stitch A-B. So, all the subsequent stitch points will lie on top their previous stitch.



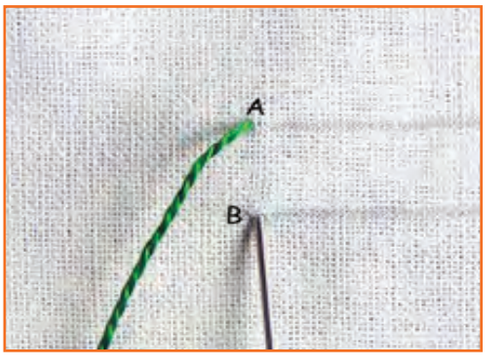
Step 3: Take the needle in through D. Try to mark D in such a way that the point B will lie half way through C-D. Bring the needle out through B

Step 4: The pattern of two stitches of the stem stitch will be as shown in figure

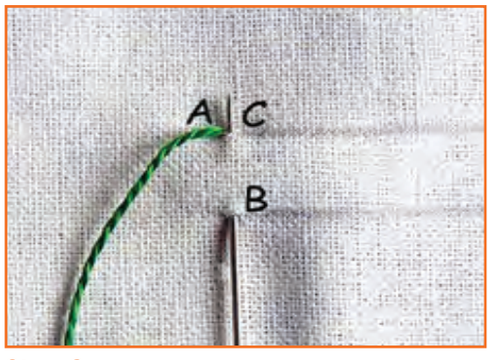
Step 5: Continue this pattern of stitching with the needle coming out through the top of the previous stitch always

3.3.5 Steps of Carrying out Satin Stitch

This stitch is primarily used for Solid filling for shapes and monogram. Often, a satin stitch is outlined using one of the straight stitches like, the split stitch, the outline stitch, back stitch, chain stitch, or any other similar stitches. This helps in containing the satin stitch within the parameters of the pattern/design easily.



Step 1: Bring the needle out through A and put it in through B. So, that makes a stitch which covers a small area between the stitch lines

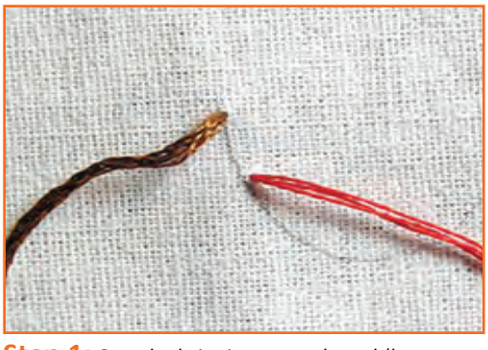


Step 2: Bring the needle back through C, a point very close to A. Continue this action over the two stitch lines

Step 3: Once finished, the area is filled as in figure. Almost same amount of thread will be spent on the reverse side as on the actual side of the fabric

3.3.6 Steps of Carrying out Couching Stitch

This stitch is usually used to make outlines, or layers of this stitch can be made to fill in patterns. This stitch involves two threads: a thicker foundation thread, (also called the laid thread) and a thinner thread (called the couching thread).



Step 1: Start by bringing out a thread (brown in the figure) for laying from one end of the stitch line. Keep it open. Now, bring another thread (red in the figure) out, a little outside the stitch line, and away from the other thread.

Step 2: Keep the laid thread over the stitch line. Use the other thread to fasten the laid thread down using a small stitch.

Step 3: After fastening, the stitch will look like as in the figure.

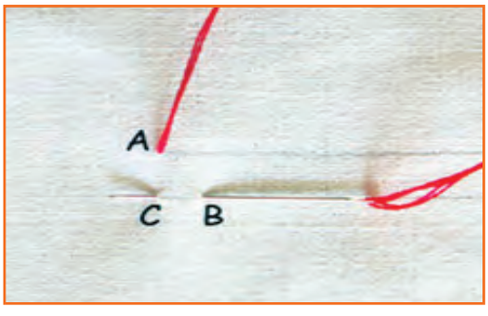
Step 4: Bring the fastening thread out as a short distance from the earlier stitch. Lay the open thread over the stitch line, and again fasten it down with a small stitch.

Step 5: Continue with this method for the entire stitch line. To finish up, pass the laid thread through the fabric and knot it. Make sure the fastening thread is brought out at regular intervals to make it look elegant.

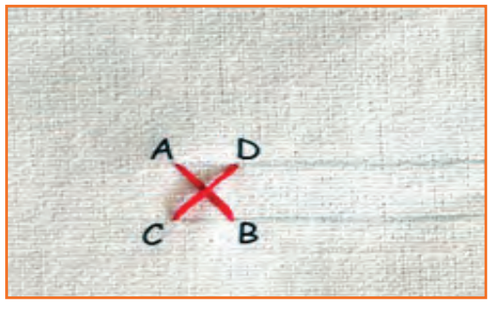
Step 6: A finished couched line will look like this.

3.3.7 Steps of Carrying out Cross Stitch

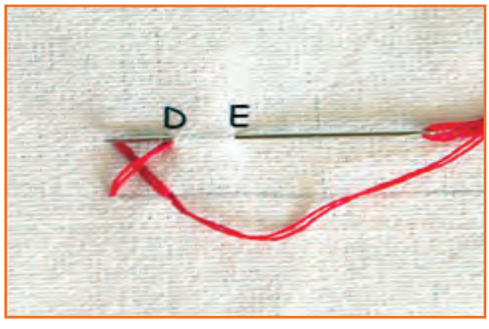
This stitch is used for borders and filling if worked in adjacent rows.



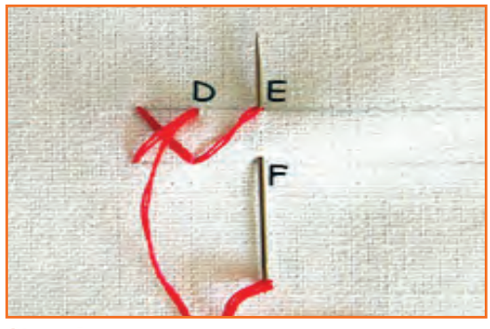
Step 1: Bring the needle out through A and take it diagonally across to B. Bring it back again through C, which lies vertically below A



Step 2: Now put the needle in through D, which lies vertically above B. You have made a single cross



Step 3: Continue by putting the needle in through Eand bring it out through the previous point D

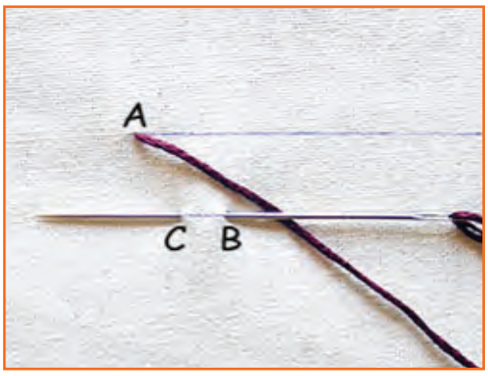


Step 4: Put the needle in through F to complete the second cross. Now, bring the needle out through the previous point E to begin for the third cross. Continue this process

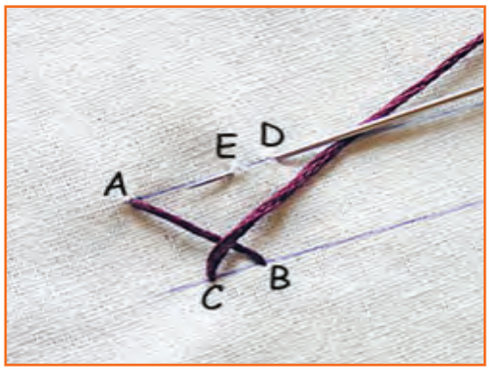
Step 5: A row of cross stitch would appear like this.
The same technique is followed for a vertical row

3.3.8 Steps of Carrying out Herringbone Stitch

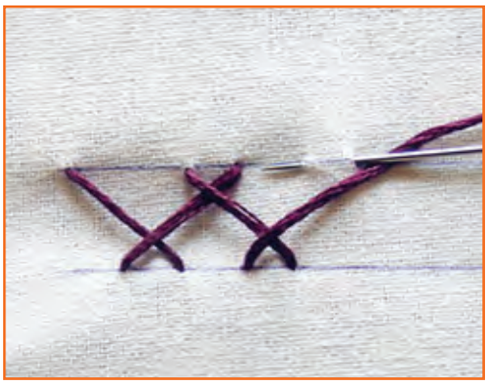
This type of stitch is used to create border, edging, can be stitched over a ribbon or braid to hold it down. It is ked along parallel lines on an evenweave fabric



Step 1: Bring the needle out through the first stitch line at A. Now, take the needle in throughB, which lies diagonally across A on the second stitch line. Then, take the needle backwards out through C, which lies near B.



Step 2: Now, the same procedure will be worked on first stitch line. Take the needle diagonally across to D and bring the needle backwards out through E



Step 3: Continue to make such crosses on both stitch lines alternately. Make sure the diagonal stitches are parallel to each other to bring out the best look

Step 4: A finished sequence of herringbone stitch would look like this

3.3.9 Loop Stitches

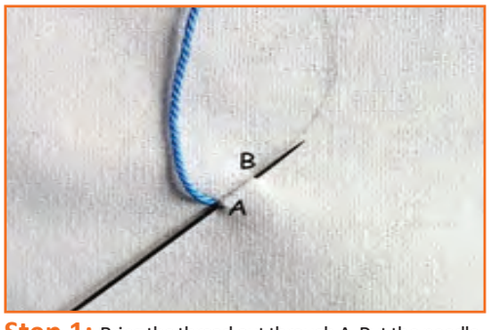
Loop stitch gets its name from the long loops it leaves behind

Commonly used types of Loop Stitches and their techniques are given below:

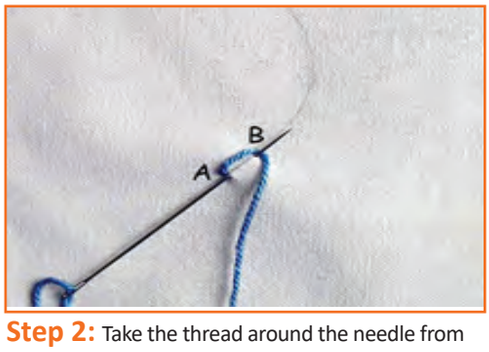
- Chain stitch
- Button-hole stitch
- Blanket Stitch
- Fishbone stitch
- Feather stitch
- Fly Stitch

3.3.10 Steps of Carrying out Chain Stitch

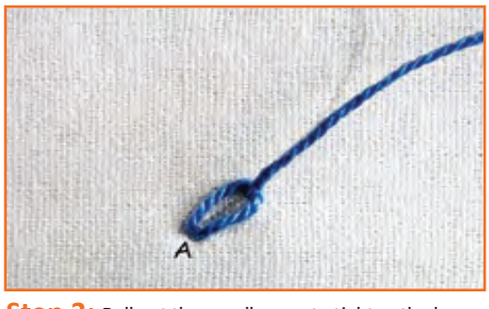
The chain stitch is a looped stitch that can be worked along a curved or straight line. Variations of this stitch including the single or detached chain, lazy daisy, feathered chain, square chain, cable chain, heavy chain, zig-zag chain and many more. This stitch is commonly used for outlining, straight and curved lines, filling if rows are stitched closely together



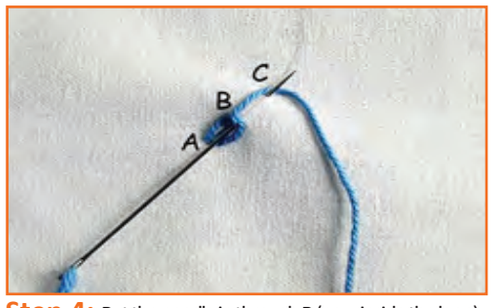
Step 1: Bring the thread out through A. Put the needle back in A and bring it out through the point B, but don't pull the needle out completely.



Step 2: Take the thread around the needle from left to right to form a loop



Step 3: Pull out the needle now to tighten the loop and you will get the first part of the chain.

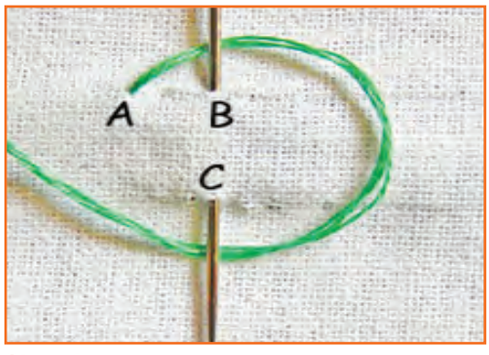


Step 4: Put the needle in through B (now inside the loop) and bring it out on C (outside of the loop).

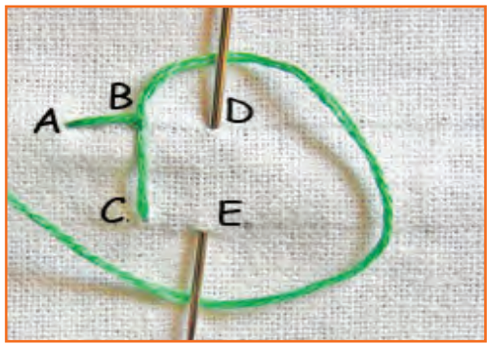
Step 5: Continue the action by taking the thread around the back of the needle from left to right to form a loop and pull out the needle to get the next loop of the chain. Keep on with this procedure to finish the design.

3.3.11 Steps of Carrying out Button Hole Stitch

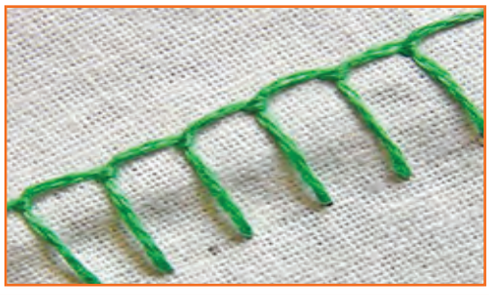
This stitch is used to secure the edges of buttonholes as it gives a much sturdier stitch due to the knots it makes.



Step 1: Bring the needle out through A. Now, loop the thread around from left to right. Take the needle in through B and bring it out from C. Keep the thread below the needle always



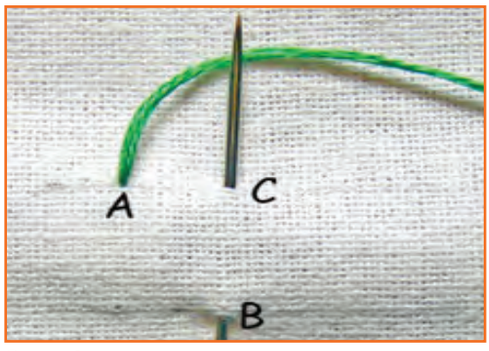
Step 2: Pull out the needle towards the top. This creates a small knot near the point B. Do not pull the needle downwards as it will not give the desired results



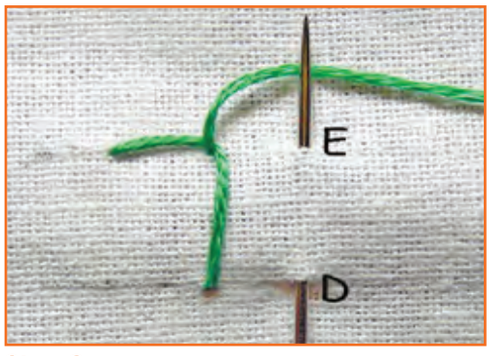
Step 3: A finished portion of the buttonhole stitch would look like as in figure

3.3.12 Steps of Carrying out Blanket Hole Stitch

This stitch is called blanket stitch as traditionally it is used to stitch the edges of blankets. It is used to create straight and gently curved lines, borders and finishing edges



Step 1: Bring the needle out through A. Take the needle in through B. Take it out through C, a point in the same stitch line as A. Loop the thread under the needle

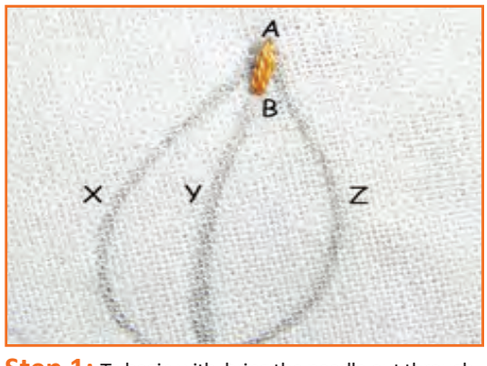


Step 2: Pull out the needle. Continue with this process till the end of the line

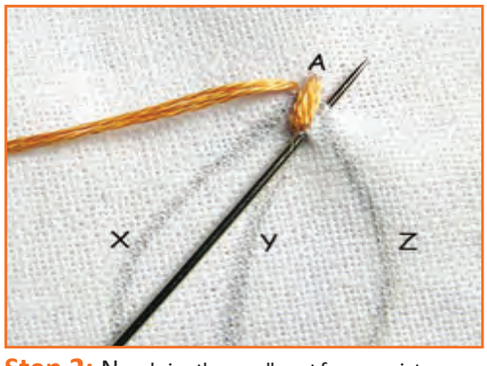
Step 3: A portion of the finished blanket stitch would look like as in the figure

3.3.13 Steps of Carrying out Fishbone Stitch

This stitch is a type of filling stitch and is used for making leaves and feathers



Step 1: To begin with, bring the needle out through point A, which is the top tip of line Y. Put it in through B, to make a single straight stitch.



Step 2: Now, bring the needle out from a point very close to A on the line X. Put it in through a point very close to B on line Y. Again pull out the needle through a point very close to A on line Z.

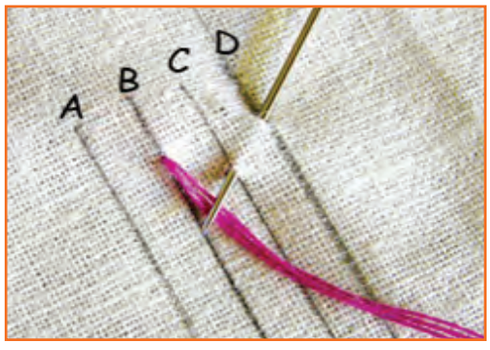
Step 3: This procedure of putting in the needle through X and Z alternatively will follow. Each time you will be connecting X-Y and Y-Z.

Step 4: Make sure all the stitch points lie close to each other to avoid any visible spaces.

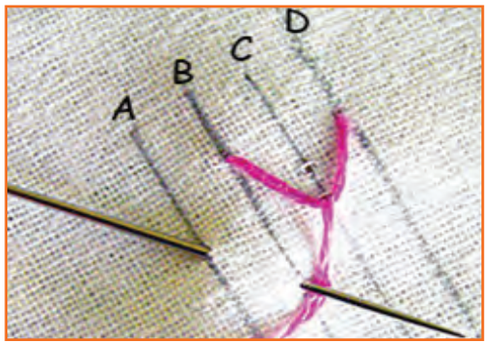
Step 5: Half way through, the leaf design would look like as in the image.

3.3.14 Steps of Carrying out Feather Stitch

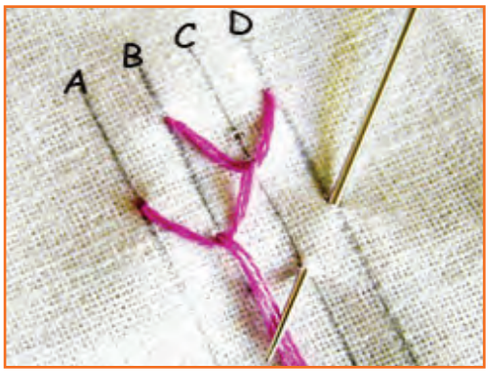
Feather stitch is a decorative stitch, usually, used to accompany it with embellishments or other forms of stitches like the French knot. It can be used to make borders, horizontal or vertical fillings, or designs with curves. It looks like a series of interconnected 'V's.



Step 1: Bring the needle from B. Now, put the needle in through D and bring it out from C. Note that the points on B and D falls on a straight line, and C lies diagonally to both B and D. Pull the needle out with the thread under it, as shown. We would form our first 'V'



Step 2: Continue to put the needle in through A and bring it out through B. Pull the needle out with the thread under it as shown, to make the next 'V'

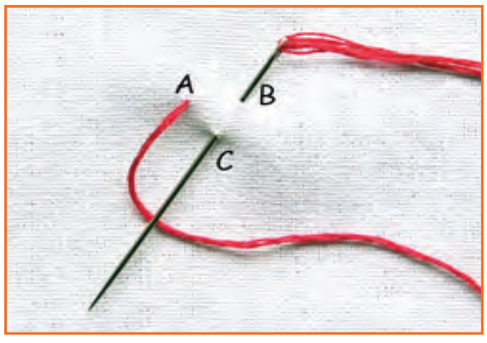


Step 3: Continue the procedure by putting the needle in through the outer stitch line and brining it out from the inner stitch line. Keep alternating between left and right side to make the 'V's- putting in the needle through A and bringing it out from B; putting the needle in through D and bringing it out from C.

Step 4: Once a small portion of feather stitch is done, the stitch will look like as in the figure

3.3.15 Steps of Carrying out Fly Stitch

This stitch is done in rows for edging or singly for accents, plants and foliage, decorative lines, interesting filling



Step 1: Bring the needle out from A and put it in through B. Then, bring it out through C, which lies between and below A and B. Pull the needle out from over the working thread, as shown in the picture. this creates a 'V' shape.

Step 2: To create the 'Y' shape, we need to make a tail. Put in the needle a little space right below C.

Step 3: The stand alone fly stitch would look like as in the image

3.3.16 Knotted Stitches

A knotted stitch is any embroidery technique in which the yarn or thread is knotted around itself.

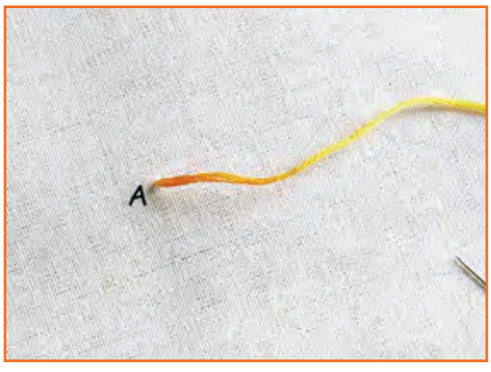
Knotted edgings are used as a decorative trims, and can also be used to fill open spaces in cutwork and in needle-lace

Commonly used types of Loop Stitches and their techniques are given below:

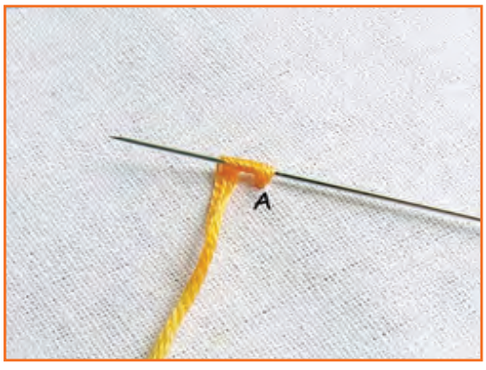
- French Knot
- Double Knot
- Bullion Knot

3.3.17 Steps of Carrying out French Knot

This is one of the most commonly used knotted stitches. French knot is used to make decorative dots, filling flower centres, leaves, plants etc.



Step 1: Bring the needle out through A.



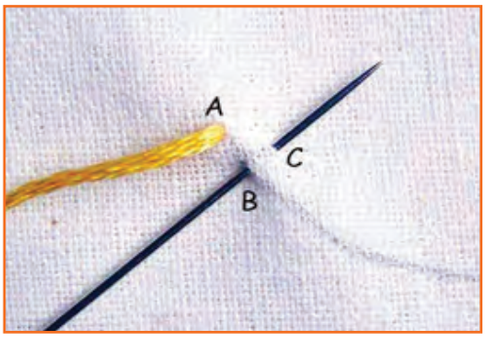
Step 2: Place the needle close to the fabric. Wrap the thread around it twice.

Step 3: Keep the longer end of the thread pulled with your fingers while putting the needle back in a point just close to A or even through A.

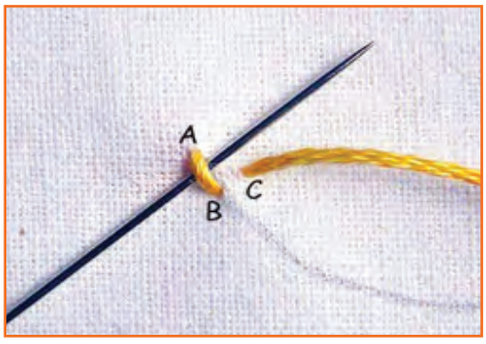
Step 4: Pull down the needle through the fabric. You will see your first French knot formed.

3.3.18 Steps of Carrying out Double Knot

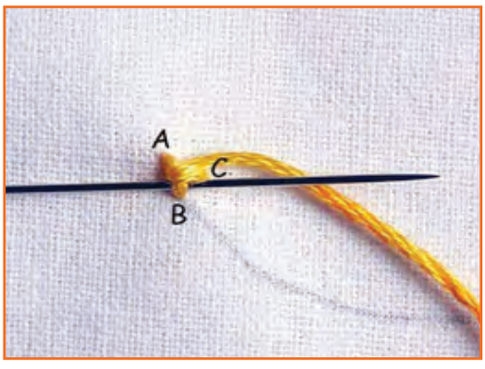
It is also known as Palestrina knot stitch. This stitch is usually used for outlining or bordering purposes.



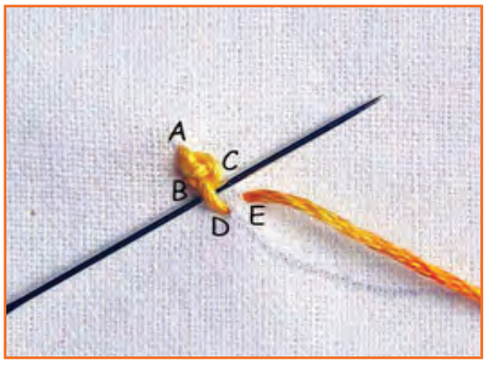
Step 1: Bring the needle out through the point A, which lies on the stitch line. Then, take the needle in through B, which lies on the stitch line too. Bring out the needle through C, a point straight above and not too far from B.



Step 2: Take the needle below the stitch A-B, without plucking the fabric underneath. The needle will be angled above or towards the left of the point C.



Step 3: Take the needle under the stitch A-B. Only, this time, the needle is angled below or towards the right side of the point C. Then, loop the thread around the needle

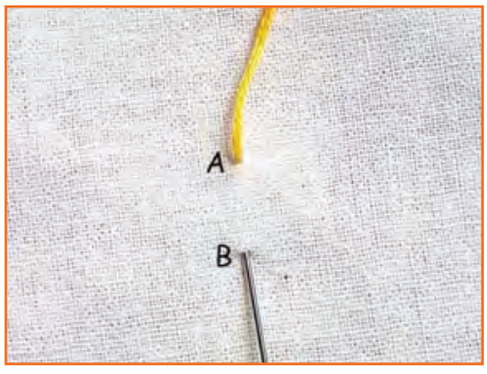


Step 4: When we pull out the needle, the first double knot is formed. For the nest knot by putting in the needle through D on the stitch line and bringing it out from E, just above the point D. Continue with the procedure as we did for the first knot.

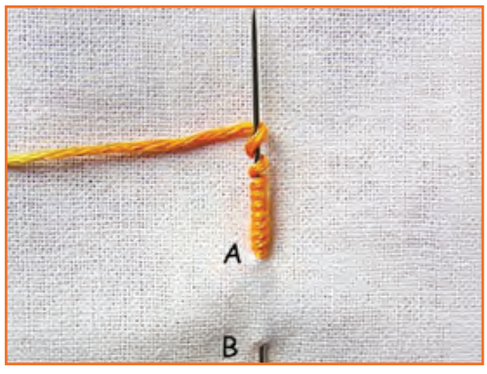
Step 5: The finished portion of double knot would look like as in figure.

3.3.19 Steps of Carrying out Bullion Knot

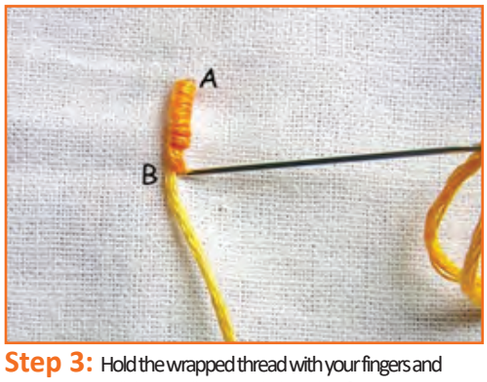
This knot is very similar to the French Knot, but here the loop is threaded around the needle more times, producing a worm of a knot that is inserted a slight distance from the needle's original entry point. Bullion knot is used to create decorative dots, leaves, plants etc.



Step 1: Bring the needle out through A and put the needle through B at a desired length.



Step 2: Bring the needle out through A again. Then, wind the thread around the needle as shown. The distance of wound thread should measure the same as the distance between A and B. Too many or too less wraps will spoil the stitch.



Step 3: Hold the wrapped thread with your fingers and pull the needle out with the other finger. Keep pulling the needle completely in an upward direction till the wraps lay on the fabric. Adjust and straighten the wraps if required and put in the needle back through B.

Step 4: The finished bullion stitch would look like as in the figure

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Understand different types of stitches such as; flat stitches, loop stitches and knotted stitches.
- Observe how a tailor carries out flat stitches, loop stitches and knotted stitches
- Ask questions to Tailors/shop owners if you have any query.

Exercise

1. Which of the followings are the commonly used types of flat stitching:
   a) Satin
   b) Cross
   c) Stem
   d) All the above
2. Stem stitch, and its variations, are worked as a thin line and can be used to outline embroidered shapes, stitch lines and curves, embroider letters.
   a) True
   b) False
3. _____ Stitch is used to secure the edges of buttonholes as it gives a much sturdier stitch due to the knots it makes.
   a) Chain
   b) Button Hole
   c) Fish bone
   d) Feather
4. _____ stitch is a type of filling stitch and is used for making leaves and feathers.
   a) Feather
   b) Fish bone
   c) Chain
   d) Button Hole
5. Which of the followings are the types of loop stitch:
   a) Double Knot
   b) Bullion Knot
   c) French Knot
   d) All the above
6. _____ is also known as Palestrina knot stitch.
   a) Bullion Knot
   b) Double Knot
   c) French Knot
   d) None of the above

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4. Inspections and Alterations for Fittings

Unit 4.1 - Inspections and Alterations for Fittings

AMH/N1949

Key Learning Outcomes 

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

1. Know the importance of basic elements of garment fitting
2. Carry out fitting inspection
3. Recognise the common fitting errors and their solutions

UNIT 4.1: Inspections and Alterations for Fittings

Unit Objectives

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

1. Know the importance of basic elements of garment fitting
2. Carry out fitting inspection
3. Recognise the common fitting errors and their solutions

4.1.1 Basic Elements of Garment Fitting

A well-fitted garment is very important to reach the satisfaction level of a client who wears tailored attire. Every detail has to be attended to, when a tailor does fittings. If the fittings are improper the look and design of the garment completely destroyed.

A good fit is based on 5 classic elements

1. **Grain:** For a good fit the garment should be cut on the right grain. If the costume is off-grain, the seam lines may twist or hang crooked. Imprecise cutting or stitching may result in deviation in the grain line.
2. **Set:** Is when the garment fits perfectly without any undesirable wrinkles. Wrinkles usually occur because the garment is too large or too small for the customer.
3. **Line:** Refers how the lines of the garment are in alignment with the natural lines of the body. Poor design or construction can result in an out of line garment
4. **Balance:** occurs when the garment is in equilibrium. The garment should appear symmetrical, when viewed from any angle.
5. **Ease:** Is how fitted or airy the fittings of the garment is. A good fitted garment will give some room to breathe and won't be too fitted or tight.

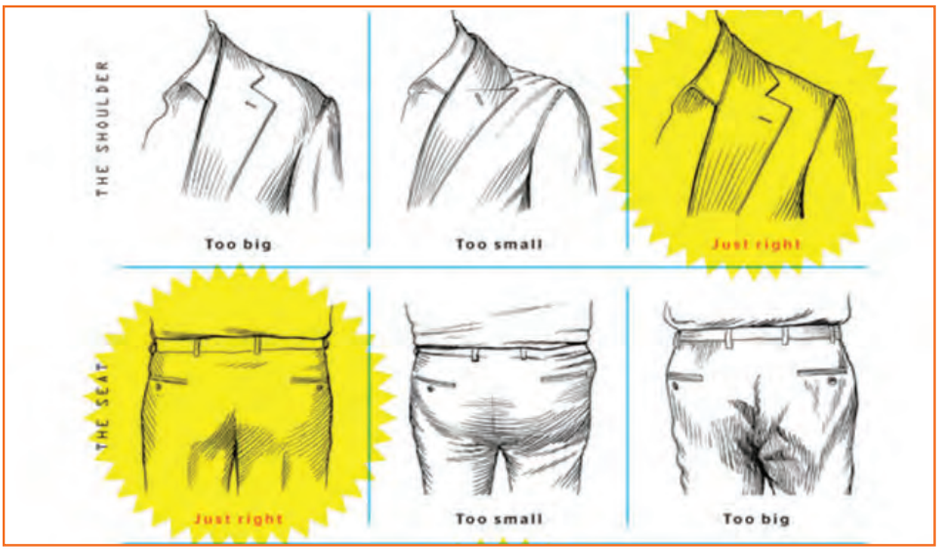

Fig.4.1.1(a): Garment Fittings

Fig.4.1.1(b): Garment Fittings

4.1.1.1 Carrying Out Fittings Inspection

A tailor must check the following details when he checks the fittings of a garment

Shoulders

- Seam should lie on the edge of the shoulder.
- The shoulders should be wide enough to ensure that the sleeves hang comfortably into position.
- The shoulder slope of the garment should go in sync with the shoulder slope of the wearer.

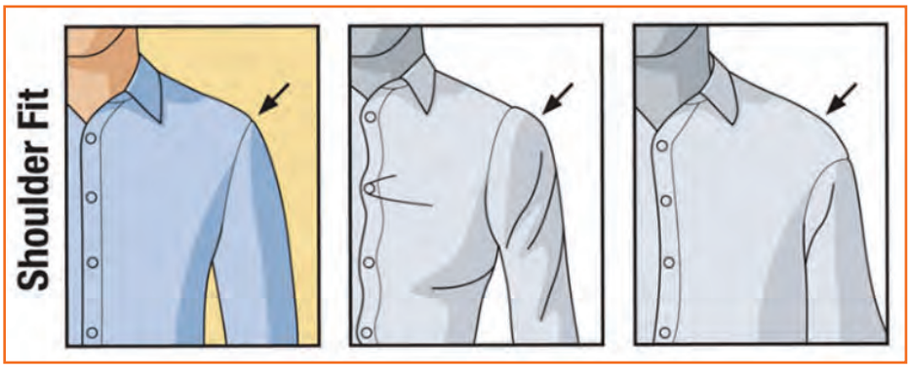

Fig.4.1.2: Shoulder Fitting

Chest/Bust

- The tip of the dart should end about an inch before the fullest part of the curve of the bust.
- Incorrect positioning of the dart will make the garment too fitted around the bust area.

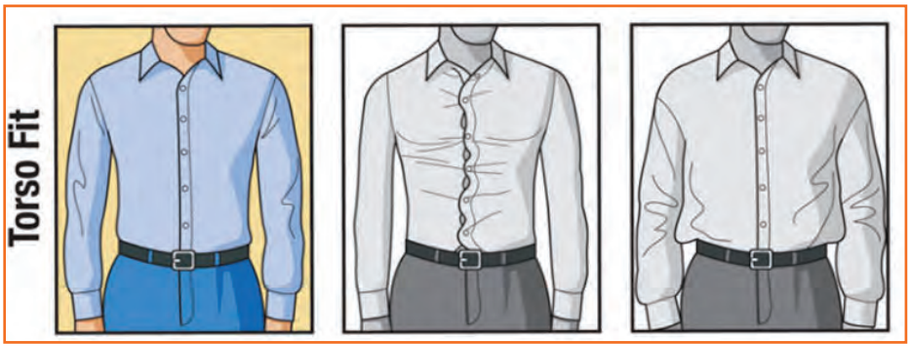

Fig.4.1.3: Chest/bust Fitting

Neckline

- The front of the normal neck line should be always larger than the neckline at the back
- Neckline should not be too large or too small.

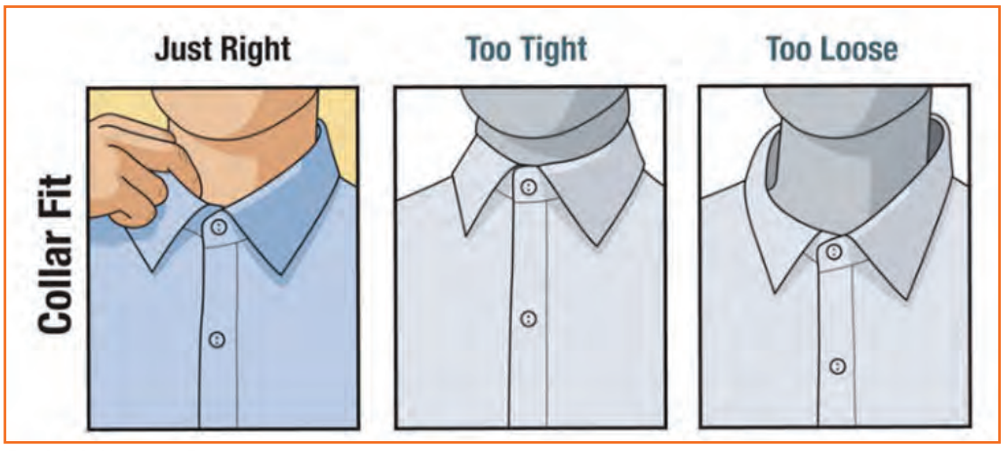

Fig.4.1.4: Neckline Fitting

Collar

- The circumference of the collar should be at least 1/4th of an inch bigger than that of the neckline.
- You should be able to slip a finger in between your neck and the shirt at any point without struggling or forcing.
- The collar should neither be too tight nor too loose.

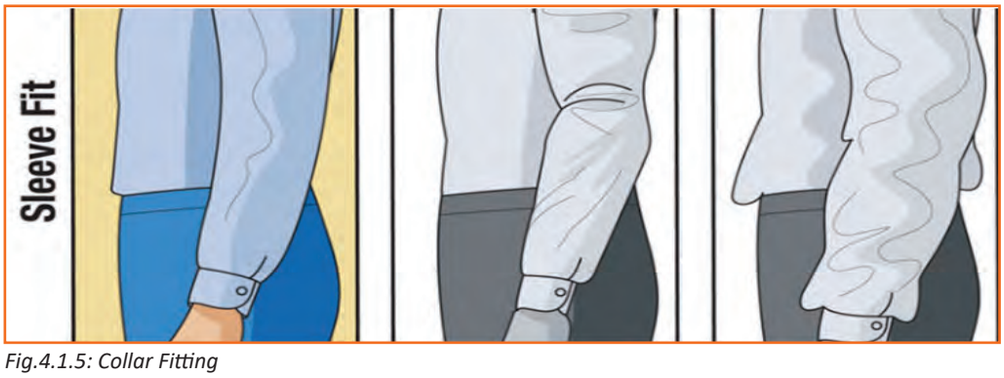

Fig.4.1.5: Collar Fitting

Sleeves

- The crosswise grain at the bicep should lie parallel to the floor.
- The sleeve should not be too fitted and should hang comfortably.
- The sleeve should begin from the edge of the shoulder seam. If it is too high the sleeve would pull.

Waistline

- The waistline should not be too fitted or too loose as both can cause discomfort.
- The narrowest part of the garment should fall at the wearer's waist.

Hips

- Garments should have enough room around the hip area.
- Garment should not have excess ease in hip or thigh area as it will result in vertical folds.

Crotch/seat

In order to incorporate comfort and durability, trousers and other bifurcated garments require a well-fitted crotch for. A properly tailored crotch doesn't cut or bind the wearer amid the legs and adapts to the shape of the buttocks. There should be slight ease in the crotch area. Crotch length has one inch of ease in the crotch area. The back of the crotch seam should be lengthier and more deeply curled than the anterior as the behind of the buttocks are more curved than the front. Bigger sizes require longer and deeper curved crotch lengths at the back. Oblique wrinkles radiating from the crotch area is because crotch curve isn't left long enough to allow the size of the buttocks. Diagonal wrinkles in the front may also be due to the wearer's big abdomen. Wrinkles coming upward from the crotch area indicate a too tight and high crotch, causing to chafing and discomfort. Wrinkles coming downwards from the crotch area shows a low and loose crotch; it stacks and drops, restricts walking and has increased probability of ripping from strain of movement. If the rise may be elongated or reduced, the waistband should also be raised or lowered. Rise should not be lengthened or shortened in the crotch length as the same may lead to problems where none existed.

4.1.2 Why and How to Fit?

To have a good fit of a garment, accurate calculations and design corrections is not enough. They can only provide an approximation of one's figure needs. The other points to be considered to have a good fit are:

1. The stylishness of the attire whether it suits oneself or not.
2. The sufficient ease in the garment.
3. The posture and the individual figure of the wearer.

Only on a fabric test fit, these can be evaluated. Since only minor changes can be made once the garment has been cut on the fabric. Hence a test fit can save lot of waste. There are times when test fit is not necessary, those are when one is sure of the style, know from experience how to adjust the pattern, have sufficient material to recut if necessary and have adequate seam allowances to borrow in crises. But if one has any doubts whatsoever, then test fitting is a must.

Usually used test material is muslin, bleached or unbleached. It should be used in a similar weight to that of the final fabric. Any other solid coloured plain weave fabric like poplin in a similar weight to final fabric would do. A plain surface is recommended as this clearly shows all seams, darts and other style details. Layout the pattern cut and mark your test fit fabric with equal amount of care as you would your final garment fabric. The fastest way to get the outcome of the finished garment without actual stitching is to overlay and pin all the seams lines. Pinning gives the same result and information, that one wants without going to the machine. It is so faster to unpin and then re-pin. After that to rip stitching and re-stitching.

Pins must be placed at the right angle to the seam line, as in, this method there is least amount of straining or pull on the seam, and it does not gape. When test-fitting trousers remember to baste stitch the crotch seam. Check the test fit muslin and make alteration till fully satisfied. Mark all the rectifications and the same should be relocated on the pattern for it is the paper pattern that one should use to cut the final fabric and not the test fit muslin. Mark new notches as the old ones may not hold good after the alterations. Check the lengths of two corresponding seams to ensure that the alterations have not created more problems, e.g. if you have corrected the dart intake of side seam dart in the front, check to ensure that both the side seams are still equal or not and if vital make the necessary changes.

Methods of fit

There are two kinds of fitting:

4. The first test fit is done on muslin at the time when the design is made. A basic test fit is done to cross check, the pattern fitting; the pattern is cut with relevant seam allowances and pinned in place for test fitting. Make sure that seams and darts are in place. This fitting is done from the right side of the garment. These corrections become the new seam lines for the garment. Check the garment for ease and fullness. It is important to mark buttons and buttonholes at right places in this fit.
5. The second is after the garment has been stitched before final finishing. Stitch the garment with relevant interfacing/ or underlining in place press it well and test fit to check the position of darts, seams, puckers if any and find the position of outer seams. This sort of fitting improves the fit of the attire. Other times when refitting happens, if the garment has been purchased readymade from the market some alterations may be required for it to be fitted to an individual's size and also if there are changes in the body size. The methods by which each pattern seam or area is to be corrected or reformed depends on the type of problems and nature of the fitting defect. The major problem areas have been previously recognized and thoroughly explained. There are areas that require minor modifications those have been explained and those that require some pattern manipulation have been shown with figures and explained briefly.

Given below are some of the fitting problems that would necessitate pattern alterations.

Waist alterations

- **Thick waists** reduce the size of the darts and or add at the side seam.
- **Slim waists** upsurge the size of the darts and take some at the side seam. If alteration is a small amount then the changes may be made in either in the darts or on the side seam. But in case the amount is adequately large than half of it should be altered in the dart and half in the side seam.

Shoulder alterations

Since the clothes hang from the shoulder their correct fit begins the lines and shaping of the rest of the garment.

- **Narrow shoulders:** On front and back pattern; draw L-shaped slash lines from mid shoulder to notches on the armhole. Slash and overlap the pattern at shoulder to the needed amount. Redraw the shoulder line.
- **Square armholes:** On front and back pattern, draw slash lines from neck to armhole edges. Slash and spread the pattern at armhole edges to the needed amount. Raise the armhole curve by the correction amount. Redraw the pattern on a new sheet or add paper to fill the gap
- **Broad shoulders:** On front and back pattern draw L-shaped slash lines from mid shoulder to notches on the armhole. Slash and spread the pattern at shoulder to the needed amount. Redraw the pattern or insert paper in the gap. Correct the shoulder lines.
- **Sloping shoulders:** On front and back pattern draw slash lines from neck to armhole edges. Slash and overlap the pattern at armhole edges to the needed amount. Pin the pattern piece or scotch- tape it to the required position. Redraw the armhole curves, lowering them at underarm by the same amount that you have taken in for corrections.
- **Round armholes:** On front and back pattern, draw slash lines from neck to armhole edges. Slash and overlap the pattern at armhole edges to the needed amount. Redraw the armhole curves, lowering them at underarm by the same amount that you have taken in for corrections.

Sleeve alterations

The sleeve hangs from the shoulder and setting of the sleeve starts at the shoulder. Check that the armhole is neither too tight nor too loose otherwise a sleeve will not set in properly.

- **Wrinkling, pulling, straining, binding:** This may be due to insufficient width across the sleeve cap, across the chest or back. Unpin the sleeve. Use some of the sleeve seam allowances at the armhole and sleeve cap for more width.
- **Tight armhole:** Drop the armhole by requisite amount. Add width at both the armhole and sleeve edge. Use some of the under arm seam allowances at sleeve and side seam.
- **Short sleeve stands out at the hem:** This is due to insufficient length of the sleeve cap. Draw a slash line across the cap. Slash and spread to the needed amount. Correct the armhole curve.
- **Sleeve cap wrinkles across the top of the sleeve:** This indicates too much length at sleeve cap. Draw a slash line across the cap. Slash and overlap to the needed amount. Correct the armhole curve.
- **Heavy arm:** Draw an upturned slash line on each side of the sleeve opening at under arm to the lower edge of the sleeve. Slash and spread the pattern to half the needed amount to each side at the underarm and tapered to nothing at the lower edge. Make identical changes in the armhole seam of the front and back bodice. Draw a slash line from the underarm to waistlines in front and back bodice. Slash and spread the pattern to the same amount as that added on each side of the sleeve, starting at the underarm and tapering to nothing at the lower edge.
- **Tight upper arm:** Slash the sleeve at the centre from shoulder point to the lower edge. Spread at the cap the essential amount tapering at the lower edge.

Bust alterations

Since the bust area is the most difficult to fit being the rounded part of the body. Check the garment; it should be neither too tight nor too loose. Big alterations are not very effective in this area especially for closer fitting garments.

- **Bust with a large cup:** As you know, women with the same bust size have different cup sizes. These causes the garment to be tight over the bust area. Draw a upright slash line from the shoulder passing through the bust point to the other edge of the pattern, passing through the waistline dart. Draw a vertical line to this line at the bust point from centre front to the side seam. Slash on all lines and spread the pattern adding at the bust area without increasing at the shoulder.The added width at the side seam and waistline should be taken in a dart. If the dart intake is very big it is advisable to convert it into two darts.
- **Bust with a small cup:** Draw a vertical slash line from the shoulder passing through the bust point to the other edge of the pattern, passing through the waistline dart. Draw a perpendicular to this line at the bust point from centre front to the side seam. Slash on all lines and overlap the pattern without reducing on the shoulder.

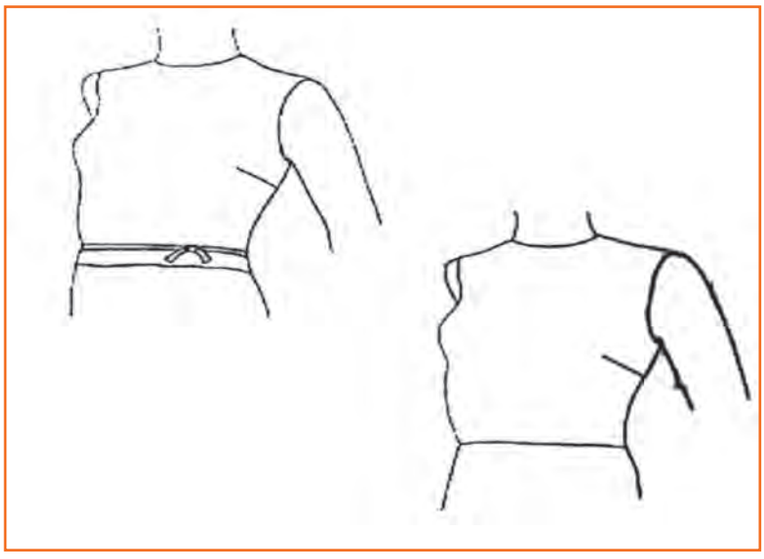

Fig.4.1.6: Bust with a large cup

Hip pattern alterations

Fitting problems in this are manifest themselves in wrinkling, pulling, sagging and uneven hemlines.

- **Small hips:** Draw a vertical slash line from the waist to the hem of the skirt pattern. Draw a horizontal line from centre back to the side seam passing through the fullest part of the hip. Slash the pattern on both the lines and overlap width wise to remove excess without loosing at the waist, unless the dart intake can be taken out for ease. Overlap length wise to remove excess without loosing at the side seam. True the seam lines.
- **Large hips:** Draw a vertical slash line from the waist to the hem of the skirt pattern. Draw a horizontal line from centre back to the side seam passing through the fullest part of the hip. Slash the pattern on both the lines and spread width wise to fullness; the added ease may be taken in the dart intake. Spread length wise to add fullness without adding at the side seam. True the seam lines.

Given below are some of the common fitting problems that would necessitate pattern alterations with illustrated solutions by draping method.

1. **Problem- Folds below the bust dart.**

   Solution- Undo the dart and part of the side seam. Lift shoulder a little, re-pin a bigger dart and pin the side seam to take out the excess fabric.

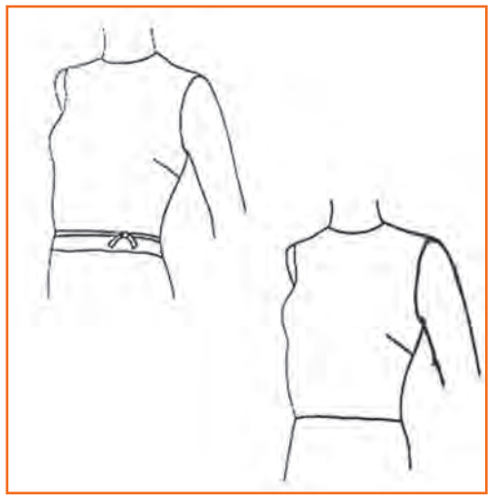

Fig.4.1.7: Folds below the bust dart

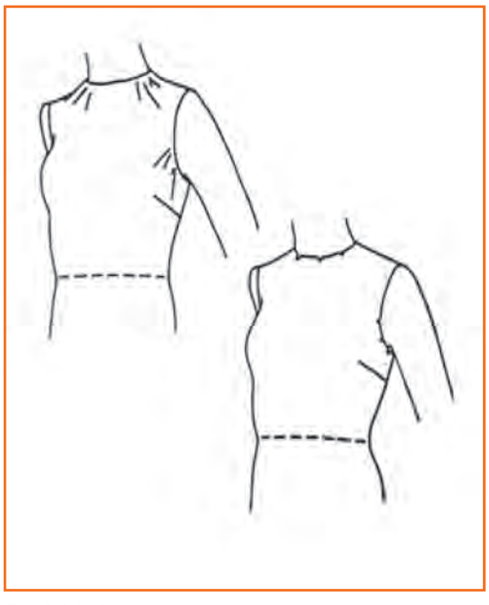

Fig.4.1.8: Low waist

2. **Problem- Low waist.**

   Solution- Tie a band around the waist and remark the waistline. Remove and re-pin the skirt to new waistline.

3. **Problem- Baggy below the hip.**

   Solution- Raise the skirt at back only and re-pin

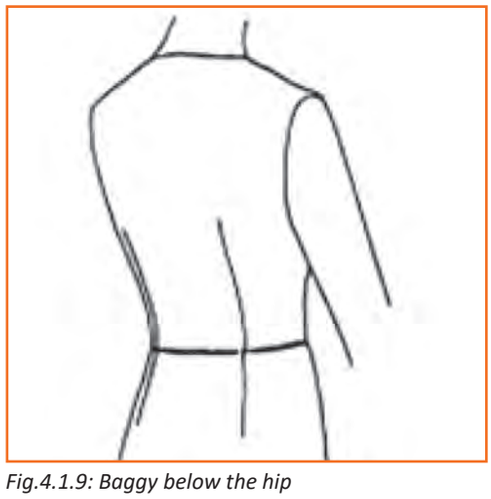

Fig.4.1.9: Baggy below the hip

4. **Problem- Gaping armhole**

   Solution- undo dart and pin a bigger dart. Making sure that it points towards the bust point. One may need to lift shoulder seam at the armhole.

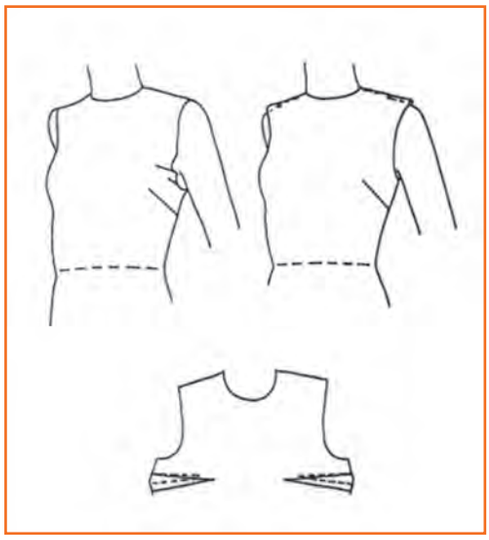

Fig.4.1.10: Gaping armhole

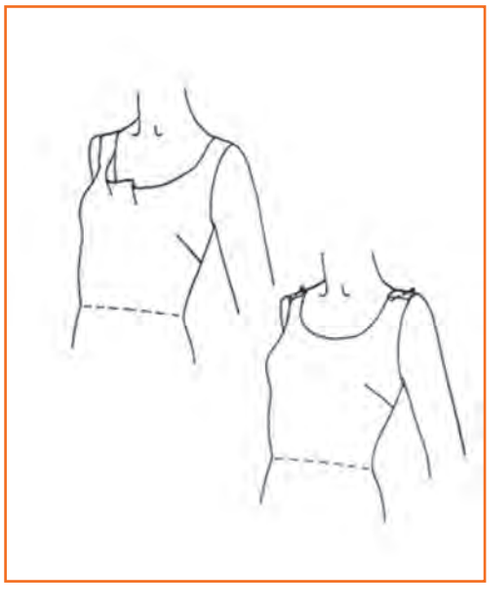

Fig.4.1.11: Low neckline gapes

5. **Problem- Low neckline gapes.**

   Solution- Lift at the front shoulder seam. Lower the dart point if necessary

6. **Problem- Folds in the dress below the waist.**

   Solution- Undo the side seam from below the armhole and ease out until the garment hangs smoothly.

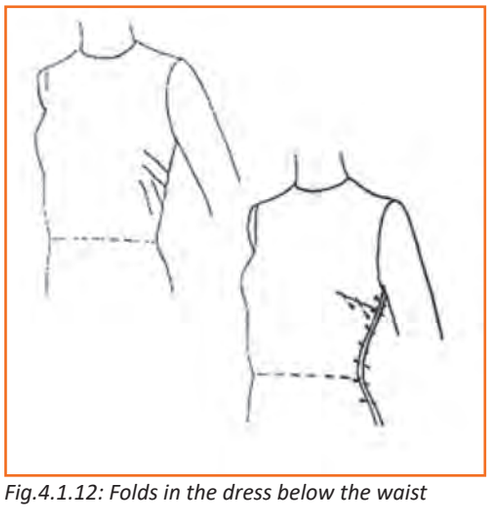

Fig.4.1.12: Folds in the dress below the waist

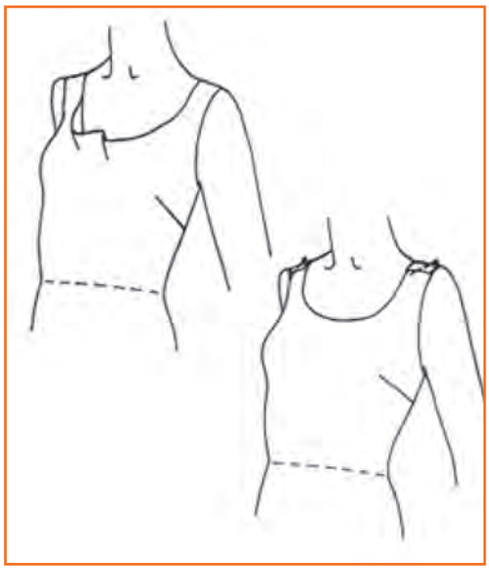

Fig.4.1.13: Tight neck or armhole

7. **Problem- Tight neck or armhole.**

   Solution- slash and snip seam allowance to release tension. If it is not enough, mark a new seam line that is lower than before.

8. **Problem- Neckline stands away and folds below.**

   Solution- release shoulder seam and let it out at the armhole edge.

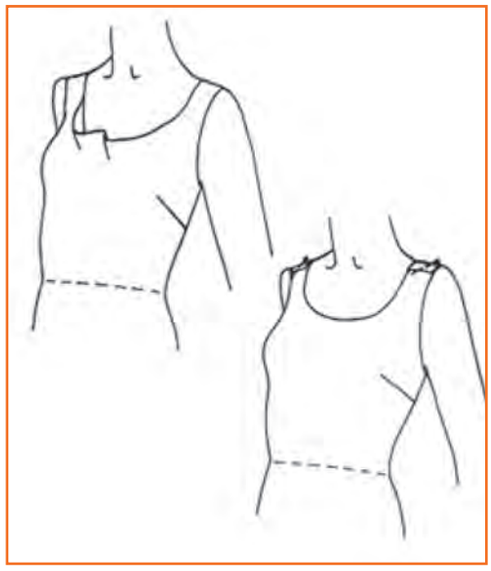

Fig.4.1.14: Neckline stands away and folds below

Fig.4.1.15: Shoulder seam lies towards the front of the shoulder

9. **Problem- Shoulder seam lies towards the front of the shoulder.**

   Solution- Undo shoulder seam and release front seam allowances only.

10. **Problem- Folds across sleeve at the top.**

    Solution- Mark a new fitting line below the existing one to reduce cap height.

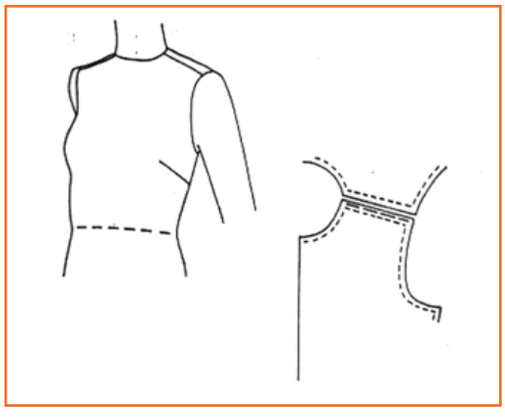

Fig.4.1.16: Folds across sleeve at the top

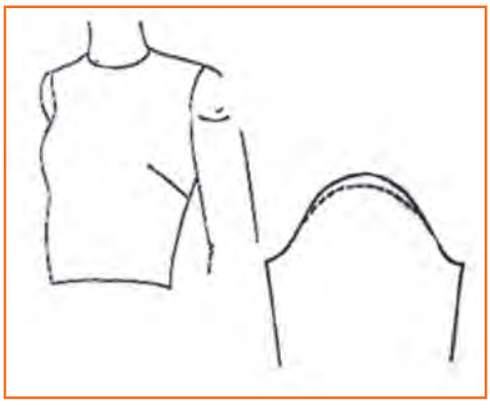

Fig.4.1.17: Sleeve hangs towards the back

11. **Problem-Sleeve hangs towards the back.**

    Solution- Remove the sleeve and re-pin by moving the notch at the centre of the sleeve toward the back so that the sleeve may hang towards the front

12. Problem- Wrinkles and creases around the upper arm.

Solution- Release the underarm seam allowance and add the ease.

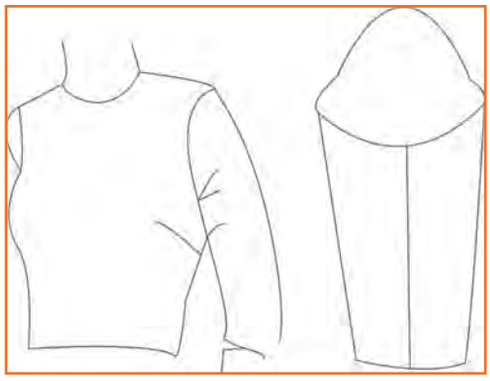

Fig.4.1.18: Wrinkles and creases around the upper arm

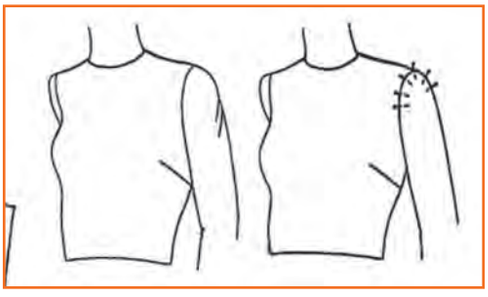

Fig.4.1.19: Sleeve pulls at the back armhole

13. Problem- Sleeve pulls at the back armhole.

Solution- Unpin the sleeve and release the seam allowance on both the armholes of sleeve and bodice.

14. Problem- Trousers are loose at waist, hip or leg. Creases on leg and trousers stands away at waist.

Solution- Take excess fabric at side and pin at original seam lower down. For larger hip increase the dart intake. Pin the excess towards the outer seam.

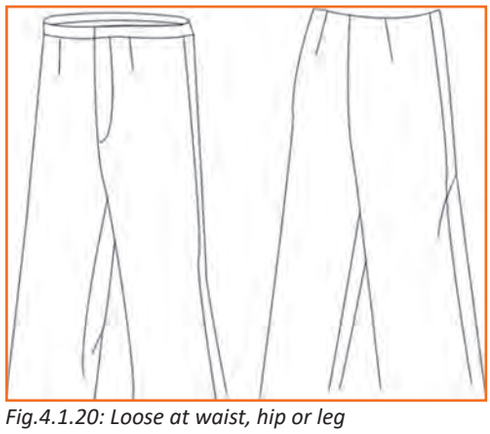

Fig.4.1.20: Loose at waist, hip or leg

Fig.4.1.21: Trousers tight below the waist

15. Problem- Trousers tight below the waist, crease around abdomen.

Solution- Release darts and reduce their width and length, also release some ease on the outer seams and re-p”

4.1.3 Common Fitting Errors and Their Solutions

Most of fitting errors can be altered or changed easily.

Problems	Solutions
Folds below the bust dart	Undo the dart and part of the side seam. Lift the shoulder, re-pin a larger dart and pin the side seam to take out the excess fabric.
Gaping armhole	Undo dart and pin a bigger dart. Making sure that it points towards the bust point. Lift shoulder seam at the armhole.
Low neckline gapes.	Lift the front shoulder seam. Lower the dart point if necessary.
Folds in the dress below the waist.	Undo the side seam from below the armhole and ease out until the garment hangs smoothly.
Tight neck or armhole.	Slash and snip seam grant to release tension
Neckline stands away and folds below.	Release shoulder seam and let it out at the armhole edge
Shoulder seam lies towards the front of the shoulder.	Undo shoulder seam and release front seam allowances only.
Sleeve hangs towards the back	Remove the sleeve and re-pin by moving the notch at the centre of the sleeve toward the back so that the sleeve may hang towards the front.
Wrinkles and creases around the upper arm.	Release the underarm seam allowance and add the ease.
Sleeve pulls at the back armhole.	Unpin the sleeve and release the seam allowance on both the armholes of sleeve and bodice.
Trousers are loose at waist, hip or leg. Creases on leg and trousers stands away at waist.	Leave the darts and decrease their width and length, also release some ease on the outer seams and re-pin.
Trousers tight below the waist, crease around abdomen.	Release darts and reduce their width and length, also release some ease on the outer seams and re-pin.

Fig.4.1.22: Common Fitting Errors and Their Solutions

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Know the importance of basic elements of garment fitting and alteration.
- Inspect and recognise the common fitting errors and their solutions.
- Observe how a tailor carries out fitting of pant, shirt and kurta.
- Ask questions to Tailors/shop owners if you have any query.

Exercise

1. A tailor must check the following details when he checks the fittings of a garment:
   a) Chest
   b) Shoulders
   c) Collar
   d) All the above
2. The circumference of the collar should be at least 1/4th of an inch bigger than that of the neckline.
   a) True
   b) False
3. What are the methods of fit?

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4. What are the common fitting problems?

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5. Maintain Work-Area, Tools and Machines

Unit 5.1 - Maintain Work Area, Tools and Machines

AMH/N0102

Key Learning Outcomes

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

1. Practice the machine safety and maintain machines properly.
2. Carry out basic maintenance of machine.
3. Maintain tools and equipments and handle them safely.
4. Use materials to minimize waste.
5. Carryout running maintenance within agreed schedules.
6. Carry out maintenance and/or cleaning within one's responsibility.
7. Work in a comfortable position with the correct posture.
8. Use cleaning equipment and methods appropriate for the work to be carried out.
9. Dispose of waste safely in the designated location.
10. Store cleaning equipment safely after use.
11. Carryout cleaning according to schedules and limits of responsibility.

UNIT 5.1: Maintain Work Area, Tools and Machines

Unit Objectives

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

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8. Use cleaning equipment and methods appropriate for the work to be carried out.
9. Dispose of waste safely in the designated location.
10. Store cleaning equipment safely after use.
11. Carryout cleaning according to schedules and limits of responsibility.

Fig 5.1.1: A well maintained machine shop

5.1.1 Introduction

Machines are essential to modern production. However, along with accrued productivity, they have brought hazards into the tailoring shop. proper management of machine hazards has traditionally been seen as expensive and a constraint on productivity. In general, the garment manufacturing trade is considered to be less dangerous than alternative industrial sectors and, therefore, safety policy is a low priority in several enterprises. for example, it has been ascertained that some workers remove guards protective belts from sewing machines, and manual cutting machines are operated with naked hands.

Machine breakdown is a common reason behind production delay affecting delivery schedules. Considering the importance of meeting delivery dates, a competitive enterprise cannot afford penalties for delay due to machine breakdown therefore, proper maintenance of machines to prolong their economic life, reduce breakdowns, prevent defective outputs and guarantee safe operation ought to be additional importance. protective staff against pollution from the frequent use of solvents for cleaning and the existence of cotton or other fibers within the surroundings ought to also be taken into consideration. Maintenance and safety measures to eliminate these hazards and increase machine productivity, beside affordable techniques for environmental control, are mentioned below.

5.1.2 Maintain Machines Properly

A poorly maintained machine is inefficient, if not dangerous. it will also have frequent breakdowns and quality issues. proper maintenance isn't lost production time; it's an investment for higher productivity and lower repair prices. nonetheless in several corporations, machines are maintained only if they break down. this can be as a result of a number of reasons:

- Machines are owned by the contractors or they're leased.
- No maintenance personnel are available.
- No time to maintain machines is allotted under production time.
- There is a powerful belief that maintenance means cost.
- Some machines are not simple to maintain.

Machine down-time affects production and causes delays. Defects are also made inflicting quality and productivity issues. Machine maintenance ought to, therefore, be planned and coordinated with supervisors and employees. employees ought to be involved in machine maintenance and should be equipped a basic tool kit to include tweezers, small screwdriver, machine brush, oil can and material wipes. one of the basic training skills is to train employees to do routine machine maintenance such as:

- Removing lints
- Cleaning the tension assembly
- Cleaning the feed dog assembly
- Cleaning the bobbin area
- Lubricating the machine

5.1.2.1 Removing Lint

Lint: With proper care, a sewing machine can last for many, many years. Fabric and thread are a combination that is going to produce lint. Lint can build up in unseen areas of machine leading to wear and tear. To keep the sewing machine running smoothly, good quality thread should be used and simple maintenance should be performed regularly. One of the most important things is to clean out the pieces of lint leftover from bits of thread and fuzzy fabric. Sewing with thick, furry fabrics (such as polar fleece), will need cleaning of the sewing machine frequently. One should open all areas that can be cleaned and clean the lint out of the machine. Usage of brush should be done to remove lint in cracks and crevices and from under the bobbin case.

Requirements: Sewing machine

- Lint brush
- Small soft brush
- Clean lint free cloth
- Compressed air (optional but helpful)
- Light source
- Screw drivers

5.1.2.2 Cleaning the Bobbin Area

- **Step 1:** Turn off and unplug the sewing machine.
- **Step 2:** Remove the bobbin cover and the bobbin.
- **Step 3:** Using a small lint brush (many machines come with one), carefully remove any lint from the bobbin area. Be especially sure to remove any lint from crevices and tight places, since compacted lint can actually stop the machine from running.
- **Step 4:** Using the lint brush or canned air, remove the lint from the area around the needle, the presser foot and the thread guides.
- **Step 5:** Remove any lint from the inside of the doors and lids of the sewing machine.
- **Step 6:** Replace the bobbin and the bobbin cover.
- **Step 7:** Plug the sewing machine back in and turn it on.

Note: *Make sure to check that after cleaning all the machine parts are properly placed and tightened. It should be safe for using it the next time.*

Fig 5.1.2: Cleaning the bobbin and case

5.1.2.3 Cleaning the Tension Assembly

Maintaining the machine is important to keep it in good condition and to avoid unnecessary service costs. Keeping the tension assembly clean is one of the maintenance procedures that, if performed on a regular basis, can help ensure that your stitching is accurate and precise. The following steps assist the cleaning of the sewing machine tension assembly.

- **Step 1:** Clean your machine often. Each stitch is precise and even a bit of lint collected on the tension assembly can cause problems. Make it a habit to clean your sewing machine after any large project.
- **Step 2:** Raise the pressure foot to release the tension on the disks. Gently run the folded edge of a clean piece of lint free cloth through the tension disks. Compressed air will also dislodge any bits of thread or lint.
- **Step 3:** Remove all lint along the thread guides using a small brush or clean cloth.
- **Step 4:** Check the bobbin area of the machine. The bobbin controls the lower tension and can be a source of built up lint. Depending on the type of machine you have, the bobbin consists of the bobbin, case and on some models a removable hook race. Remove these according to your instruction manual and clean with a cloth or small brush.
- **Step 5:** Do a final check to make sure the tension is correct and that the bobbin assembly is in place properly before you begin your next project.

5.1.2.4 Cleaning the Feed Dog Assembly

The feed dogs on a sewing machine help move the fabric underneath the needle. If they're not operating properly, damage to the machine or fabric can occur. Feed dog assembly maintenance is essential to smart sewing. Use the steps below to guide you through the procedure.

- **Step 1:** Unplug the machine and examine the feed dogs. The newer machines have metal feed dogs, however older models could have rubber ones, which regularly need replacement. Examine the feed dogs and check for damage.
- **Step 2:** remove the throat plate, which is the covering over the feed dogs, and clean it with a soft fabric. Use a small soft brush to wash the feed dogs. ensure to get rid of all lint and thread from the grooves of the teeth. Some machines have an adjustment that lowers the feed dogs for specific sewing procedures. they must be in the raised position for better viewing during the cleanup method.
- **Step 3:** Clean the area around the feed dogs with a soft brush. compressed gas could be a sensible choice to use in the small tight areas.
- **Step 4:** Wipe down all areas with a clean, lint free fabric before replacing the throat plate.
- **Step 5:** Prepare to clean the feed dogs and all other areas that lint could accumulate on, after each project. Your sewing machine will last longer and need fewer repairs if kept clean and lint free.

5.1.3 Lubricating the Machine

In order to make sure that your sewing machine enjoys the long life it was engineered for, it is important to repairs it regularly using proper maintenance techniques. one of the best things you can do to keep your sewing machine running smoothly is to lubricate it using sewing machine oil. sewing machine oil isn't something you borrow from the garage. it is clear white oil. make sure to use the right oil. refer to your owner's manual for the right spots to oil. some of the older machines have these areas marked.

After oiling your machine run stitches on some scrap cloth before you tackle your project. this enables oil to escape on to the scraps, if it's going to, rather than the project you're working on. Oiling the machine not only lubricates your moving elements, to prevent wear, it reduces the chance of rust. Rust forms rapidly with any moistness, even just the humidness in the air. Surface rust will act just like loose sand grain in your machine, and make excess wear.

- **Step 1:** Purchase a high-quality brand of sewing machine oil from a sewing store or other specialty merchandiser. Higher quality typically comes with a higher price tag, however the value of good sewing machine oil is favorable to the prices involved repairing or replacement an entire sewing machine.
- **Step 2:** unplug your sewing machine. check that its power switch is set to 'off.' as a result of you will be dealing with fluid, it is especially important to make absolutely certain any power supply is disconnected.
- **Step 3:** Drop a single drip of sewing machine oil onto the mechanism that drives the sewing needle. If you bought quality sewing machine oil, more than one drop can usually not be necessary.
- **Step 4:** Repeat Step three, applying one drop of oil to each part of your sewing machine that moves. Consult your sewing machine owner's manual if you would like instruction on the way to access any moving parts which will be contained beneath the casing of the machine.
- **Step 5:** allow the oil to absorb by letting your sewing machine stand for a few minutes. Most experts counsel that fifteen to half-hour could be a sensible window of time to let your machine stand while the stitching machine oil works its magic.
- **Step 6:** Plug your sewing machine back in. once you have safely done so, turn the power switch to 'on.'
- **Step 7:** Feed some scrap fabric through the sewing machine, running its moving elements at a slow but constant rate. this may allow the oil to spread equally throughout the parts that need lubrication to maintain best performance.

Tips & Warnings

- Never lubricate any electrical part of your sewing machine. This may damage to your sewing machine, and could result in an electric shock.

5.1.4 Machine Guards

There are different safety guards given in the sewing machine that are vital to use and it's also essential to check that the right safety guard is in place as per the need. Below are given the machine guards of a sewing machine.

- **Finger guard:** while guiding the fabric under the presser foot the fingers may accidently cross into the path of the needle. Hence, finger guard is attached to the presser foot to avoid such accidents. This is very important safety feature.

Fig 5.1.3: Finger Guard

- **Eye guard:** Eye guard is important in cases where the operator is working on the fabric which has many fibers, hence eye guard protect eyes from getting tired. It also helps in protecting them against any little cloth fabric like that of wool or dust fibers. Eye guard is also used as a protection against needle-breakage in high speed sewing machines.

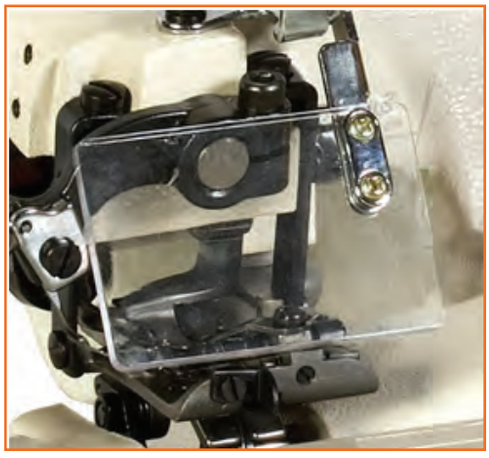

Fig 5.1.4: Eye Guard

- **Belt guard:** Belt guard is a cover attached to the belt pulley assembly and the ad wheel. In industrial sewing machines the pulley and the belt move at very high speeds. Hence there is always a risk of hand or hair getting caught in the belt pulley therefore it is important to have a belt guard as it protects the operator from such accidents.
- **Motor pulley guard:** Motor pulley guard is attached to the motor under the Fig, like the belt guard, motor pulley guard protects our body Parts from getting caught in the wheel and belt attached to the motor below the Fig.

5.1.5 Troubleshoot Common Machine

In several cases machine issues are due to the employee not having received correct training in basic machine maintenance. This causes issues that need to be corrected by a certified mechanic/technician. All garment enterprises suffer from such issues to varying degrees. Some common causes are:

- Incorrect needles
- Incorrect machine settings for the fabric
- Inexperienced staff
- Inexperienced mechanics/technicians
- Fabric finishes.

On-the-job training sessions could also be organized for beginners as part of their training period. Enlist the assistance of senior operators with teaching skills. group work will provide good opportunities for these training sessions. Sessions ought to embrace acquiring the essential sewing skills and troubleshooting sewing issues.

5.1.6 Carry out Basic Maintenance of Machine

It is important to carryout basic maintenance of own machine and surroundings. While operating a sewing machine we can keep a check of these two maintenances by keeping an eye on the needle point i.e.

- Must check the needle point and stitch quality while working. Be attentive and look for any kind of oil leakage is found, replace (or inform) immediately. For hazard free environment always keep the hook area clean and tidy.
- **Routine Maintenance:** This covers sub kinds of maintenance i.e.
  - » **Daily maintenance of the machinery:** While carrying out the daily maintenance one must look for whether the machine and its area is clean, look for threading of the machine, quality and quantity of the oil.

    Make sure to switch off the machines after operation this is one of the most important part of daily maintenance. Keep a check on needle tip and needle bend it should not be dull or rusty at all.
  - » **Weekly maintenance:** Consists of checking up the oil level and oil color in the machine. Make sure to remove the presser foot, throat plate and the feed dog too and clean them all thoroughly. Hook timing and clearance is also adjusted weekly so that the machine can work efficiently.
  - » **Monthly maintenance:** While keeping an eye on monthly maintenance of the machinery it is very important check oil flow in the pipeline, refill the oil up to its maximum level for efficient and flawless performance.

Industry Visit

The purpose of visiting a tailor shop/boutique is to get hands on knowledge about various processes involved in the work of a tailor. During the visit you have to interact with Tailors and owner of the shop to understand how work is done in a tailor shop/boutique. Make sure that you keep a notebook handy and note down any important points that come up during your interaction at the tailor shop/boutique. When you go to an tailor shop/boutique, you should:

- Understand the machine safety and maintenance rules of industry.
- Analyze how packers:
  - » Maintain machines properly.
  - » Carry out basic maintenance of machine.
  - » Maintain tools and equipments and handle them safely and use materials to minimize waste.
  - » Work in a comfortable position with the correct posture.
  - » Dispose of waste safely in the designated location.
  - » Store cleaning equipment safely after use.
- Ask questions to Tailors/shop owners if you have any query.

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N·S·D·C
National
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Corporation
Transforming the skill landscape

6. Comply with Industry, Regulatory and Organizational Requirements

APPAREL MADE-UPS HOME FURNISHING
SECTOR SKILL COUNCIL

AMH/N0104

Key Learning Outcomes

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

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

UNIT 6.1: Comply with Industry, Regulatory and Organizational Requirements

Unit Objectives

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

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

6.1.1 Defining Compliance for Your Organization

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

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

Fig.6.1.1: Regulatory Compliance

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

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

After that, they must adopt ways to enforce those policies and measure their effectiveness. Initially this may seem to be an easy and convenient task. But the dilemma is creating a policy – without any mechanism, may it be manual, automated, or third-part, to measure and monitor compliance of the policies is very difficult. In order

to build effective policies, we must not only have an understanding of the statutory requirements that will shape the policy within our organizations, but how these policies relate to the business practices, the workforce, the methodologies of operations and the technologies within the corporation.

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

6.1.2 Significance of Compliance in Indian Garment Industry

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

Social Compliance

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

Compliance Audit

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

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

There are three main phases of compliance audit in India:

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

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

6.1.2.1 Core Labour Standards

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

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

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

6.1.3 India Adopting Universal Standards on Child Labour

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

6.1.3.1 Common Compliance Code

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

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

6.1.4 Indian Garment Industry and Social Responsibility

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

- Rise in disposable incomes
- Government policy focused on fast-track growth

- Convenience of shopping at departmental stores and shopping malls
- Increasing demand for branded apparels and fashion accessories
- Boom in the retail industry

6.1.4.1 International Labour Standards

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

6.1.4.2 Corporate Social Responsibility

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

6.1.4.3 Social Responsibility in the Garment Industry

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

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

6.1.5 Indian Apparel Trade and Compliance Standards

The Indian garment industry is aiming to reach 7.5 billion by the end of 2012, a Fig that is practically double the size of the last profit intended by the Indian Chamber of Commerce (ICC).

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

6.1.5.1 Why Code of Ethics is Required

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

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

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

6.1.5.2 Working Hour & Wage Rate Compliance

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

6.1.5.3 Tailoring Shop & Work Environment Compliance

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

6.1.5.4 Non-discrimination Compliance

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

6.1.5.5 Social Compliance in India

Religion, community, culture or belief characteristics should never be the basis of distinction among employees by the organisation. All the terms and conditions of employment should be based on a person's ability to do the job. The mandate for social compliance is growing every day. One can accomplish a dynamic and vigorous compliance system only when the workforce is provided with an equal stand to voice their concern and have consultative instrument at the tailoring shop. The Apparel Export Promotion Council of India (AEPC), a summit framework of Indian apparel exporters, runs all social compliance services to meet international global standards. This council trains and monitors industrial unit to upgrade the factory conditions and labour values and standards.

6.1.6 Health and Safety Compliance in Indian Garment Industry

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

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

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

6.1.6.1 Need for Compliance Codes

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

6.1.6.2 Role of Apparel Export Promotion Council in India

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

6.1.6.3 Compliance Code Guidelines

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

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

6.1.7 Compliance Code Guidelines for Indian Garment Industry

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

- Exporters must not be intricate in unfair labour practices but limited to interferences in matters regarding freedom of association.
- Exporters shall recompense workforce for all hours operated. Workers on a piece rate payment scheme or any other incentive scheme should be paid according to that.
- Exporters shall not illogically restrain the liberty of movement of workers, including movement in canteen during breaks, using toilets, accessing water, or to access necessary medical attention, as a means to maintain work discipline.
- Exporters are about to offer workers with paid annual leaves as required under local laws, guidelines and processes. Exporters shall not impose any undue limitations on workers' use of annual leave or taking any type of sick or maternity leave.
- There shall be no alterations in workers remuneration for work of equal value on the basis of gender, race, religion, age, nationality, sexual orientation, social political opinion, disability or ethnic origin.
- Exporters shall not threaten female workers with firing or any other employment conclusion that adversely distresses their service status in order to avert them from getting married or becoming pregnant.
- Exporters shall confirm that proper ventilation systems are installed within their premises to prevent airborne exposures which may affect the health of workers.

- Members shall not custom any form of physical or mental, emotional violence, threats, harassment, or abuse against workers seeking to form organisations or participating in union activities, including strikes.
- Workers shall be permitted to at least 24 successive hours of rest in every seven-day period. If workers must work on a rest day, another successive 24 hours rest day must be provided.
- Exporters shall pay workers at least the legal minimum wage or the usual industry wage, the one that is Higher. This indeed is the most essential code of compliance for Indian Industry.
- Garment exporters must ensure that the minimum age requirement to unsafe employment shall not be less than 14 years. This is the most significant concern in the country. Each worker has the right to enter into and to terminate their employment freely. Indian apparel makers need to follow all the compliance rules to comply with global standards. Often companies adopt industry compliance codes to project a positive image and protect their goodwill in the market. The Indian garment industry needs to be strong on compliance instead of competing with other developing countries manufacturing inexpensive garments.

6.1.8 India Complying with International Standards on Child Labour

Child labour has been a grave crime in India. It still exists. Children are in poverty, ignorance, and corruption due to illiteracy. Child labour superfluities under many conditions such as discernment (based on gender, ethnic, or religious issues), inaccessibility of educational and other substitutes, weak enforcement of child labour laws, etc. Large global firms, conscious of their image, often set up their own compliance standards for the exporters to ensure that all standards are being complied with. Various companies of U.S originality have included child labour in their code of conduct, due to tenacious evidence of child exploitation in the industry. In worldwide market, the buyer's compulsory requirement is to have an audit. As India is a leading garment exporter, the level of garment factory compliance is very high for Indian exporters. The child labour issue is one of the very important aspect that the audit checks. Therefore, all the export units must be highly compliant on issues related to child labour.

6.1.8.1 Code of Conduct for Garment Exporters

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

UNIT 6.2: Entrepreneurship

Unit Objectives

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

1. Understand importance of being an entrepreneur
2. Understand concepts of tailor shop economics like book keeping, inventory management

6.2.1 An Entrepreneur

An entrepreneur is a person who runs his/her own business. Entrepreneurs are the ones who explore opportunities, scan the environment, mobilize resources, and transform notions and ideas into practicable business proposition, providing new products and services to the society by bringing together and merging various factors of production. An entrepreneurial individual has a distinct concept, vision and a dream, which he/she is able to convert into products. Such individuals are driven by task, challenge and opportunity with very high achievement orientation.

6.2.2 Accounting

Book keeping is an activity that is unkempt by small scale farmers, even in literate populations. The agriculturalists may not see the advantage from this extra activity, which appears to be quite unrelated to the practical aspects of dairy farming. However, financial record keeping is a very vital activity to safeguard that the dairy business runs economically. Maintaining separate accounts for the dairy farm will be helpful in:

- Understanding how money is spent and income is earned.
- Finding ways of reducing expenses and increasing incomes i.e. increasing profits.
- Making decisions about increasing or decreasing concentrate feeds, growing pastures and fodder crops, buying and selling of animals etc.
- To get a correct picture of the income, expenditure and profits (or losses), everything of value in the dairy farm and all transactions involving payments and receipts of money must be recorded.

Single- entry book keeping

Single-entry book keeping is a simple method of accounting. A single book is maintained to enter all transactions, whether they are payments made out or income received by the farmer. Some key points to remember while keeping a single-entry book are:

- Fill in the book every day or at least every week. Enter all transactions including payments and income
- Keep receipts, invoices, statements and other business documents together with a clip or in a file

For example, if someone (a buyer) gives you a bill or an invoice the following data should be recorded in the single-entry book:

- Amount of money received

- Quantity of milk
- Invoice numbers

An example of a single-entry book is shown below:

Item	Date	Description	Payment	Income
1	10-1-14	Threads (40 Pcs @ 3.00)	120.00	-
2	12-1-14	Fabric sales-received from ABC.	-	310.00
3	12-1-13	Payment to labourer	50.00	-
4	13-1-14	Other Expenses	60.00	-
5	14-1-14	Payment of loan	96.00	-

Fig.6.2.1: Single- entry book keeping

Some important aspects of financial management are:

Profit and Loss

Even though income and expenditure are recorded everyday in this manner as and when actual transactions take place, the profits (and losses) are usually calculated for longer periods e.g. for a year. For calculating profits (and losses), the items of expenditure and income during the period under consideration are summarised under three main sections:

- **Capital items:** Capital items are those having a longer life and a higher value e.g. land, buildings, equipment such as milk cans and animals.
- **Recurrent items:** The recurrent (or consumption) items are those that get used up in the production process e.g. cattle feeds (both roughages and concentrates), mineral mixtures, chemicals, disinfectants, medicines, soap, and various miscellaneous items.
- **Loans** (and payment of loan instalments including interest).

Cash flows

It is also imperative to know about the timing of receipts and expenditure of money. If money is not available from the enterprise to meet the expenditure at the correct time, e.g. planting grass or buying concentrates, the farmer may be forced to lend from expensive sources (because the borrowing has to be done at short notice).

6.2.3 Client Management

For a tailor it is very important to manage relations with clients. By maintaining cordial relations with clients, the tailor can benefit financially as well as benefit from finding new linkages. There are generally two kinds of clients:

Buyers/Customers: These are the people who buy finished garments from you to sell them to others. In other words, they are not the direct users of the products. They might be wholesalers, who supply products to the retailers.

Consumers: These are the people who directly consume the products (for example a consumer who get a shirt made for himself)

One has to understand that there are a number of tailoring shops in the market and if good relations are not maintained with the clients, they can easily move on to some other tailors. A business remains in the market successfully only by sustaining good relations with each of the client. Clients can be satisfied with the goods and services provided by you :

- When they are happy with the features and quality of the product
- When the price of your product is reasonable (reasonable means within the budget)
- When one delivers on time and maintains agreed terms
- When extra efforts are put in to make them happy; like by working overnight to deliver on time

Another important benefit of managing good relations with the clients is that they can provide more detailed and accurate information on the market trends. E.g. a wholesale buyer can update with the expected change in demand of a new design of blouse or shirt or even tell you about the arrival of a new tailor. This information can help you to manage you production accordingly and also to decide prices in a better way.

It is also advisable to keep a detailed record of the different clients that are associated with you. The record may include:

- Client's name
- Contact number
- Quantity of goods sold (daily, weekly or monthly)
- Financial details (money received/money given)

Once you have good relations with the client, you can understand their needs and requirements in a better way and hence serve them well.

UNIT 6.3: Documentation

Unit Objectives

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

1. Understand importance of being an entrepreneur
2. Understand concepts of tailor shop economics like book keeping, inventory management

6.3.1 Introduction

Documentation is one the most crucial aspect of every job. By completing documents it is ensured that details of every transaction/event/incident are recorded and can be accessed when required.

Due to limitations of human memory, it is very difficult to remember each transaction and its details. In order to keep a record of all the transactions, routine or special, tailor maintains and updates different types of registers. The importance of this information varies with time and situation. Some information is casual and day to day observation, while others are unusual and spontaneous. Due to limitations of human memory, a tailor's recall capacity is limited. Important events/incidents can be recalled with accuracy if some writing exercise is carried out and notes are made.

6.3.2 Maintaining Registers

The need for maintaining registers is explained below:

- To keep a record of transactions carried out
- To maintain order and uniformity in recording details
- A register is a documentary proof of a transaction carried out
- Gives a consolidated summary of a particular kind of transaction in a given period
- Can be used as a legal document
- Details of a past event can be retrieved whenever required
- To provide statistics of daily/monthly movement of men/material
- To maintain proper records of an incident on a day for future reference

According to the requirement, the tailor can use some registers. Commonly used registers are:

- Handing/Taking over Register
- Visitor Register (In/Out Register)
- Measurement Register
- Material Register

While maintaining a register a tailor should always remember the following key aspects:

- Register is to be named and all the pages are to be numbered

- Register is to be kept in good condition
- Pages of registers not to be torn or detached
- Use only blue/black pen while making entries
- Avoid corrections/overwriting
- Do not relocate the register from its designated post
- One dedicated register to be maintained for a particular purpose
- First entry of the day to be made on the current date
- All the fields of a particular entry are to be filled.
- Do not keep fields incomplete

Register Formats - Attendance Register

MATERIAL ISSUE REGISTER

Date	Department Name	Receiver Name	Material Name	Qty	Unit	Material Issue slip No.	Remark	Material Receiver Signature	Store keeper Signature

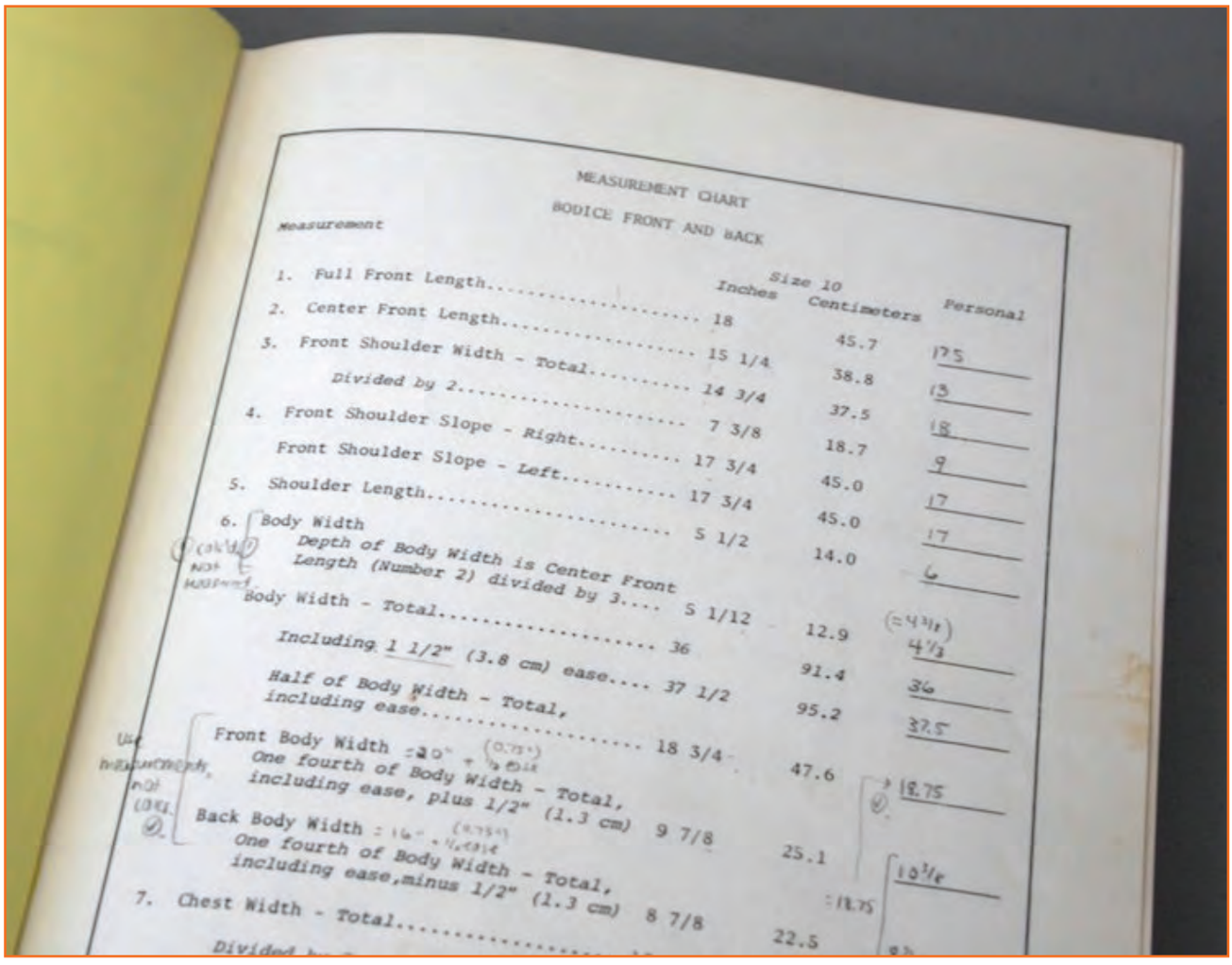
Fig.6.3.1: Material Register

VISITOR LOG BOOK

Format No.:

SR NO	VISIT NO	DATE	NAME OF PERSON	VISITOR FROM	MEETING WITH	REASON FOR VISIT	LAST VISITED ON DATE	TIME		TIME SPENT		ACTIVITES DONE DURING STAY
								IN	OUT	HOURS	MINUTES	

Fig.6.3.2: Visitor log (In/Out Register)



MEASUREMENT CHART

BODICE FRONT AND BACK

Measurement	Size 10 Inches	Centimeters	Personal
1. Full Front Length	18	45.7	17.5
2. Center Front Length	15 1/4	38.8	15
3. Front Shoulder Width - Total	14 3/4	37.5	18
Divided by 2	7 3/8	18.7	9
4. Front Shoulder Slope - Right	17 3/4	45.0	17
Front Shoulder Slope - Left	17 3/4	45.0	17
5. Shoulder Length	5 1/2	14.0	6
6. Body Width - Depth of Body Width is Center Front Length (Number 2) divided by 3	5 1/12	12.9	4 1/3
Body Width - Total	36	91.4	36
Including 1 1/2" (3.8 cm) ease	37 1/2	95.2	37.5
Half of Body Width - Total, including ease	18 3/4	47.6	18.75
Front Body Width - One fourth of Body Width - Total, including ease, plus 1/2" (1.3 cm)	9 7/8	25.1	
Back Body Width - One fourth of Body Width - Total, including ease, minus 1/2" (1.3 cm)	8 7/8	22.5	10 3/8
7. Chest Width - Total			
Divided			

Fig.6.3.3: Measurement Register

6.3.3 Cost Sheet

A statement which provides for the assembly of the detailed cost of a centre or a cost unit. It is also a periodical statement.

A cost sheet is prepared to know the outcome and breakup of costs for a particular accounting period. Columnar form is most popular. Although cost sheets are prepared as per the requirements of the management, the information to be incorporated in a cost sheet should comprise of cost per unit and the total cost for the current period along with the cost per unit and the total cost of preceding period. Data of financial statement is used for preparation of cost sheet. Therefore, reconciliation of cost sheet and financial statement should be done on a regular interval.

The expenditure which has been incurred upon product for a period is extracted from the financial books and the store records and set out in a memorandum statement. If this statement is confined to the disclosure of the costs of units produced dividing the period, it is termed as Cost- Sheet, but where the statement records both total cost, profit and sales, it is usually known as Statement of Cost or Production Account.

Cost Sheet				
Date	12-03-2016	**Description**	Kameez with waist band	
Size	M	**Colour**	Blue	
Selling Price	Rs 758			
1. Material	**Meters**	**Price**	**Amount**	
Cotton	4	Rs 65/meter	Rs 260	
Lining	-	-	-	
Total Material Cost (1)				Rs 260
2. Trimmings and Accessories	**Quantity**	**Price**	**Amount**	
Buttons	4	Rs 0.5/button	Rs 2	
Pads				
Zippers				
Waist Band	1	10	10	
Elastic				
Total Trimmings and Accessories Cost (2)				Rs 12
3. Labour				
Cutting			Rs 20	
Sewing			Rs 250	
Total Labour Cost (3)				Rs 270
Total Cost (1+2+3)				Rs 542
Markup (profit)	@40 %			Rs 758

Fig.6.3.4: A typical cost sheet

Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

APPAREL MADE-UPS HOME FURNISHING
SECTOR SKILL COUNCIL

7. Soft Skills And Communication Skills

Key Learning Outcomes

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

1. Understand Art of Effective Communication.
2. Able to handle effective Communication with co-workers.
3. Able to handle effective Communication with Peers/ colleagues.
4. Learn basic reading and writing skills.

UNIT 7.1: Introduction to the Soft Skills

Unit Objectives

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

1. Understand the basic meaning of Soft Skills, their components and their benefits.
2. Understand Work Readiness and its significance.

7.1.1 What is a Soft Skill?

These are personal characteristics that describe an individual's ability to interact with people and situations around. Soft skills can be explained as a group which comprises personality traits, social graces, language, habits, sociability and optimism that characterise relationship with other people. Soft Skills complement hard skills which are occupational requirements of a job and many other activities. They are related to feelings, emotions, insight. Soft skills has to do with who we are than what we know.

For instance – the soft skills required for doctor would be empathy, understanding, active listening and a good bedside manner.

Soft skills also determine how satisfied and happy one remains in professional and personal situations.

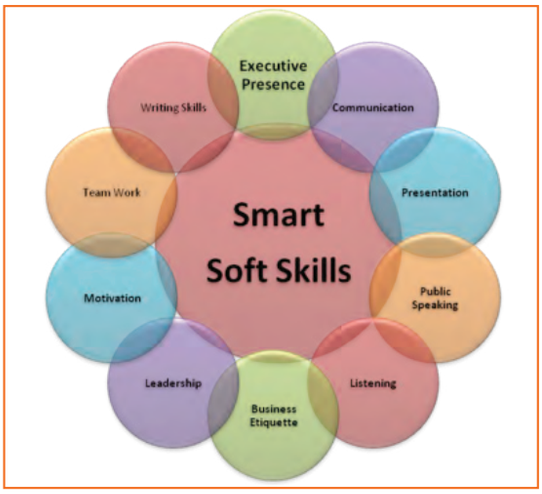


Fig.7.1.1: Soft skills

7.1.2 Components of Soft Skills

- **Adaptability:** It is the ability of an individual to manage change. It's about how fast and smoothly a person is able to blend in and be productive in an changed environment.
- **Emotional Strength:** This involves managing mood and having control over it. An emotionally strong person succeeds in directing his moods and emotions such as anger frustration and excitement.
- **Leadership Quality:** How one manages conflict in personal and professional situation and convinces people reflects upon his leadership quality.
- **Team Playing Ability:** It is the ability to manage different types of people and make them work harmoniously with each other.
- **Decision Making:** This reflects upon how one manages his time and other resources in efficient and productive manner.

- **Interpersonal Communication:** This is an individual's ability to effective communication with other and in the process creating a positive image of him.
- **Negotiation Skills:** This is how one negotiates with others and reduces the level of stress in work, professional and personal environment.

7.1.3 Benefits of Soft Skills

Some of the benefits of Soft Skills are as:

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

7.1.4 Work Readiness

Work readiness involves you having what employers call "the right attitude". At the most basic level you should have:

- A positive attitude to spend some days at tailoring shop
- The capacity to function in a mature environment without the support of other co-workers
- An allegro attitude to the owner
- A clear interest at work to be done
- Expectations of the work that a fresher will be able to do at a tailoring shop with commercial goals to achieve
- The willingness to be supervised, follow instructions and wear safety gear as directed

Fig.7.1.2: Work readiness

- The confidence to ask questions to clarify instructions
- Pride in appropriate personal presentation
- The ability to communicate appropriately in an adult working environment
- The capacity to acknowledge customers and provide the assistance recommended by the employer
- A commitment to maintaining their reliability and punctuality for the whole of the period spent in the tailoring shop
- Completed a preparation for tailoring shop learning program which includes OH&S practices, acceptable behaviour in the tailoring shop (including child protection issues) and emergency contact procedures.

UNIT 7.2: Effective Communication

Unit Objectives

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

1. Do public speaking.
2. Describe likes and dislikes of a person.
3. Know basic etiquette of conversation.

7.2.1 Introduction

We are living in an information age where communication is an integral part of our lives. We have to send, receive and process huge number of messages everyday. But effective communication is more than just passing information to each other. An effective communication is nothing but understanding the emotion behind the information. Effective communication helps us develop relationship at home, work, and in social situations by excavating our connections to others and improving teamwork, problem solving and decision making.

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

7.2.2 The Communication Process

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

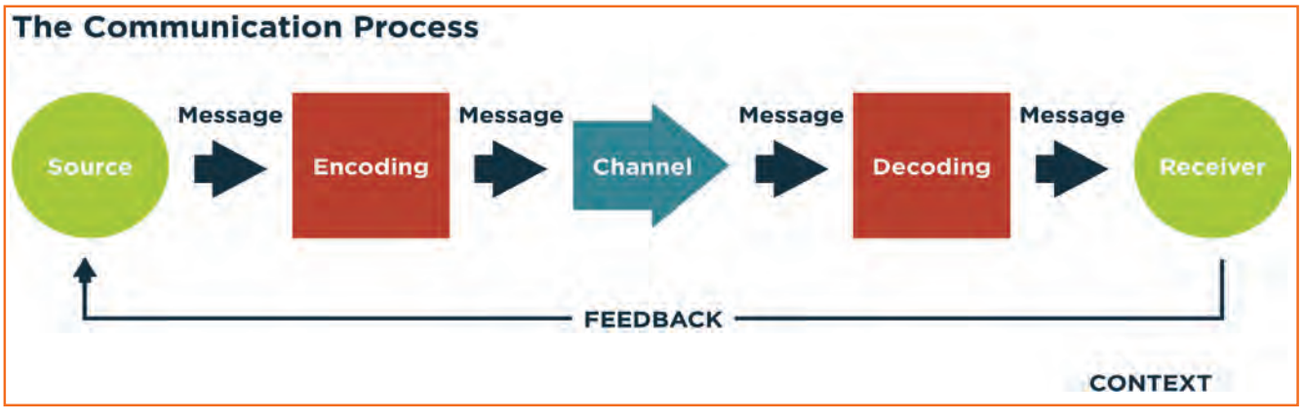


Fig.7.2.1: The Communication Process

Communication requires a sender, a message, a medium and a recipient. Communication process is not complete if a receiver does not understand the sender's message.

Communication with other involves three steps:

1. **Message:** First of all the information exists in sender's mind. It could be a concept, an idea, a formation or a feeling.
2. **Encoding:** A message is sent to the receiver in encoded language/format.
3. **Decoding:** Lastly the receiver translates the words or symbols into a concept or information that a person can understand.

7.2.3 Verbal and Non-Verbal Communication

There are three main types of communication. These are:

1. **Verbal Communication:** It means you listen to a person to understand what message the person is trying to convey. The speaker have the advantage of immediate feedback. This type of communication is best for conveying emotions and can involve storytelling and critical conversations.
2. **Written Communication:** Letters, books, newspapers are few of the examples of written communication. Printed media, emails can also be categorised into this communication. They are asynchronous, can reach many readers and are best for conveying information.
3. **Nonverbal Communication:** A nonverbal communication can also be called Body language because this communication does not involvedany verbal interaction but mere observation of the people involved in the communication. Both verbal and written communications convey nonverbal communication and are also supported by body language, eye contact, facial expression, posture, touch and space.

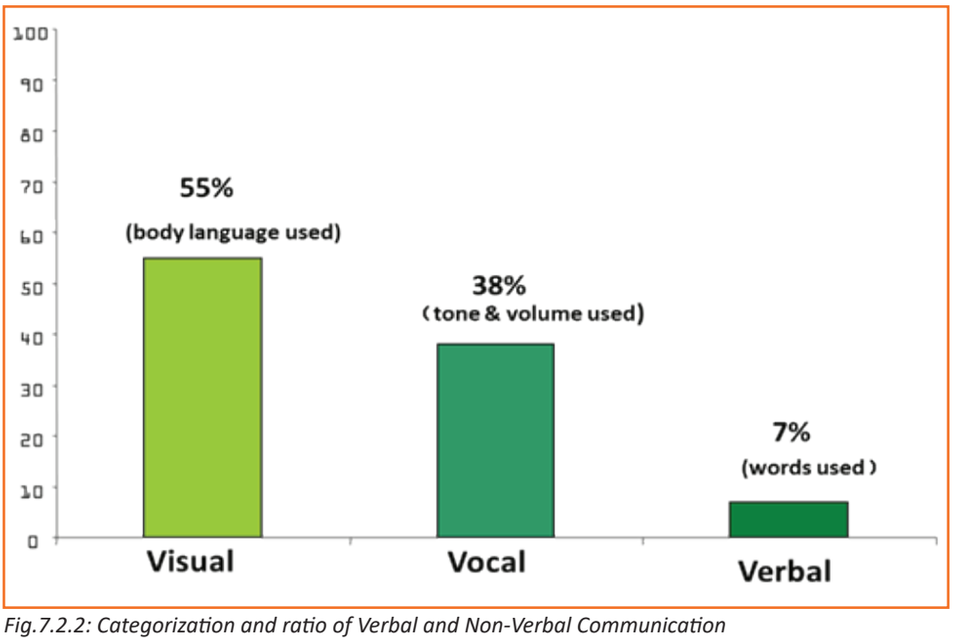


Fig.7.2.2: Categorization and ratio of Verbal and Non-Verbal Communication

According to a study only seven-membered of a receiver's comprehension of a message relies on sender's actual words, 38th relies on paralinguistic communication (tone, pace and volume of speech) and 55th relies on nonverbal cues.

Research shows that once people are lying they're more doubtless to blink more frequently, shift their weight and shrug.

7.2.4 Communicating Effectively Identifying Barriers

There are various reasons why communication is not effective and successful. These failures are because of the barriers in communication which occurs at any stage in the communication process. Barriers may lead to one's message becoming misleading and therefore at risk of wasting both time and money by causing confusion and misunderstanding. Effective communication involves overcoming these barriers and conveying a flawless and concise message.

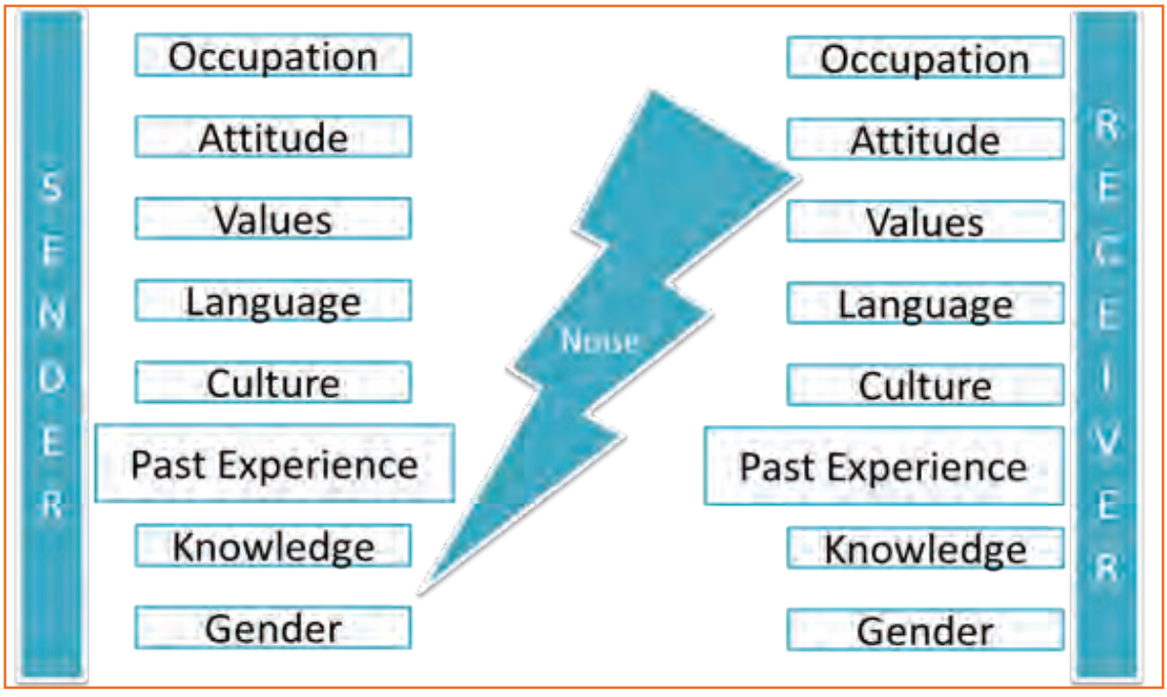


Fig.7.2.3: Barriers in Communication

A skilled person should remember these barriers and try to reduce their impact by regularly checking understanding or by giving correct feedback.

Dealing with Barriers

- Use simple, easily understood word. Over complicating makes things confusing
- While speaking in other language always prepare beforehand
- Always give or take feedback to ensure the effectiveness of communication
- Be alert to cues
- Listen, listen, listen …
- Test your understanding
- Share opinions, perceptions

7.2.5 Effective Communication-Practice

Active Listening

Listening is one of the most significant skills one can have. To become a better listener it is important that you practice active listening at all time of verbal communication.

7.2.5.1 Some tips for active listening

- **STEP 1:** Concentrate what the person is talking about and not on noise or other external distractions.
- **STEP 2:** Understand his emotions and you get it all right. Is the speaker angry, happy or plainly inquisitive?
- **STEP 3:** When the speaker is saying or telling something, don't break the chain of his thoughts.
- **STEP 4:** Don't avoid completing sentences of the speaker. Let them speak and speak only after they finish.
- **STEP 5:** It's alright if you haven't understood at first chance. Request to repeat the information.
- **STEP 6:** Practice makes a man perfect. Listen intently, focus and ignore other noises. Listen more and talk when required.

It takes lots of concentration and determination to be active listener. Previous habits are arduous to break and if your listening habits are not good then you have to break those. Start listening deliberately and prompt yourself frequently that your goal is to hear truly what the other person is saying.

UNIT 7.3: Grooming and Hygiene

Unit Objectives

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

1. Maintain cleanliness and hygiene.
2. Keep their dress clean and tidy.
3. Maintain positive body language while speaking.
4. Enable to perform more of the do's than the don'ts.
5. Learn about good eating habit and their impact on health.
6. Avoiding bad things such as gutkha and alcohol.
7. Learn about AIDS and its prevention.

7.3.1 Personal Grooming

An art of keeping your body and mind clean is Personal Grooming. It is very important that everyone should take care of their hygiene n cleanliness. Due to this, one would not just look good but feel healthy to. Taking care of your body appearance is imperative. Once you enter your store/department you need to be dressed in full uniform as per company standards, and also properly groom yourself as per the service ethics.

Fig.7.3.1: Personal Grooming

Personal grooming not only makes us presentable but also makes us feel confident about ourselves. Good personal hygiene is essential for good health. Habits that are considered personal grooming include, bathing, dressing, applying makeup, hair removal and taking care of one's teeth, nails and skin.

Appearance

- The front line person/team is the brand ambassador of the company, just like the face is to your body. The customers visiting the stores are greeted by this team and lend their assistance. Hence they are expected to present a neat & clean looks.
- When in store premises, even during off-duty hours, a well-dressed appearance needs to be maintained. They are expected to be in uniforms (including shirt, trousers, shoes & socks) which must be worn clean & ironed.
- We should take care about no stains, broken buttons, or loose thread present on the uniform.
- You should always clean & polish your shoes. Sandals/slippers/sports shoes and white socks should not to be worn during on duty.
- Nails must be trimmed and clean.
- Hair should be neatly combed before commencing duty. For female members hair should be tied up if longer than shoulder length. Display ID cards when on duty is a must since accountability is important for the customers.

7.3.2 Specific Uniform Guidelines

Sr. No.	Specifically for Men	Specifically for Women
1	Uniform prescribed should be clean and pressed.	Women having long hair should tie it with rubber band or hair clips and not keep it loose. She should apply much oil in hair.
2	Shoes should be clean and polished.	They should avoid bright color nail polish and long nails as they'll be a cause to distract customers or harm the merchandise on display.
3	Hair must be short, clean & tidy.	Minimum, non-flashy jewellery should be worn.
4	One is expected to have a clean shaven look.	Dangling earrings, noisy anklets & bangles must not be worn on the floor
5	In case of beards/moustaches, must be trimmed, neat & tidy.	Only very light make-up to be applied (lip- stick of very light shades only)
6	Nails should be cut or trimmed neatly at regular intervals.	Any type of earrings studs & bracelets are not to be worn on the floor during official hours.

Fig.7.3.2: Specific Uniform Guidelines

7.3.3 Body Posture

- Staff needs to keep their hands clean at all times as they mostly will be handling merchandise or in contact with customers.
- Avoid biting nails on the floor.
- Manage body odour & bad breath to be under control as they are offensive to the customer.
- Maintain straight & upright posture on the shop floor.
- Slouching on the floor, hands in pockets, hands on the hips are not courteous to the customer & hence should be avoided.

It just takes a few seconds for people to assess others when they meet for the first time. The other person creates an opinion based on appearance, body language, mannerisms and how one is dressed. For creating a first positive good impression always follow these things:

- Be on time
- Be yourself and be at ease
- Present yourself appropriately
- Always smile
- Be courteous and attentive
- Be positive

7.3.4 Positive Body Language

While meeting someone for the first time always remember that not only you should talk positively but your body language also needs to be positive. There are some tips for positive body language as:

- Avoid your pockets. Keep your hands out of your pocket. Hand in pocket shows we are uncomfortable and unsure of ourselves. Keeping our hand in open indicates confidence and show that people has nothing to hide.
- Don't Fidget. Fidgeting is a clear sign of nervousness. An individual who can't keep still is an individual who is worried, tense and not confident. Keep your gesture calm and under control.
- Keep your eyes forward. This indicates that you are interested in communication with other.
- Stand up straight with your shoulders back. It communicates confidence.
- Take wide steps. It makes you seem purposeful and suggest a personal tranquility and denotes confidence.
- Firm handshake. Grip other persons hand firmly and confidently instead of getting a palm full of dead fish. Firmness adds warmth and enthusiasm to the handshake. But make sure that you don't crush the other person's hand and don't hold on too long.
- Don't cross your arms when meeting other persons. This is a protective posture.
- Use contact to show appreciation.

7.3.5 Personal Hygiene

What is Personal Hygiene?

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

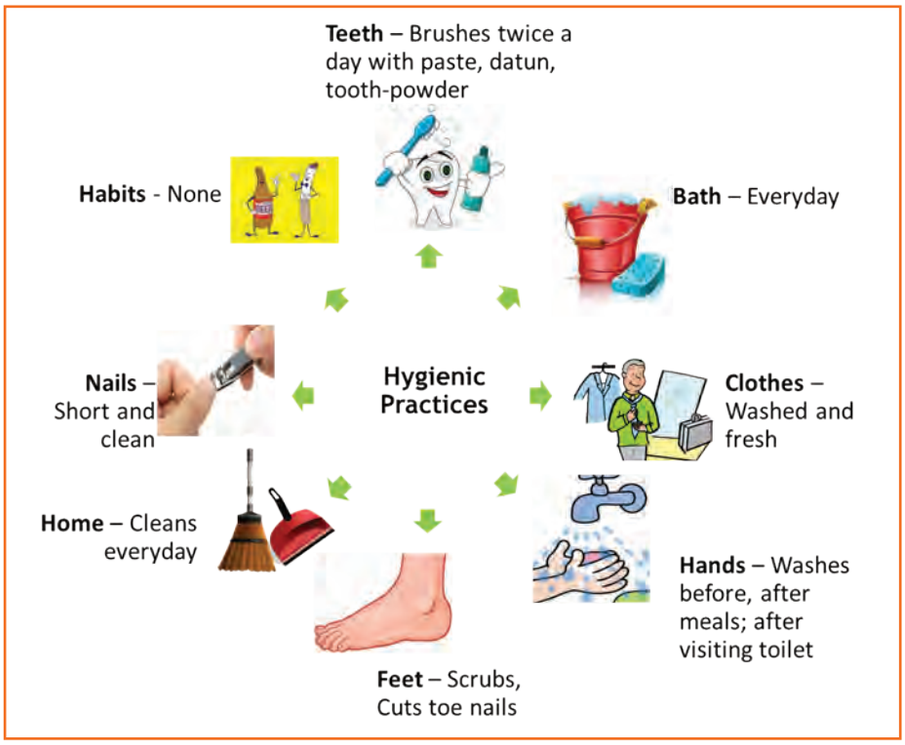


Fig.7.3.3: Personal Hygiene

Why to brush teeth?

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.....

.....

Brush your teeth in the morning and before going to bed with paste, datun or tooth powder

Fig.7.3.4: Brush teeth

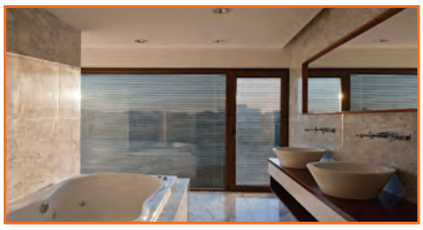

Fig.7.3.5: Take bath

Why to take bath?

.....

.....

.....

Why to wear clean clothes?

.....

.....

.....

Fig.7.3.6: Clean clothes

Fig.7.3.7: Cut nails

Why cut nails?

.....

.....

.....

Why wash hands?

.....

.....

.....

Fig.7.3.8: Wash hands

7.3.6 Physical Fitness

Fig.7.3.9: Physical Fitness

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

Advantages of Physical Fitness

- It maintains optimal body weight.
- It reduces risk of diseases.
- It boosts confidence and self esteem.
- It reduces stress, anxiety and depression.

Healthy Eating

We can follow hygienic practices and exercise regularly, but what we eat has the biggest impact on our health. To be healthy, one has to eat healthy. But what do we mean by eating healthy?

Eating a healthy, balanced diet provides nutrients to our body. These nutrients give us energy; keep our brain active and our muscles working.

Fig.7.3.10: To eat

Fig.7.3.11: Not to eat

What are healthy eating habits?

- Always try to eat home-made food
- Avoid oily food
- Always cook and eat fresh food
- Avoid junk food like burgers, carbonated drinks etc.
- Eat fruits regularly
- Drink lot of water

Things to be avoided

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

Alcoholism

It's the tendency during which one consumes alcohol to manage difficulties or to avoid feeling unhealthy.

Alcohol has the potential to interrupt almost every organ in the body as well as the brain. Uncontrolled consumption of alcohol not only affects a drinker's health but also human relationship and social standings.

Fig.7.3.12: Effects of alcohol

It's effects:

- Health increase risk of heart diseases, cancer, impaired immune system, liver infection (Cirrhosis) etc.
- Reduced work focus and drop in performance
- Degradation in social and economic status
- Withdrawal symptoms like anxiety, trembling, fatigue, headache and depression etc.

Tobacco

Tobacco is the second largest cause of death in the world. It claims one death in every six seconds.

Smoking is a practice of burning a substance and inhaling the smoke coming out of it. Common smoking implements include cigarette, bidi, hookas and pipes. According to a report every year 4.9 million people die worldwide as a result of smoking. Smoking is prime cause of lung cancer. According to a study male smoker lose an average of 13.2 years of life while a female smoker lose 14.5 years of their life. Smoking increases 50 % chances of heart diseases than a non smoker.

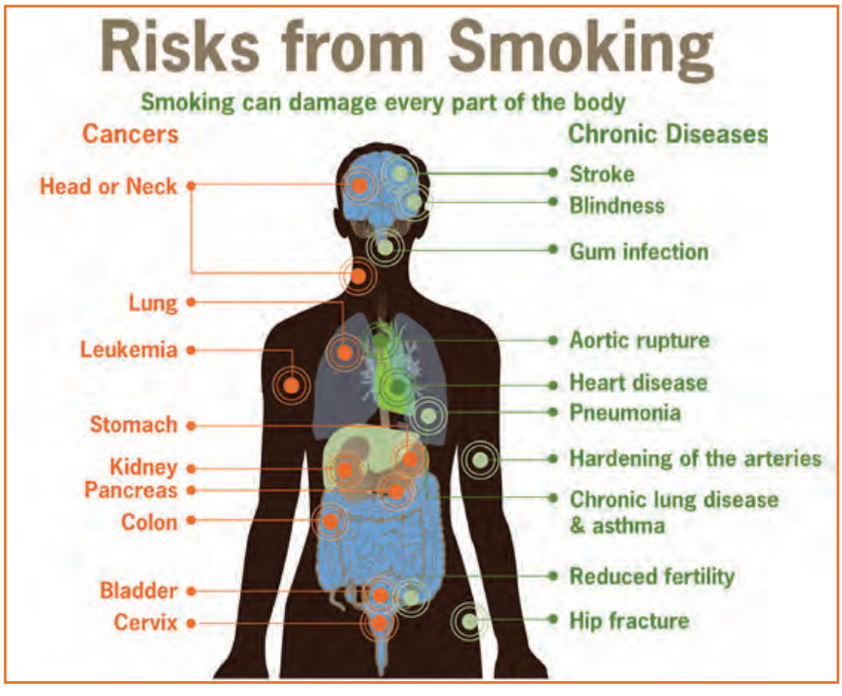

Fig.7.3.13: Risks from smoking

Chewing tobacco is a product consumed by placing a portion of it between the cheek and upper gum or upper lip teeth and chewing. Having tobacco increases the risk of oral cancer.

It's effects:

- It is the biggest reason for oral cancer which effects mouth, tongue, cheek, gums and lips
- Chewing tobacco lessens a person's sense of taste and ability to smell
- Smokers face a greater risk of suffering from lung cancer

Gutkha

Gutkha is extremely habit-forming and a acknowledged substance. Excessive use of gutkha can cause loss of appetite; promote uncommon sleeping pattern and loss of concentration beside different tobacco related issues. A gutkha user may be simply illustrious by prominently stained teeth ranging from dirty yellow orange to scarlet black. The stains are powerful to remove by normal brushing sometimes want the attention of dentist. According to a world adult tobacco survey 53.5% of Indians use tobacco products. Gutkha's each sachet contains 4000 chemicals, including 50 that cause cancer, Betel nut, Tobacco, Flavouring.

Impact of Gutkha on health:

- Loss of sensation in tongue
- Disfigured mouth
- Increased sensitivity to heat, spices, cold and spices
- Inability to open the mouth
- Swelling, lumps, rough spots on gums or in other places inside the mouth
- Unexplained bleeding in mouth
- Difficulty in swallowing and finally Mouth Cancer

Fig.7.3.14: Oral Cancer

7.3.7 AIDS/HIV Awareness

The full form of AIDS is Acquired Immunodeficiency Syndrome. AIDS is caused by HIV (Human immunodeficiency Virus). It is the last stage of the HIV infection, if a person is HIV positive, he/she is suffering from AIDS.

According to a survey number of AIDS patients in India is between 2 to 3.1 million almost 50 % of total patients of AIDS. More men are HIV positive than women. A total of population of 0.29% females are suffering from AIDS while 0.43 % males are suffering.

Fig.7.3.15: NACO Logo

AIDS is transmitted by:

- Unprotected sexual relationships
- Contaminated blood transfusion
- Hypodermic Needles
- From infected mother to child

As per studies in India HIV/AIDS is largely due to unsafe sex worker interactions. About 86 % HIV incidents in the country is from unprotected sex. Migrant workers, truck drivers and majority of men who have sex with men pose greater risk of infecting their spouse and unborn children. People between 18-29 age groups accounts for 31 % of AIDS burden.

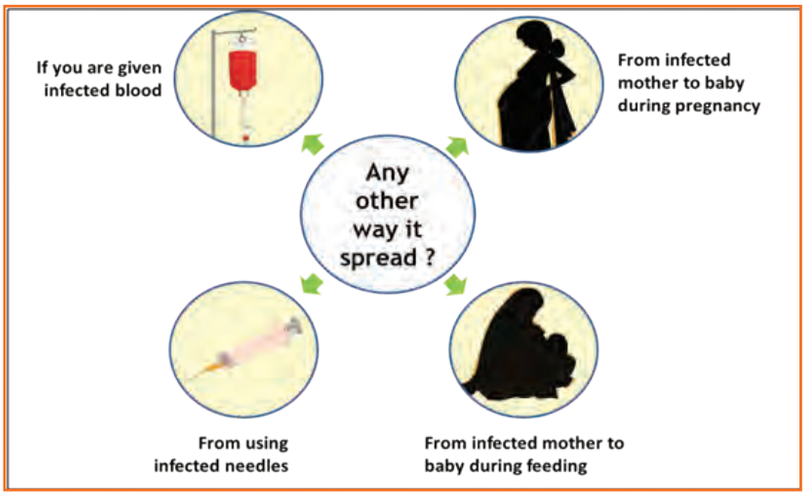

Fig.7.3.16: AIDS transmition

There are no medicines or vaccines for AIDS so far. The treatment and medicines which are available in the market are expensive and have side effects.

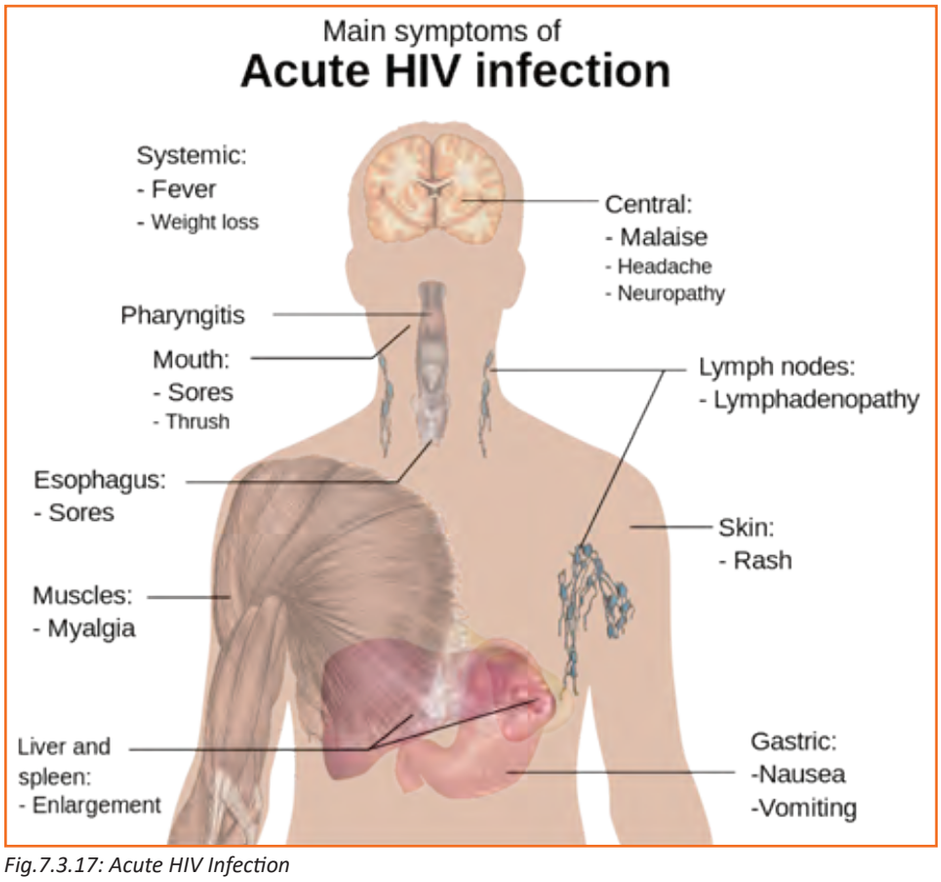

Fig.7.3.17: Acute HIV Infection

AIDS is not a disease like cancer or malaria, but is a condition that weakens a person's ability to fight diseases (immune system).AIDS not only affects you, but also has severe impact on family and friends. Even one mistake is enough to get HIV positive.

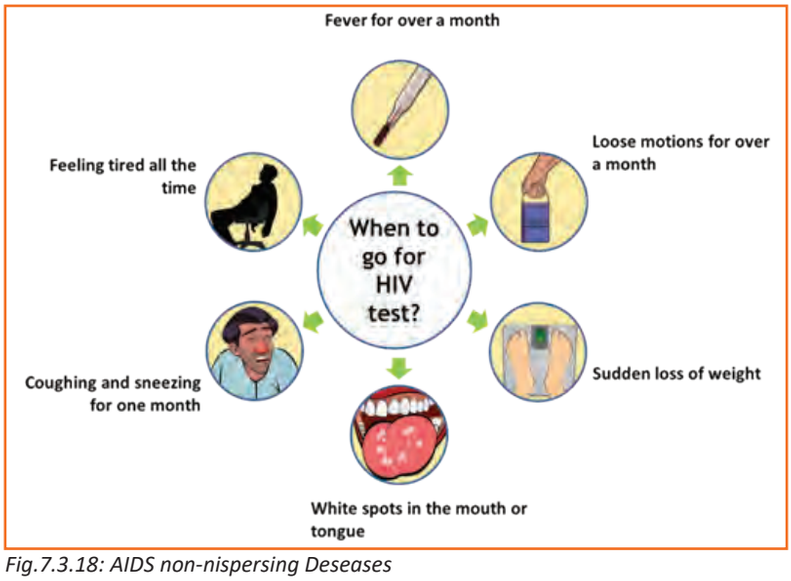

Fig.7.3.18: AIDS non-nispersing Deseases

Stay faithful

- In India large number of people move around for work, mostly men.
- Are you one of them?
- Take care. See that you don't catch any infection from AIDS.
- Even one visit to a sex worker may result in HIV infection.
- So it is advisable to avoid multiple sex-partners and always use protection (condoms/nirodh) during intercourse.

Fig.7.3.19: Condoms

AIDS does NOT spread through

- Sitting close
- Working together
- Hugging
- Touching hands
- Mosquito bite
- Saliva or cough
- Taking care
- Sharing clothes
- Eating together or sharing utensils

7.3.7.1 Case Study

Gautam is a plumber. His family lives in a village. He travels from place to place. Once he visited a sex worker. After one month he fell ill. He went for a checkup and found he had AIDS. Gautam did not know it, but that sex worker had AIDS. He was infected from that one visit.

Share four things that you know or learnt about AIDS.

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Always remember:

- AIDS has no cure but can be prevented, therefore be cautious of it not afraid of it.
- Be faithful to your partner and always use condom while making any sexual contact.
- Take blood only after checking proper medical certificates.
- Do not discriminate HIV positive people.

UNIT 7.4: Interpersonal Skill Development

Unit Objectives

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

1. Develop a positive attitude and behaviour.
2. Understanding Goal Setting.
3. Motivated for team participation at work.
4. Learn how to manage relations.
5. Learn about Stress and anger management skills.
6. Learn to develop leadership qualities.

7.4.1 Introduction

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

- Where are we now?
- How change and growth occur successfully?
- How we can change our attitude to get results we want and to be more effective in work and personal life?

One can learn to control over many aspects of our job and their environment by making appropriate choices and responses.

These include various traits like:

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

7.4.2 Positive Attitude

What is attitude?

- Our approach...
- Our outlook towards situations and others...

- The emotions we express towards others.
- Our attitude must be positive and hopeful.

Remember:

- Luck favors those who help themselves
- Don't wait for things to happen make them happen
- Stay away from negative influences
- Start your day with something positive
- Learn to like the things that need to be done

Positive attitude shows in the following ways:

- Positive thinking
- Constructive things
- Creative thinking
- Optimism
- The motivation and energy to accomplish goals.
- An approach of happiness

Fig.7.4.1: Positive Attitude

Positive attitude results in happiness as well as success. Positivity not only affects you and the way you look at the world, but it also affects work environment and people around you.

7.4.2.1 Story of Carrot, Egg and Coffee Beans

Raju works as a Supervisor in a factory. He is not happy with his job. One day he spoke about his dejection to his elderly friend, Prashant, who runs a small canteen for the factory workers.

"Prashant I am not satisfied with my job. There are so many problems in the factory. If I solve one, another one crops up. The problems seem to be never ending. I am quite fed up and wish to quit."

Prashant said nothing. He quietly put three pots with water on the stove. He put some carrots into one pot, some eggs into another and coffee beans into the third pot. The water in the pots began to boil.

Raju wondered what was going on! "Oh, here I am with my tale of woes, and this illiterate cook goes about his business!"

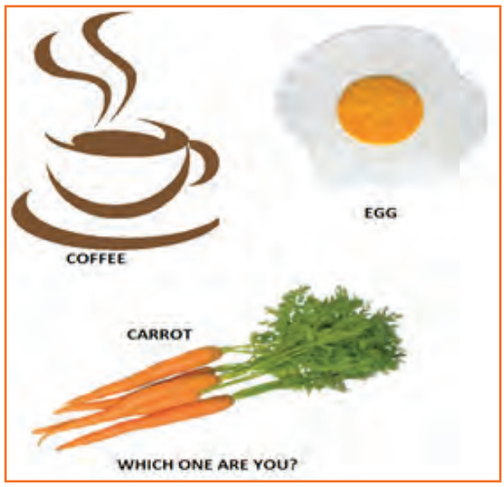

Fig.7.4.2: Story of Carrot, Egg and Coffee Beans

After some time, Prashant switched off the stove and put the carrots, eggs and the beans in different bowls. He then said, "My friend, what do you see here?" "Carrots, eggs and coffee", said Raju irritably. "Of course! Now come and feel them one by one", said Prashant. "Oh God! What do you want to prove?" asked Raju controlling his anger. "The carrots have turned soft. The egg is hard boiled beneath its shell and the coffee is stronger in aroma". "Exactly" said Prashant "Each of them faced the same degree of heat, but each reacted differently. The carrots that were

so hard before became soft and weak. The egg was fragile with its thin outer shell, but after boiling it became hardened and the inner liquid portion became hard boiled. But the coffee beans are unique. After boiling in water, they became stronger and richer. So my friend, tell me, are you the carrot, the egg or the coffee bean? How do you respond to difficult situations? Are you like the carrot that is hard to look at but with the slightest difficulty becomes weak and soft? Are you the egg born with a soft heart but became tough and stiff after a difficult or a bitter experience? Or are you like the coffee bean that gets stronger and tougher and reaches its peak in extreme adversity or difficulty?

When things get worse, you get better.

"Thank you Prashant. You've opened my eyes. I shall strive and do my best."

What have you learnt from the story?

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7.4.2.2 Some Successful People

Dirubhai Ambani - Founder of the Reliance brand

Born in Junagadh in a middle class family, son of a school teacher. His mother who had difficulty meeting the ends with his father's income, nagged him to begin earning some money. He snapped at her "Phadia, phadia su karo chho ...paisa no to dhanglo karees ..." Just to show that that he was serious, he once bought a tin of groundnut oil on credit from a local whole seller and sold the oil in retail sitting on the roadside, earning a profit of a few rupees that he gave to his mother.

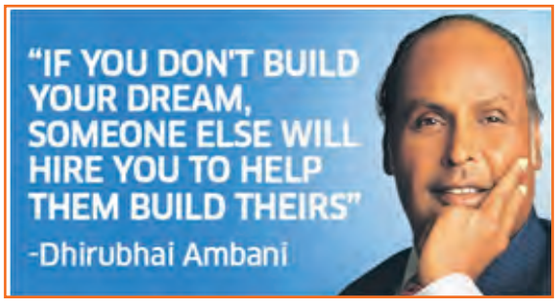

Fig.7.4.3: Dirubhai Ambani - Founder of Reliance

Next, he began setting up onion and potato fries stalls at village fairs during weekends when his school was closed. When he grew up, he came to Mumbai with very little money and lived in a two room chawl with his family. But dreamt big and worked towards his dreams.

Fig.7.4.4: Rajnikanth: Super star of Tamil cinema

Rajnikanth: Super star of Tamil cinema

- *Hero and demi-God for many thousands*
- *Original name Shivaji Rao Gaekwad*
- *From bus conductor to super star*

Early life:

- *Driven by poverty, went through extreme struggle*
- *No education; Worked as a bus conductor*
- *Entertained passengers in the bus*
- *Got a break in Tamil cinema*
- *Worked with a single mind to become a super hero*

What have you learnt from these two people?

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7.4.3 Goal Setting

Goal setting is a powerful method for considering your ideal future. The method of setting goals helps you to decide on where you wish to go in life.

Goal setting consists of establishment of specific, measurable, achievable, realistic and time targeted aim. Goal setting helps individuals work towards their own objectives. Goals are a kind of motivation that sets the standard for self-satisfaction with performance. Achieving the goal one has for oneself is a measure of success and having the ability to satisfy job challenges is a way one measures success in the tailoring shop. Set SMART goals:

- S : Specific
- M: Measurable
- A: Attainment
- R: Relevant
- T: Time bound

Fig.7.4.5: Goal setting

Identify

- What you want to achieve,
- Where you have to concentrate your efforts
- Also spot the distractions that can, lead you astray.

First create your "big picture" (the next 10 years)

- Identify the large-scale goals that you just wish to achieve.
- Then break these down into the smaller targets that you simply should hit to succeed in your life goals.
- Once you have your plan, you begin working on it to achieve these goals.

Setting goal is important for an individual because:

- Goals narrow attention and direct efforts to goal related activities.
- Goals lead to more effort.
- One works through setbacks if he is pursuing a goal.
- It develops and changes individuals behaviour.

Categorization of Goals

To give a broad balanced coverage of all important areas in your life set goals in all the important categories of your life such as:

- **Career:** What level do you want to reach in your career or where you want to reach?

- **Financial:** How much you want to earn, by what stage? How it is related to your career goals?
- **Education:** Is there any specific knowledge you want to acquire in life? What information and skills you need to acquire in order to achieve your goals?
- **Family:** How you want to be seen by your spouse and family members?
- **Health:** Do you want to stay healthy in your old age? What are you planning to achieve this?
- **Public Service:** If you want to make the world a better place, what will you do?

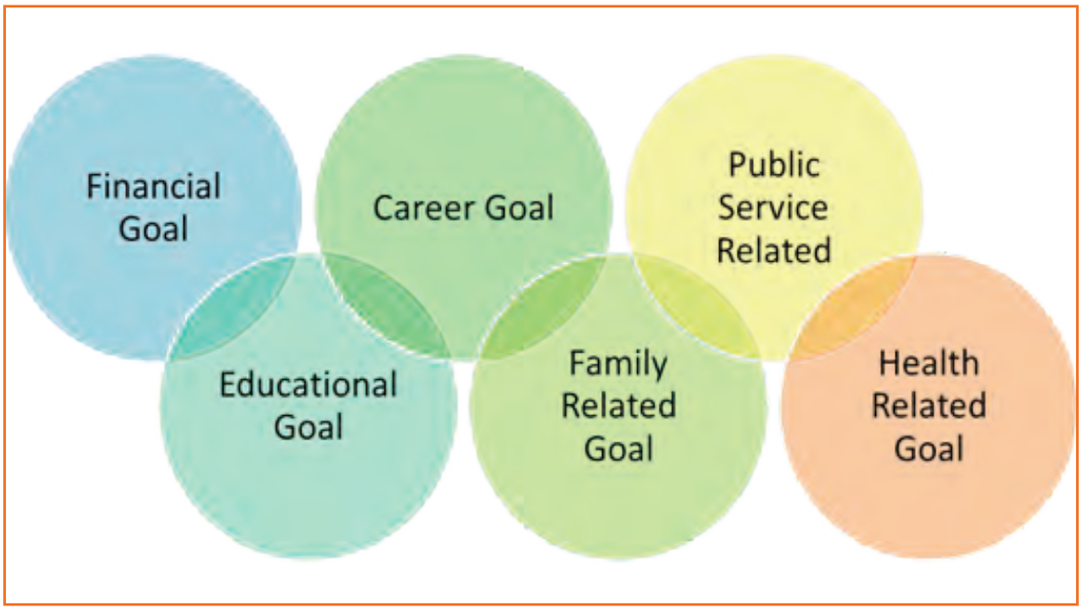

Fig.7.4.6: Categorization of Goals

Write down your two financil goals.

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Write down your two career goals.

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Write down your two educational goals.

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Write down your family related two goals.

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Write down your health related two goals.

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Write down your public service related two goals.

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7.4.4 Team Dynamics

A team is made up of a group of people associated to a common purpose. Teams are especially made to conduct complex works. A team is an example where a people share a goal. This creates a dynamic bond amongst the team members as they are dependent on one another for success. For example a sports team wins or loses as a whole.

Fig.7.4.7: A teamwork

Team members need to learn:

- How to assist each other
- Realize their true potential
- Prepare the atmosphere that is familiar with each member to work beyond their streangth.

Factors of Team Dynamics

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

In a team, there is no room for personal gains and definitely not betrayals. In a team:

- A single person cannot achieve a big task single handedly.
- Big and difficult tasks can be accomplished only through collective effort, through teams.
- In a team, the team members stand by each other during good and bad times alike.
- Work together towards a common goal.
- Divide the task and share the burden.
- Help and accept help from others.

7.4.4.1 Story : Small Fishes and Big Fish

Once there was a shoal of tiny red fish living in the sea. One among them was a little different. His name was Swimmy and he was black in colour. Swimmy was the fastest swimmer in the shoal. The fish would swim around in the sea looking for food. One day when they were busy searching for lunch, Swimmy who was far ahead of the others saw a big fish coming in their direction. The big fish was also looking for his lunch---smaller fish. Swimmy was scared! If the big fish would spot his shoal, all of them would be eaten up. Swimmy thought hard of a way out and quickly came up with a plan. He quickly swam back to his shoal and told all the fish about the big fish and also explained his plan to escape from being eaten.

Fig.7.4.8(a): Small Fishes and Big Fish

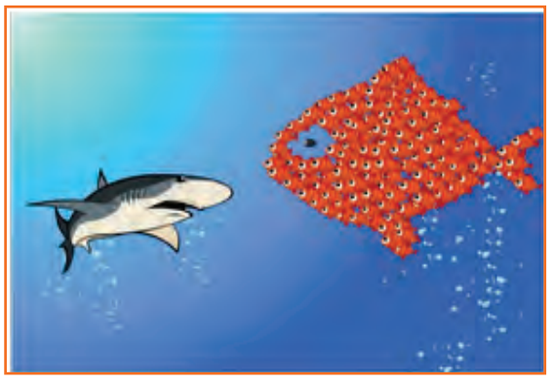

Fig.7.4.8(b): Small Fishes and Big Fish

When the big fish came closer he was shocked to see an even bigger fish swimming in his direction with its huge jaws wide open. Frightened that he would get eaten up, the big fish swam away. If he had looked carefully, he would have realised that the huge fish was actually all the tiny red fish swimming very closely together in such a way that they looked like one big fish. And little black Swimmy, being different, became the eye of the 'huge' fish!

What have you learnt from the story?

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7.4.5 Managing Relations

We all have different personalities, different desires and wishes, and different ways of showing our emotions that affects people around us.

70% of the tailoring shop learning is informal, once people discuss with each other at work they really are learning to do their job better. Friendlier staff are effective communicators, more productive and trustworthy more by employers and colleagues.

Tips for improving relations with people around us:

- Observe how you react to people such as do you reach to a conclusion

Fig.7.4.9: Managing Relations

before you know all the facts.

- Look honestly how you think and interact with other people.
- Look at work environment. Do you seek attention for accomplishments or give chance to others.
- Accept your weaknesses courageously and work on them.
- Take responsibility for your actions.
- If you think someone is hurted by you, apologise directly.

7.4.6 Etiquette

Etiquette are nithing but rules operating behaviour regarded as good and acceptable in personal and professional life. Etiquette includes:

Making Positive Impression

- Stand straight, make eye contact and turn towards people when they are speaking and genuinely smile at people.
- Follow the dress code prescribed by the organization.
- When meeting someone for the first time always shake hands with a gentle firmness.
- Always arrive early to work each day.

How you treat with people

- Think how you treat your supervisors and colleagues.
- Don't make value judgments on people's importance at tailoring shop. Respect every individual equally.
- Respect people's personal space at tailoring shop.

Communicating at Workspace

- Keep workspace professional and neat.
- Don't interrupt other people on the tailoring shop.
- Limit personal calls especially when you are working in a manufacturing unit.
- Eat and smoke to the designated areas only otherwise it may disturb other people.

Work etiquette tells the individual a way to behave when handling situations in an exceedingly working environment however the trivial situation is. It also applies to co-worker interaction and communication with colleagues.

Work Ethics

Work ethics is a value based on hard work and attentiveness. Work ethics include:

- **Discipline:** It takes a certain level of commitment to finish your tasks every day. Only with discipline one can stay fixed on goals and determined to complete his assignment.
- **Commitment to work:** A strong sense of commitment to work affects how an individual work and the amount of work he does. When a worker is committed to work he turns up on time, puts in his best efforts and completes the projects to the best of his ability.
- **Punctuality:** It shows that you are dedicated to your work, interested in the work and capable of handling responsibility. Being punctual shows your professionalism and commitment to work.

- **Ownership and responsibility:** Ownership and responsibility stretches in all aspects of an employee's job. Co-workers value the employees' ability to give honest feedback. Supervisors rely on the high moral standards trusting him not create problems and being responsible.
- **Striving to excel:** Keep yourself updated with new developments and knowledge of your field. Learn new skills, techniques, methods required to uplift your career.

Workers exhibiting a good work ethic are usually selected for higher positions, increased responsibility as well as promotion. Workers who don not exhibit good work ethic can be regarded as incompetent and failing to provide a fair value to the employer for the salary.

7.4.7 Stress and Anger Management

Anger is a normal and a healthy emotion. Anger management may be critical for people who find it difficult to keep it under control. There are many health issues related to a unresolved anger like heart attack, high blood pressure, anxiety, depression, colds and flu/fever and digestive problems.

If your heart beats faster and you breathe quickly, tension in your shoulder or clinching your fists beware your body may be showing sign of anger, take steps to calm yourself down. Once you will be able to recognize the signs of anger you can calm yourself down.

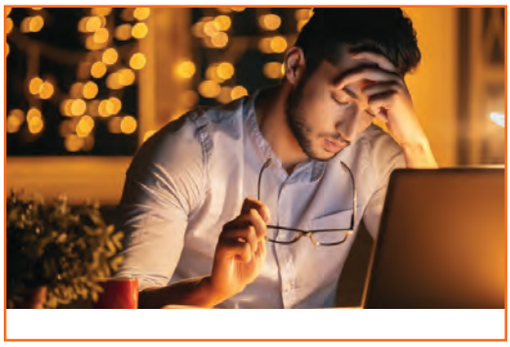

Fig.7.4.10: Stress Management

Always remember:

- Avoid unnecessary stress, learn to say no and take control of your environment.
- Express your feelings instead of boiling them up.
- Accept the things you can't change.
- Learn to forgive.
- ANGER is only one letter away from DANGER.
- Anger can destroy lives, destroy relationships.
- Put yourself in other's shoes.
- Don't react immediately.
- Post pone for a few seconds whatever you wish to say or do.
- Take a deep breath.
- Speak when you have calmed down.

Fig.7.4.11: Anger Management

7.4.8 Conflict Resolution

What is a Conflict?

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

Why do we need to resolve conflicts?

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

How to work out Conflicts?

1. STOP . . .

   before you loose your temper and make the conflict worse.

2. SAY . . .

   what you feel is the issue. What is the reason of disagreement? What do you like?

3. LISTEN . . .

   to others ideas and feelings.

4. THINK . . .

   of solutions that satisfy both the parties.

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

7.4.9 Leadership Skills

The ability to lead effectively depends on variety of key skills. These skills are extremely sought after by employers as they involve managing a number of individuals in such a way on inspire, enthuse and build respect. Some of the qualities that every good leader should possess are:

- **Honesty:** If you make honest and ethical behaviour a key value your team will follow the suit.
- **Ability to delegate:** delegating task to one of the appropriate person is the one of the most important skills that needs to be developed. The key to delegation is to identify the core strengths of the team and capitalizing on them.
- **Good communications skills:** Beingable to communicate clearly is quite important.
- **Confidence:** Keeps morale of the team high even in the tough times.
- **Commitment:** If you expectyour team to work hard and produce quality content then you should lead by example.
- **Positive Attitude:** Keeping teams motivated towards continued success of the company.
- **Creativity:** During the critical situations it is important to think out of the box solutions than to prefer the set course of action.
- **Be decisive:** Plan for the unexpected and nothing will surprize you. If you have thought of things go wrong in a particular task you will be able to make confident decisions on corrective actions when necessary.
- **Focus on the big picture:** Plan future strategies for your department and communicate them to supervisors and staff members. Set realistic and measurable individual and team goals and communicate your expectations within the context of massive picture.

How to become a leader:

- Use initiative to act on opportunities. Become a frontrunner before other people view you together.
- Take responsibility of own objectives, set priorities.
- Attempt to solve the matter instead of to pass on to others.
- Go the extra mile when asked to do tasks. go beyond your job description.
- Show enthusiasm.
- Take ownership of the issues. Anticipate potential issues, take pre-emptive action and act quickly to resolve the issues.
- Introduce enhancements to the ways in which things are done.
- Develop innovative practices. Value innovative thinking.
- Learn new skills that may enhance capability.

UNIT 7.5: Social Interaction

Unit Objectives

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

1. Understand what is social interaction and what are social interaction behaviour.
2. Give a brief description about himself/herself in public.
3. Follow daily duties.
4. Cooperate with peers, family and other members in society.

7.5.1 Social Interaction

Social interaction is a process through which we respond to people talking with us. It includes acts where people perform toward each other and responses they give in return. Social interaction has a number of behaviours. Some of them are:

Fig.7.5.1: Social interaction

- **Exchange:** Exchange is the most elementary kind of social interaction. It's a human process by that social behaviour is exchanged for some kind of reward for equal or greater value.
- **Competition:** It's a process by which two or more individuals plan to accomplish a goal that just one can attain. It will lead to psychological stress, a lack of cooperation in social relationship, difference and even conflict.
- **Cooperation:** It's a process in which people work together to achieve shared goals. Task can not be completed without their cooperation.
- **Conflict:** Social conflict is the struggle for agency or power among a society to achieve control of scarce resources. It happens when two or more individuals oppose each other in social interaction to achieve incompatible goals.
- **Coercion:** People or teams are forced to provide in to the desire of other people or teams.

7.5.2 Self- Introduction

We all, in our lifetime, have to introduce ourselves to the others. The introduction usually lasts for around 2 minutes to 3 minutes. It is very important that it gives the first impression to other about us. It has a great impact on your self-esteem and self-confidence. It's helpful in:

Fig.7.5.2: Self- Introduction

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

Points for Self Introduction

Following are some self-introduction points:

- **Wishes:** It is the first thing that we need to do before addressing a gathering. At this point we need to make effort to grab the attention of audience. You have to wish depending on the time either, Good Morning, Good Afternoon or Good Evening.
  - » Good Morning! My dear friends.
  - » Respected Sir! Good morning.
  - » Special or lovely or cool morning to you all.
- **Purpose:** We have to tell the purpose of coming in front of the audience. We can say I have come here to tell you about myself.
- **Name:** Here you tell about your name….. . To grab the eye of the audience, you have got to present your name differently. If you know you can tell the meaning of your name or nay famous celebrity along with your name.
- **Father's Name:** Here you have to say concerning your father's name. begin your father name as Mr. or Prof. or Dr.
- **Family:** It's a good chance to inform about your family, therefore tell the small print what you want to tell about them.
- **Profession:** Tell about your profession what you're doing at the moment.
- **Location:** Tell about your present location, wherever you're staying and if you would like you can also tell with whom you're living.

You can also tell about your native place. It is better to describe about or tell about your place which is famous for.

- **Hobbies/Habits:** Hobbies means what you like in your leisure and habit means your regular activities. This part tells about your nature and your life style, be careful while telling this.
- **Life Aim:** Tell about what is your aim in life, it will be good if your aim is high. You have to think high and reach high.
- **Achievements:** Tell about what you achieve up to now, minimum it is good to tell about three achievements and maximum five. Though achievements are small, tell them it shows your confidence but don't say I don't have any achievements.
- **Favourite Person's or Ideal:** It is good to say about your ideal persons.
- **Favourite movies, things, colour, places etc.:** if you want to tell your favourites, which tell about your tastes and preferences to others.
- **Your Strengths and Weakness:** You can tell about your strengths and weaknesses.Make sure your weakness should not be absurd or incorrigible.
- **People you like and dislike**: You have to tell what kind people you like or what kind of people you dislike.
- Any turning point in your life
- How are you different from others
- **Conclusion:** In conclusion offer a memorable answer on the question the listeners probably will have when they have listen to your public speaking speech. Tell how this aspect of your life makes you what you are and who you are. It will be perfect ending to your self –introduction.
- Finally say thank you.

You will have to maintain your speech according to the time, generally 3 minutes and you have to make the speech depending on the section of people you are giving the speech and what you want to reveal about yourself.

Improving self-introduction

There are a few things that you can do that helps in making your self-introduction better:

- **Listen to what you are saying to yourself:** Notice what your inner voice is saying. Take some time to listen and even write down what you are thinking.
- **Monitor your self-talk:** Analyse that your self-talk is more positive than negative.
- **Change your introduction:** counter your negative thoughts with positive ones. Avoid speaking negative and try to look for things that might add a better spin to a tough situation.

7.5.3 Our Duties and Responsibilities

There are certain duties which are laid by the Constitution of India. These duties are very to be fulfilled by every citizen of India. These are as follows:

- To bear by the Constitution and respect its ideals and establishments, the national flag and also the national anthem.
- To encourage and respect the noble ideals that galvanized our national struggle for freedom.
- To uphold and protect the sovereignty, unity and integrity of Republic of India.
- To defend the country and render national service once called upon to do so.
- To promote harmony and also the spirit of respect amongst all the people of the Republic of India transcending religious, linguistic and regional diversities.
- To forbid practices derogative to the dignity of ladies.
- To preserve the rich and diversified heritage of our culture.
- To conserve the natural surroundings like forests, lakes, rivers and wild life, and to have compassion for living creatures.
- To develop the scientific temper, humanism and the spirit of inquiry and reform.
- To safeguard public property and to retract violence.
- To try towards excellence altogether spheres of individual and collective activity so that the nation perpetually rises to higher levels of endeavour and accomplishment.

These need to be followed by every citizen of India for development of the country.

7.5.4 Cooperation

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

Family cooperation provides an avenue for a family to come closer. It increases coping skills and decision making. Some steps to promote family cooperation are:

Fig.7.5.3: Cooperation

- **Plan things together:** It calls for negotiation and compromise and teaches everyone to be more tolerant and considerable to other's viewpoint.
- **Share responsibilities:** Diving up necessaryhousehold responsibilities can be a good exercise in family cooperation.

Peer support occurs once individuals give knowledge, experience, and emotional, social or sensible help to each other. It's a distinct state of social support in this the source of support may be a peer an individual who is analogous in ways to the recipient of the support.

The effective peer support can be in form of:

- **Social Support:** In form of positive psychological interactions with others with whom there is mutual trust and concern.
- **Experiential Knowledge:** contributes to solve problems and improve quality of life.
- **Emotional support :** Esteem, attachment and reassurance
- **Instrumental Support:** Product and services.

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

- Listen carefully to others and make sure you perceive what they're expressing.
- Share when you have something that others would really like to have.
- Take Turns once there's something that no-one desires to do, or when more than one person desires to do a similar factor.
- Compromise when you have a significant conflict.
- Do your part the very best that you just probably can. this can inspire others to do the same.
- Show appreciation to people for what they contribute.
- Encourage people to do their best.
- Make people needed. working together may be a lot more fun that manner.
- Don't isolate or exclude anyone. everyone has something valuable to offer, and nobody likes being omitted.

UNIT 7.6: Group Interaction

Unit Objectives

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

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

7.6.1 Group Interaction

Every day we tend to meet with teams of individuals socially and professionally. However we interact to play a big role in the impressions we tend to produce. Interaction that happens whereas a group completes a cooperative task describes how the group works. For a successful and positive group interaction these steps needs to be followed:

Fig.7.6.1: Group Interaction

- Put your mobile phone away or place in silent mode.
- Greet everyone.
- Be friendly with everyone in the group.
- Show an interest in others by paying someone a compliment and listen carefully to what is being discussed.
- Be proactive and introduce yourself to others in the group.
- Sit up straight. Poor body posture is an indication of low self-esteem.
- Focus your attention on the person talking.
- Don't discount anyone's comment. Remember everyone is different and have different the ability to think.
- Think before you speak. Don't be too quick to jump into the conversation.
- Be a respect listener and observer.
- Include everyone when talking. Be sure to share eye contact with each person in the group.
- Unless there is a clear indication don't change the topic. Otherwise it will make people feel you are not interested in the topic.
- Don't start or participate in a side conversation. Don't allow their mistake to prevent you from being a good listener.
- Make sure to smile shake hands and embrace and use each person's name when conversation and the person's name when the discussion is over.

Everything you are doing in a group setting makes an effect on everybody in the group. Don't ever suppose something doesn't matter. Everything matters. Take every chance to take part in informal and formal group interactions. Begin by creating small contributions to discussion, prepare an issue to raise or accept as true with another person's remark. ask for other persons opinion.

7.6.2 Importance of Group Interactions

As a participant group interactions is important as:

- It helps you to get a subject more deeply.
- It improves your streangth to think positively.
- It helps in solving a serious issue.
- It helps the team to go on a final decision.
- It provides you the chance to listen to others' ideas.
- It improves your listening skills.
- It increases your confidence in communications.
- It can change your behaviour.

As a moderator a group interaction helps in:

- Understanding a member interpersonal skills.
- Identifying if a member is able to work in a team.
- Understanding ones behaviour.
- Selecting a perspective member in a perspective methodology.

Dos and Don'ts of Group Interaction

Do's	Don't
• Speak pleasantly and in a well mannered way to the group. • Respect the contribution of each speaker. • Remember that a discussion isn't AN argument. Learn to disagree in a well mannered way. • Think about your contribution before you speak. How best can you answer the question/ contribute to the topic? • Try to follow the discussion topic. do not introduce tangential information. • Be aware of your visual communication when you are speaking. • Agree with and acknowledge what you find fascinating.	• Lose your temper. A discussion isn't an argument. • Shout. Use a moderate tone and medium pitch. • Use too several gestures when you speak. Gestures like finger pointing and table thumping will appear aggressive. • Dominate the discussion. Confident speakers ought to enable quieter students an opportunity to contribute. • Draw too much on personal experience or anecdote. Although some tutors encourage students to reflect on their own expertise, keep in mind to not generalize an excessive amount of. • Interrupt. Wait for a speaker to complete before you speak.

Fig.7.6.2: Dos and Don'ts of Group Interaction

7.6.3 Team Work

Team work is a critical part of professional life. They can have a big impact on:

- The profitability of an organisation.

- People enjoy their work.
- Staff retention rates.
- Team and individual performance.
- Company reputation.

Fig.7.6.3: Team work

Importance of Team Building

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

- **Facilitates better communication:** Activities that create discussion results in open communication among the employees, and among employees and management. This improves office environment also the quality of work.
- **Motivates employees:** The more comfortable team members are to share their ideas and opinions, the more confident they will be. This motivates them to take on new projects or challenges .
- **Promotes creativity:** Working closely with other team members increase creativity and promotes new ideas.
- **Develops problem-solving skills:** Team building activities that require team members to work closely to solve problems improves the ability to think rationally and logically. Teams that determine when a problem arises and knows the solution can work better when a real problem occurs.
- **Breaks the barrier:** Team building increases trust among workers.

Do and Don'ts of working in a Team

- **Don't argue in public:** if you have a disagreement with someone in the team find a neutral place to discuss the situation.
- **Do encourage each other:** when things get tough the tough gets going. Contribute to the team in trying situation.
- **Don't talk behind the backs: i**f you have trouble with some team member don't share with others. Go directly to the person in a kind and compassionate manner and share what is in your mind.
- **Do lend a hand:** if a team members is asking for help don't hesitate in helping him.
- **Don't be the weakest link:** Live up to your responsibilities, meet team expectations and communicate effectively in the team.
- **Give and receive feedback:** As a part of growing team give and receive feedback respectfully and graciously.

UNIT 7.7: Time Management

Unit Objectives

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

1. Understand the importance of time management.
2. Develop time management skills.
3. Learn about effective time planning.

7.7.1 Time Management

Time management is the process of planning and practicing control over the time given to a specific task, especially to increase effectiveness, efficiency and productivity. It is an activity with the goal to increase the overall advantage of a set of activities within the limited condition of a limited time.

Fig.7.7.1: Time management

Some effective time management

- Delegate tasks.
- Identify time wasters.
- Combine activities – Plan for them.
- Break down big tasks down to the smallest task possible.
- Accomplish them one by one.
- At the end of the day conduct a simple analysis to see which activity took time.

7.7.2 Time Robbers

Time robbers are those activities which create interruption at the tailoring shop. These activities create a deviation from the objectives which needs to be achieved. Time Robbers could be:

- Poor personal planning and scheduling.
- Interruptions by people without appointments.
- Poor delegation.
- Poor use of the media: Telephone, Mobile, e-mail, and fax, etc.
- Reading junk mail.
- Lack of concern for god time management.
- Lack of clear priorities

The Time Robbers can be avoided by:

- Be active all the time.
- Develop and maintain an organized personal activity schedule.
- Set your priorities.
- Proper delegation.
- Utilize modern technical media.

7.7.3 Pareto Analysis

- According to this 80% of the tasks can be completed in 20% of the time. The remaining 20 % of the tasks take 80 % of your time. And the task which should fall in first category should be given a higher priority.
- Time also depends on the type of method adopted to process the task. Methods should always be simpler and easier to complete the task. If we use difficult ways, it shall be result the waste of time. One should always try to find out alternate ways to complete a task.

Urgent Important Matrix

1.The Urgent and Important Tasks	2. The Non Urgent but Important Tasks
DO NOW • Emergencies, complaints and crisis issues • Superiors desire • Planned tasks or project work now due • Meetings with superiors/colleagues	PLAN TO DO THEM • Planning, preparation • Scheduling • Designing, testing • Thinking, creating, modeling the data
3. The Non Important but Urgent Tasks	**4. The Non Important and non-Urgent Tasks**
REJECT AND EXPLAIN • Small requests from others • Ostensible emergencies • Misunderstandings rising in work • Pointless routines or activities	RESIST AND CEASE • Comfort' activities, computer • Games, net surfing, excessive • Cigarette breaks • Chat, gossip, social • Communications • Reading irrelevant and useless material

Fig.7.7.2: Urgent Important Matrix

This matrix helps you understand:

- What should be done
- What should be planned
- What should be resisted
- What should be rejected

The simplest method of managing time is to create a general to do list. Prioritize the task list:

- A daily list of things to do, numbered in the order of their priority
- Start with the most unpleasant and difficult task first latter will completed easily and quickly.
- Map out everything while making a task list
- Learn to say “No” to unimportant things
- Strikeout the things completed so that you are familiar what have been completed and what needs to be completed.

List down the routine activities that you perform in a day.

……

……

……

……

Prioritize the above mentioned activities in the following heads.

Important Tasks	Unimportant Tasks	Urgent Tasks	Not Urgent Tasks

UNIT 7.8: Resume Preparation

Unit Objectives

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

1. Understand the importance of resume.
2. Learn how to prepare a resume.

7.8.1 Introduction

A resume is a self-declaration which once done properly shows how an individual's skills, experience and achievements matches the need of the work that they wish to get. The sole purpose of a resume is one to win an interview. It convinces the future employer what he wants from the prospective employee in new career or position.

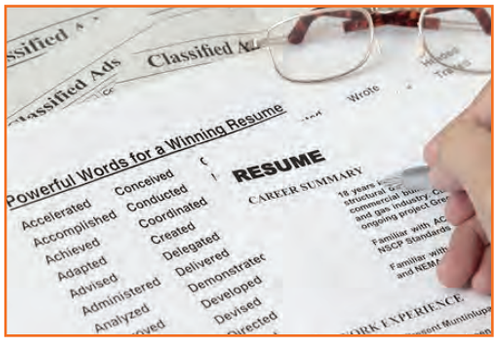

Fig.7.8.1: A resume

It also establishes an individual as a professional person with high standards and excellent writing skills based on the fact that his resume is written well. It also helps you clarify your direction, qualifications and strengths, boost your confidence or to start out the process of committing to a job or a career modification.

One must know about a resume that:

- Your resume is an instrument to get you an interview but not a job
- Employer will be screen your resume for just 15-20 seconds. That's the time your resume will make an impact on employer.

There are different sections on the resume in the same order as mentioned under:

Section	What is the employer looking for
Header	Your identity and to contact you
Objective	To check if their requirement and your objective match
Education	To check if you have the basic qualification for the job/ internship you are applying for
Practical Experience/Projects	To see if you have done anything that reflects your potential capability. Also to see how different you are from your peers.
Skills	How equipped you are in terms of your personality traits as well as occupational skills
Interests	Professional aspects apart, how meaningful is your life?
Other	Is there anything else significant and relevant you want to showcase, that will add value to your resume.

Fig.7.8.2: Different sections on the resume

Preparation work and important tips

Before you start preparing your resume make sure to follow the checklist:

- Educational documents from class ten onwards to calculate scores
- Make list of all things that you need to add to your resume. Like internships, projects, part time jobs, extracurricular activities, sports, training, skills, interests etc. the list doesn't need to be complete, you'll always add to the list as you go.

Before preparing resume always remember:

- Every point in your resume should be specific and must be supported be supported by a number of factual information.
- Use action verbs in all your points. They catch attention immediately and make your sentences clear.
- Use bullets not paragraphs.
- Do not mention your responsibilities mention what you have accomplished.
- A common mistake we make while constructing the resume is to copy the format from our friends resume and built it based on that.

7.8.1.1 Resume Header

Purpose: You have to provide some information about yourself, so that the employer can reach you.

Mandatory fields include: Name, current address, email id, phone number, date of birth. Your name should be written in bigger font.

Do Not:

- Include your photo.
- Write RESUME as heading to the file.
- Give details like family information, marital status, etc.
- Add these details to the bottom of your resume or occupy more space to fill up these details.

7.8.1.2 Framing the Objective

Purpose: To convey the employer what goals you have. The focus should be towards getting a particular position in a specific industry.

Always remember:

Your objective should include the following:

- Position wanted
- Functional area

- Industry wanted
- Be specific and restrict it to minimum words.
- You objective should be different to each role you apply to
- While writing the objective, keep the employers requirement in mind. The objective is not what you desire from the company, it's about company's need.

7.8.1.3 Education

The next session in your resume is to highlight your educational qualifications.

Purpose: For the employer to know whether you have basic qualification for the job for which you are applying or not.

Always Remember:

- To write all educational qualifications from class 10 to highest education.
- For class 10 and 12 – include school/college name, Board, Stream/Specialization (If any), year of study, Marks.
- For undergraduate – include College name, University name, Degree and Specialization, year of study.
- Write all your qualifications in reverse chronological order, i.e. the latest qualification on top.
- You may write the educational qualifications in a tabular format or in a simple one after the other order.

7.8.1.4 Projects and Internships

The next part of your resume includes the hands on work that you have done, like projects, internships, in-plant training, part time jobs, volunteering, starting up a company and other initiatives. The number and the nature of initiatives taken defines whether to keep one heading or detail them under different headings.

Purpose: This is a mandatory part of a resume, as your hands on work and the initiatives you have taken apart from your curriculum in what will reflect your real streangth as well as saperate your resume from your peers.

Remember:

- The heading should be – title / project name, role, company/organisation name, -2 lines description about the specific time period.
- Time period is must.
- The entries under each heading must be in reverse chronological order.
- Be very specific on what you have accomplished. Add numbers and facts wherever possible.

Do Not:

- Do not write simple statements. It does not give employer a clear picture of the work you have done. Thus the employer can assume that you have done an internship for the certificate.

7.8.1.5 Skills

Heading: You can have multiple headings under skills. Common heading can include:

- **Soft Skills:** must include, they showcase your personality traits.
- **Core occupational skills:** Optional include if you possess any core skills. These are skills you possess relevant to the role you are applying for.
- **IT Skills:** Optional, suggestive to include if you are applying for IT/software related roles.

Remember:

- List your skill and add a point which supports your skill the best.
- Make specific points. Add numbers and facts wherever possible.
- Pick only three to four soft skills that describes you the best.
- Dig your past to discover the best of these skills you possess and the best example you can quote to support it.

7.8.1.6 Interests

In this section of your resume carefully choose which of interests you want to showcase on your resume so that they can make your life seem meaningful.

The interests you showcase talk about your character. These interests frequently come up as a subject of discussions during the interviews, therefore sagely choose what to show.

Remember:

- List interests which are meaningful and display some learning.
- Support the interest you have listed
- Make points specific and add supporting fact to it.
- Do not just list random cluster of interests like: adventure, guitar, reading, environment
- Never include interests like partying, watching movies etc. they create wrong impression.

7.8.1.7 References

Give References

The very last thing on your resume ought to be a list of 2-4 professional references. These are all those who you're not related to, but whom you have handled in a professional manner. you would possibly think about previous leader, faculty member or volunteer coordinator to include on your reference page.

- Include the name of the reference, their relationship to you, mailing address, e mail and telephone number.
- The place you're applying to could contact these people, therefore always call them in advance to allow them to understand that you are using them for a reference and are presently applying for a job.

7.8.1.8 Points to Remember

- Make sure that the length of your resume doesn't exceed a pair of pages.
- Do a thorough recheck and confirm there are fully no errors in your resume. No grammatical errors, no spelling mistakes, no punctuation errors.
- Run through your resume time and again for to create enhancements and phrasing sentences better.
- Choose a professional font in a size eleven or twelve. You can use multiple fonts for different elements of resume, but try to limit it most of two fonts. Instead changing between fonts, strive creating specific sections bold or italicized instead.
- The font size of your header and the introduction to a part may be a size fourteen or sixteen.
- Your text should be printed in solid black ink. Ensure to deactivate any hyperlinks so that they don’t print in blue or other contrastive colour.
- Your page ought to have one inch margin all the way around with 1.5 or 2 point line spacing. The body of your resume ought to align left and your header should be centred at the top of the page.

UNIT 7.9: Interview Preparation

Unit Objectives

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

1. Understand the procedure of interview.
2. Go thorough mock interviews.
3. Understand how to present themselves during an interview.
4. Motivated to work after the training period is over.

7.9.1 Interview

An interview is a conversation between two or more individuals (the interviewer(s) and the interviewee) wherever queries are asked by the interviewer to get information from the interviewee. An interview is the first and last hurdle you need to cross in order to get employment.

Fig.7.9.1: Interview

Common Types of Interview

1. **Traditional HR Interview:** Most of the interviews are face to face interviews. The most traditional is a one-to-one conversation with the Human Resources Executive where the candidate's focus should be on the person asking question. You are advised to maintain good eye contact, listen keenly and answer promptly.
2. **Panel Interview:** In this situation, there is more than one interviewer. A panel ranging from two to ten members may conduct this part of the selection process. This is an ideal chance for you to display group management and group presentation skills.
3. **Technical interview:** The objective of this interview is to basically evaluate technical knowledge. Majority of the questions will be based on the skills sets mentioned in the candidate's resume.
4. **Telephonic Interview:** Telephonic interviews are used for initial screening of candidates who live far away from the job site.

Before going for an interview, it is important to have clarity of the role you are applying for. It's also important that for you to know where you are applying and whom will you be talking to. Your answers should tell the employer that you are the match they are looking for.

This requires you to do a small research on the following fields:

- Company & Field
- Job Description
- Yourself (Skills, Values & Interests)
- Resume (Experience)

If you were an employer, you would have chosen a person who is sure of himself, calm and confident. So it's important that you are:

- Confident
- Relaxed
- Sure of yourself
- Prepared
- Before, during and after the interview, it is important for you to be prepared.
- Dress Professionally

It is important that you dress professionally. It is a proven fact that the way we dress makes a huge difference in the way we are perceived. 90% of the way you communicate with other people is through body language (gestures, expressions, etc.) and the first Impression we make. It is very simple to make a great first impression.

For a good first impression it is important those we:

- Smell good
- Have a professional appearance
- Pay attention to your grooming
- Make eye contact
- Know what and how you speak
- Our overall personality contributes to our complete perception.

How to dress for Interview

Men	Women
Long-sleeved buttoned shirt (clean and pressed)	**Conservative pump, no stilettos**
Dark shoes (cleaned and polished) and dark socks	Jewellery -One set of earrings (preferably knobs)
Get a haircut (short hair is always best)	No bangles
No Jewellery (chains, earrings, piercing)	Minimal use of makeup
No beards or Tattoos	

Fig.7.9.2: Dress for Interview

7.9.2 The Do's and Don'ts in an Interview

Some of you might have faced an interview and some of you might not have. However, by now, you definitely have a better understanding what are the accepted standards of a professional behaviour. Read the sentences given and mark them as do's or don'ts, in relation to an interview:

Sentence	Do's	Don'ts
Be yourself		
Burp while talking!!!		
Just out from a 'powder factory' (worn too much make-up)		
Reach just about the right time for the interview		
Just barge in the cabin/ office		
Forget to greet the receptionist/ don't respond		
Think before you speak		
Do your homework- Visit the company website		
Take time to think (TTTT)		
Wear bright colour clothes on the D-day		
Emphasis on your strengths		
Argue/ Debate with the interviewer		
Chew gum during the interview.		
Review your educational and work experiences		
See your documents flying out of the file (Being clumsy)		
Thank the interviewer		
Have the 'they need me' attitude		
Maintain eye contact and good body language		
Only give monosyllabic answers(depends on the kind of questions asked… in-between)		
Carry a copy of your resume		

Fig.7.9.3: Do's and Don'ts in an Interview

7.9.3 During the Interview

- Be confident, not arrogant
- Sell yourself - Keep your energy up
- Maintain your posture
- Be positive, don't complain
- Know your resume and accomplishments.

It isn't sufficient to have ideas. They have to be expressed effectively in the interview. The parameters that the candidates are assessed on during the interview are very simple. These are the parameters that this training program has prepared you for.

7.9.4 Active Listening

- Clarity on ideas and expressions
- Correct language
- Good body language
- Fluency
- Ideas should be expressed fluently in the right tone, right voice, and right articulation

Notes

Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

8. Maintain Health, Safety and Security in Tailoring Shop

APPAREL MADE-UPS HOME FURNISHING
SECTOR SKILL COUNCIL

Unit 8.1 - Maintain Health, Safety and Security in Tailoring Shop

Unit 8.2 - First Aid and CPR

AMH/ N1950

Key Learning Outcomes 

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

1. Comply with health and safety related instructions applicable to the tailoring shop.
2. Follow environment management system related procedures.
3. Store materials and equipment in line with manufacturer's and organizational requirements.
4. Safely handle and move waste and debris.
5. Minimize health and safety risks to self and others due to own actions.
6. Monitor the tailoring shop and work processes for potential risks and threats.
7. Participate in mock drills/ evacuation procedures organized at the tailoring shop.
8. Undertake first aid, fire-fighting and emergency response training, if asked to do so.
9. Take action based on instructions in the event of fire.
10. Identify different methods of first aid.
11. Perform first aid.
12. Understand CPR.
13. Perform CPR in case of emergency.

UNIT 8.1: Maintaining Health, Safety and Security in Tailoring Shop

Unit Objectives

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

1. Comply with health and safety related instructions applicable to the tailoring shop.
2. Follow environment management system related procedures.
3. Store materials and equipment in line with manufacturer's and organizational requirements.
4. Safely handle and move waste and debris.
5. Minimize health and safety risks to self and others due to own actions.
6. Monitor the tailoring shop and work processes for potential risks and threats.
7. Participate in mock drills/ evacuation procedures organized at the tailoring shop.
8. Undertake first aid, fire-fighting and emergency response training, if asked to do so.
9. Take action based on instructions in the event of fire.

8.1.1 Introduction

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

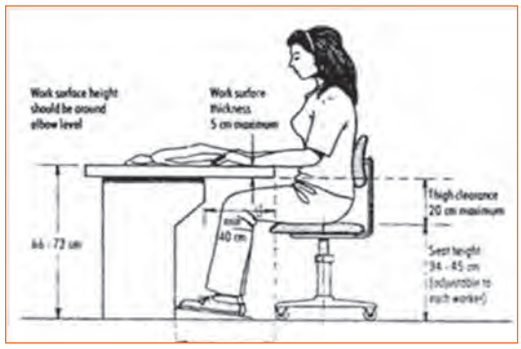

Fig 8.1.1: Body Posture

The clothing industry is usually considered as a safe place to work. Compared to other industries, there are fewer serious risks in clothing factories. The hazards in clothing industry are different from others. The major health risks in this industry come from more subtle hazards whose effect build up over time.

Tailor face a substantially higher risk of muscle pain and injury than workers in other jobs. Studies also show that frequency of neck and shoulder injuries increases with years of employment. Tailor experience a number of cases of strain injuries. These injuries have a long-term effect on workers' health.

The physical requirements of a job are an important risk factor related to muscle pain and injury. The risks for Tailor have been linked to conditions such as improper work area design, including sitting arrangements.

Factors like repeated motions, force, body-posture are associated with higher risks and rate of injury. There are other factors are linked to injuries. Some of these factors include improper height of work pace, excessive workload, lack of support from co-worker, overall work environment etc. The factors that lead to reduction in injury rates include empowering workforce, following safety protocol, good housekeeping practices and increased support from top management.

8.1.2 The 'Ergonomics'

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

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

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

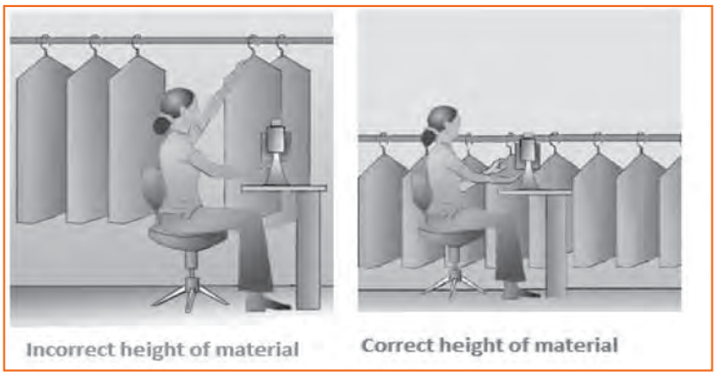

Fig 8.1.2: Situating the material

Injuries and illnesses among textile and apparel workers

- 81% complained CTDs to the wrist.
- 70% of Tailor complains of back pain.
- 49% of workers is suffering from neck pains.
- 35% report obstinate lower back pain.
- 25% have suffered a compensable increasing trauma disorder
- 14% reported CTDs to the elbow.
- 5% reported CTDs to the shoulder.
- Absenteeism increases as working conditions worsens.
- High employee turnover is associated with detrimental working conditions.
- Embroidery tasks are associated with pain in the shoulders, wrists, and hands.
- Ironing by hand is associated with elbow pain.
- Fitting fabric in frames like of work, are associated with CTDs of the hands and wrists.

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

- **Proper tools:** Tools and equipment provided at work place should be appropriate for the specific tasks being performed. The apparatus should allow the workers to keep their hands and wrists straight – the position they would be in if they were droopy relaxed at your side. The workers should bend the tool– not the wrist.

The tool should fit easily into the hand. If the grip size is too large or too small, it will be uncomfortable and will increase the risk of injury. Tools should not have sharp edges .

- **Keep repetitive motions to a minimum:** Workstations can be restructured to avoid the number of health hazards which chances due to repetitive motions that must be performed. Using a power-driven screwdriver or tools with a notch device can decrease the number of twisting motions with the arm. Work stations should have enough space for the given tasks and provide proper chairs. For deterrence of ergonomic injuries, the labour force should be encouraged to change work and take frequent but short breaks. Some tasks can be mechanical or reformatted to eliminate musculoskeletal injuries. Manufacturing tools and equipment should integrated ergonomic design codes and should not require an extreme amount of force to operate.
- **Avoid awkward postures:** The industry is such that the workforce's job should not require you to work with your hands above shoulder height on a regular basis. Arms should be closer to the body and not raised too high. Bending of their wrists, back and neck should be avoided.
- **Use safe lifting procedures:** The employee should avoid lifting objects that are too heavy. Use more than one person or a mechanical device to reduce the load. The workstation should not require lifting objects above the head or twisting his/her back while lifting. One must keep the load close to his body. Heavy and often lifted objects should be kept between knee and shoulder height and not on the floor or above the head level.
- **Get proper rest:** It is imperative to take frequent breaks to rejuverate the body and mind so that they don't get injuried. The workforce should be groomed to understand that they should take a break from the work not just mentally but physically too. If a person has errand which doesn't allow him to sit, he must take intervals from his work to relax his leg muscles. If he is doing a sitting job, he ust go for a walk whenever his work permits.

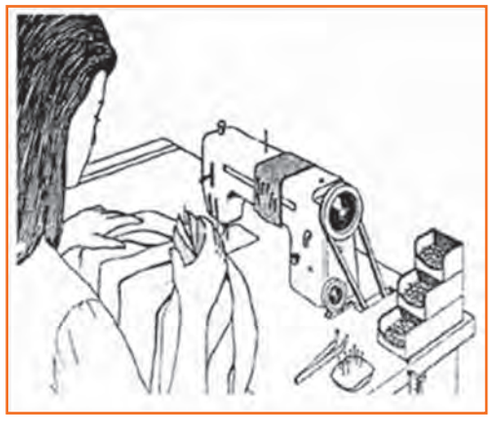

Fig 8.1.3: Cleaning the Tools

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

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

Fig 8.1.4(a): Don'ts

Fig 8.1.4(b): Don'ts

8.1.3 Environmental Control Measures

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

8.1.3.1 Clean Regularly and Properly - Don't Spread Dust

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

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

8.1.4 Make Local Ventilation Cost-effective

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

Use proper fans

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

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

8.1.5 Good Lighting for Quality Products

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

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

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

• The environment of the working area

• The nature of the task

• The sharpness of the worker's eyesight

A sewer needs focused light at needle point, so needle lights should always be fitted. A worker packing garments requires more largely lighting. In many situations, packers work on special tiered work tops, where lights are built into the station. The age group of the workforce is also important factor to determine this. Which means, an older worker may need twice as much light as a younger one. Another way to identify the gap, in lighting problem is going around the tailoring shop, observing the workers and asking them about their visual problems. The plan of improvements may not have much impact if the workers' eyesight is insufficient.

8.1.6 Reporting an Accident and an Incident

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

If you are injured at work you must:

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

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

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

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

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

8.1.7 Mock Drills/ Evacuations

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

Fig 8.1.5: Fire Safety

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

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

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

8.1.8 Low-cost Work-related Welfare Facilities and Benefits

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

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

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

8.1.8.1 Make Sure Essential Facilities Serve Their Purpose

Drinking water

Drinking water vessels should be made from materials that can easily be cleaned, Even if the vessels are filled with fresh water, the water inside, if kept for even a short time, can become unhygienic. It should therefore be different frequently. They should not be left uncovered, under the sun or in a hot place. Drinking fountains for production areas are very advantageous from a hygienic point of view . They can be fitted with a jet or bubbler outlet and/or goose-neck or other outlet for filling drinking cups. The fountain should be free from sharp angles and designed to prevent unnecessary splashing. Water outlets should be above the rim of overflow level so that they will not be contaminated with waste water. The water outlet should be shielded to prevent the lips of a drinker from being placed on it. Drinking water containers should be attended by a designated person. Containers should be made of impermeable materials. Containers should be provided with suitable covers, and kept in a cool place protected from the sun. The water must be changed frequently.

8.1.8.2 Sanitary Facilities

To avoid the possible spread of infection, it is better to use throwaway cups or to provide separate cups for each worker and to arrange for regular washing. There are several reasons why the provision of washing facilities is important:

- Dirt and grime can be ingested and cause sickness or disease; they are, in any case, unpleasant and demoralizing.
- Washing is a necessity when women have their monthly periods.
- Washing is required for basic hygiene after using the toilet.
- Apart from the obvious basic need, sanitary facilities are required by law. Clienteles often create an impression of an enterprise through the quality of its sanitary facilities.
- There should be a sufficient number of hygienic facilities on the work locations and each should be conveniently located to avoid long walks, waiting and hindrance. The law of the country must be monitored, but the following are the minimum requirements:

- One restroom is required for up to five men; two toilets for six to 40 men.
- One separate restroom for up to five women and two toilets for six to 30 women.
- One wash-basin for every 15 workers.

Fig 8.1.6: Signages

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

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

8.1.7 Safety Signs at the Shop Floor

Health and safety signs

A sign informs and instructs about safety and health at work by means of a signboard, a colour, an illuminated sign or acoustic signal, a voice or hand signal. Some important signs which could be used at a shop are as below:

Fig.8.1.7: Mandatory Signs

UNIT 8.2: First Aid and CPR

Unit Objectives

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

1. Identify different methods of first aid.
2. Perform first aid.
3. Understand CPR.
4. Perform CPR in case of emergency.

8.2.1 First Aid

First aid is the help given to any individual suffering from an unforeseen illness or injury, with care provided to preserve life, stop the condition from worsening, and/or promote recovery. It includes initial intervention during a serious condition before skilled medical help being accessible, like performing CPR while waiting for the ambulance, also because the complete treatment of minor conditions, such as applying a plaster to a cut. First aid is usually performed by the layman, with many of us trained in providing basic levels of first aid, and others willing to try and do thus from acquired information. Mental health first aid is an extension of the idea of first aid to cover mental health.

Fig.8.2.1: First aid Pyramid

There are many situations which may require first aid, and many countries have legislation, regulation, or guidance which specifies a minimum level of first aid provision in certain circumstances. This can embrace specific coaching or equipment to be obtainable within the work area (such as an Automated External Defibrillator), the availability of specialist first aid cover at public gatherings, or necessary first aid coaching among learning institutes. First aid, however, doesn't essentially need any specific equipment or previous information, and may involve improvisation with materials offered at the time, usually by undisciplined persons.

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

Fig.8.2.2: Vital Signs

Awareness	Assessment	Action	Aftercare
• Observe • Stop to Help	• Assess what is required to be done • Ask yourself, 'Can I do it?'	• Do what you can • Call for expert medical help • Take care of your and the bystander's safety	• Once you have assisted the victim, stay with him/her till expert care arrives

Fig.8.2.3: Four A's of First Aid

While delivering First Aid always remember:

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

Injury	Symptom	Do's	Don'ts
Fracture	• Pain • Swelling • Visible bone	• Immobilise the affected part • Stabilise the affected part • Use a cloth as a sling • Use board as a sling • Carefully Transfer the victim on a stretcher	• Do not move the affected part • Do not wash or probe the injured area
Burns (see Degrees of Burn table)	• Redness of skin • Blistered skin • Injury marks • Headache/seizures	• In case of electrical burn, cut-off the power supply • In case of fire, put out fire with blanket/coat • Use water to douse the flames • Remove any jewellery from the affected area • Wash the burn with water	• Do not pull off any clothing stuck to the burnt skin • Do not place ice on the burn • Do not use cotton to cover the burn

Bleeding	• Bruises • Visible blood loss from body • Coughing blood • Wound/Injury marks • Unconsciousness due to blood loss • Dizziness • Pale skin	• Check victim's breathing • Elevate the wound above heart level • Apply direct pressure to the wound with a clean cloth or hands • Remove any visible objects from the wounds • Apply bandage once the bleeding stops	• Do not clean the wound from out to in direction • Do not apply too much pressure (not more than 15 mins) • Do not give water to the victim
Heat Stroke/Sun Stoke	• High body temperature • Headache • Hot and dry skin • Nausea/Vomiting • Unconsciousness	• Move the victim to a cool, shady place • Wet the victim's skin with a sponge • If possible apply ice packs to victim's neck, back and armpits • Remove any jewellery from the affected area • Wash the burn with water	• Do not let people crowd around the victim • Do not give any hot drinks to the victim
Unconsciousness	• No movement of limbs • No verbal response or gestures • Pale skin	• Loosen clothing around neck, waist and chest • Check for breathing • Place the victim's legs above the level of heart • If victim is not breathing, perform CPR	• Do not throw water or slap the victim • Do not force feed anything • Do not raise the head high as it may block the airway

Fig.8.2.4: First Aid for different types of injuries

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

Fig.8.2.5: Degree of Burns

8.2.2 CPR (Cardiopulmonary Resuscitation)

Cardiopulmonary resuscitation circulates blood that contains oxygen to the very important organs of a patient in cardiac arrest once the heart and respiration have stopped. It includes chest compressions and ventilations also the use of an automatic external defibrillator.

Compressions: One part of CPR is chest compressions. To make sure optimal patient outcomes, high quality CPR should be performed. You'll guarantee high-quality CPR by providing high-quality chest compressions, ensuring that the:

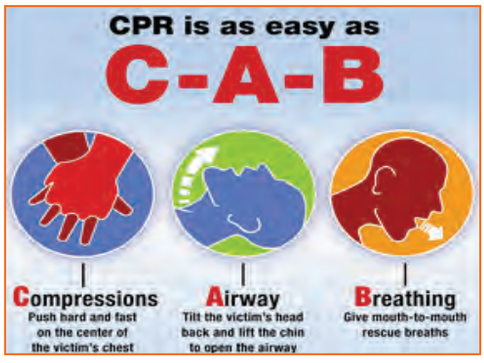

Fig.8.2.6: CAB

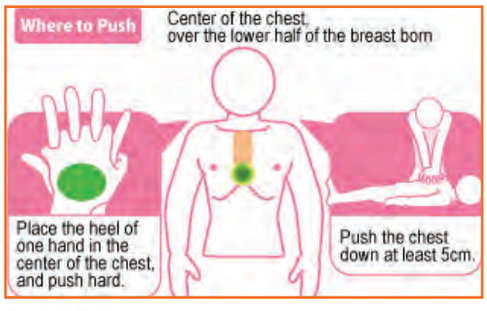

Fig.8.2.7: Compressions

- Patient is on a firm, flat surface to allow for adequate compression. In an exceedingly non-healthcare setting you might found it on the grounds, whereas in an exceedingly healthcare setting you may found it on a stretcher or bed.
- The chest is exposed to make sure correct hand placement and also the ability to envision chest recoil.
- Hands are properly positioned with the heel of 1 hand within the center of the chest on the lower 1/2 sternum with the opposite hand on top. Most rescuers realize that interlacing their fingers makes it easier to supply compressions while keeping the fingers off the chest.
- Arms are as straight as attainable, with the shoulders directly over the hands to build up effective compressions. Lockup elbows can help maintain straight arms.
- Compressions are given at the proper rate of a minimum of a hundred per minute to a most of one hundred twenty per minute, and at the correct depth of a minimum of two inches for an adult to promote adequate circulation.
- The chest should be allowed to completely recoil between every compression to allow blood to flow back to the heart following the compression.
- For adult co-workers, CPR consists of thirty chest compressions followed by two ventilations.

8.2.3 Performing CPR for an Adult

- **Step 1:** Check the scene for immediate danger.
- **Step 2:** Assess the victim's consciousness.
- **Step 3:** Do not check for a pulse.
- **Step 4:** Check for breathing.
- **Step 5:** Place the victim on his or her back.
- **Step 6:** Place the heel of 1 hand on the victim's breastbone.
- **Step 7:** Place your second hand on top of the first hand.
- **Step 8:** Position your body directly over your hands.
- **Step 9:** Perform thirty chest compressions.
- **Step 10:** Minimize pauses in chest compression.
- **Step 11:** Make sure the airway is open.
- **Step 12:** Give 2 rescue breaths (optional).
- **Step 13:** Repeat the cycle of thirty chest compressions.

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