STUDY MATERIAL FOR B.SC FASHION TECHNOLOGY

BASICS OF GARMENT CONSTRUCTION

SEMESTER – II

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PREPARED BY

FASHION TECHNOLOGY DEPARTMENT

INDEX

UNIT - I
ESSENTIALS OF SEWING

Parts and functions of a single needle machine

Sewing machine:

A sewing machine is a machine which is computerized or mechanically driven needle used to stitch materials together with thread. It revolutionized the textile industry by automating the process of sewing, greatly increasing productivity and efficiency. Sewing machine is designed to join pieces of fabric or leather by means of either a lockstitch or a chain stitch. Sewing machines are widely used in both industrial and domestic settings, enabling individuals to create garments, home décor items, and various textile projects with precision and ease. Sewing machine makes a basic running stitch the same way, with two sources of thread. The top needle takes the thread down into the fabric. It is caught and looped via the bobbin apparatus and then pulled back up. The ‘‘feed dog’’ moves it along and the next stitch begins. Every operation is continued again and again.

Modern sewing machines may feature advanced functionalities like automatic needle threading, speed control, built-in stitch patterns, and digital displays for easy operation. Computerized sewing machines offer programmable stitch sequences and embroidery capabilities.

Parts of sewing machine and their functions:

There are two major parts of the sewing machine. One is upper part and other is lower parts. The upper part contains of Head, Arm and Bed. The lower part contains of Band Wheel, Band Wheel Crank, Pitman Rod, Belt Guide, Belt Shifter, Dress Guard, Treadle, Legs.

- Arm
- Balance Wheel/Hand Wheel
- Bed
- Bobbin
- Bobbin Case
- Bobbin Cover
- Bobbin Winder
- Face Plate
- Feed Dogs
- Head
- Needle
- Needle bar
- Needle Clamp

- Pattern/Stitch selector
- Presser Foot
- Presser Foot Lever
- Reverse Lever
- Slide Plate
- Spool Pin
- Spool pin for bobbin winding
- Stitch regulator
- Take up Lever
- Tension Disc
- Thread Cutter
- Thread Guide
- Throat Plate or Needle Plate

Functions of the upper parts of sewing machine are given below:

1. **Arm**: Arm is the curve part of the head containing mechanism for operating the needle.

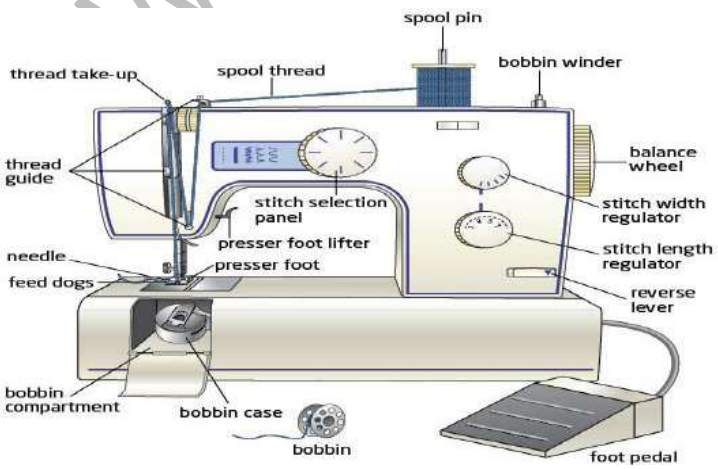
2. **Balance Wheel/Hand Wheel**: Balance Wheel sets the mechanism in motion. It is used to manually raise and lower the needle. This wheel is driven by the motor, but may be turned by hand to adjust sewing needle height. The wheel located on the right side of the sewing machine

3. **Bed**: Bed is the flat portion of the machine and beneath is the feed dog where it is mounted, and the shuttle and lower thread are placed. The role of this part is to stabilize the machine to rest in a permanent place.

4. **Bobbin Case**: The bobbin case is where the bobbin lives. It is a device which hold the bobbin and provides tension to the lower thread. As the needle thread is pulled around bobbin case, it wraps around the bobbin thread, and pulls it up through the needle plate.

5. **Bobbin Cover**: It covers the bobbin and bobbin case in the machine.

6. **Bobbin Winder:** Bobbin Winder controls the bobbin while winding thread. A simple mechanism used for winding thread on the bobbin. During bobbin winding should keep medium speed. If it is faster then can stretch the thread out or break.



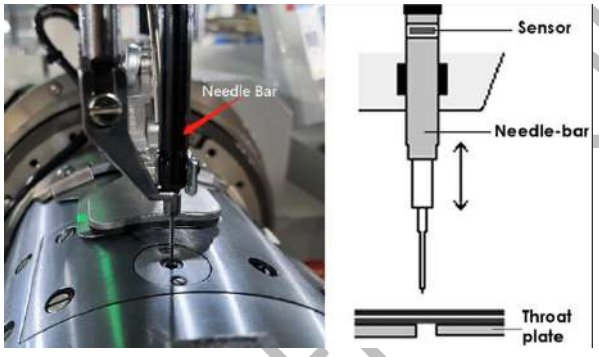
7. **Bobbin:** Low spool that provides the lower thread. A stitch is formed by looping the bobbin thread and the needle thread together.

8. **Face plate**: A cover which on removal gives access to the oiling points on the needle bar, pressers bar and take-up lever.

9. **Feed Dogs**: The feed dogs are little pieces of textured metal that move the fabric during sewing.

10. **Head**: The complete sewing machine without cabinet or carry case.

11. **Needle bar**: Needle bar is a steel rod to keep the needle at one end with the help of a clamp. Its main function is to give motion to the needle.



12. **Needle Clamp:** Needle Clamp holds and tightens the needle. It holds the needle in its actual place.

13. **Needle:** It is a very fine slender piece of metal with a point at one end and a hole or eye for thread at the other. Needle is used to form a stitch in the garments.

14. **Pattern/Stitch selector:** It determines the stitch type such as straight stitches or an embroidery stitch or zig-zag.

15. **Presser Foot:** Presser Foot holds the fabric in place while sewing. Presser foot attach to the machine shank, which is either “High”, “Low”, or “Slant”. Attach the appropriate presser foot for the selected stitching.

16. **Pressure Foot Lever/Lifter:** The primary function of this part is to raise or lower the presser foot. Lowering the foot engages the tension discs around the thread. You can control how much pressure the presser foot exerts by using the machine's pressure adjustment.

17. **Reverse Lever:** The liver works to depress the lever which enables the mechanism to move backward or in reverse.

18. **Slide Plate:** Slide plate is a movable rectangle plate that covers the bobbin case. Which facilitates the removal of the bobbin case without lifting the machine

19. **Spool pin**: It is situated in top of the sewing machine. Main function of spool pin is to hold thread packages. It can be horizontal or vertical in place.

20. **Stitch regulator**: It controls the length and width of the stitches on the fabric. This determines how wide or narrow you want your stitch. And how length of stitch you want.

21. **Take up Lever**: The take-up lever is an important part of threading the sewing machine and knowing the upward position of your sewing machine needle. This lever moves up and down with the needle and keeps the tension correct.

22. **Tension Disc:** The two concave discs put together with the convex sides facing each other. The thread passes between the two. Tension disc controls the looseness and tightness of stitches.

23. **Thread Cutter**: Many modern machines have a tiny blade attached to the left side of the machine to conveniently cut thread tails instead of looking for scissors after every seam. It is kept built-in the machine. It's usually located behind the needle.

24. **Thread Guide:** It keeps the thread in position and guide the thread from the spool to the needle.

25. **Throat Plate or Needle Plate:** It is a semi-circular disc plate. This metal plate covers the feed dogs and bobbin casing. It typically has markings that can be used to guide the fabric through at a specific seam allowance. The etching help keep seams straight.

Lower parts of sewing machine:

- Lower parts of sewing machine are point out below with alphabetically:
- Band Wheel
- Band Wheel Crank
- Belt Guide
- Belt Shifter
- Dress Guard
- Treadle or Foot Pedal
- Legs

Functions of the upper parts of sewing machine are given below:

- Band Wheel leads the balance wheel through the belt connection.
- Band Wheel Crank moves the band wheel.
- Pitman Rod holds the treadle to band wheel crank.
- Belt Guide holds the belt to its place.
- Belt Shifter removes the belt from the wheel.
- Dress Guard protects the dress from the wheel.
- Treadle or Foot Pedal is where the feet are stationed to drive the band wheel through the pitman rod. It regulates the starting, running, and stopping of the machine
- Legs support the cabinet of the machine.

Cutting tools

Some of the important cutting tools that a Sewing Machine Operator must be aware about are listed below.

Bent-handled shears

These shears are available commonly with 7- or 8-inch blades .The bent Handle allows the fabric to lie smooth and Straight when it is being cut, thus yielding Better control over the cutting edge. These Scissors are available in right-handed or Left-handed styles. These scissors are used to cut fabrics.

Scissors

These are the main tool for cutting fabric. Scissors have sharp, pointed and slender Blades, used for cutting of different materials. These scissors are mostly 3 to 10 inches long In size. These have round handles for both the Blades. Specific fabric-cutting scissors should Not be used for cutting of heavy material

Straight knife

It is a cutting machine basically used for cutting Fabrics with perfect edges. This machine has a Base plate and an upright stand to hold the Vertical blade. A straight knife consists of a Motor to transfer the complete assembly to another position. The straight knife operator's Efforts are affected by the weight, motor and the base plate movement of the machine. Straight knives are available with large variety of sizes and blade speeds in the market. It is widely used in the garment industry.

Round knife

It has a base plate with an electric motor placed above it, with a handle to direct the blade for Cutting as per the requirement. It is used for Fabric cutting in garment factories. Though it Is not used as commonly as the straight knife Cutting machine, but it is used for some specific Purpose like cutting single ply as well as multi-Layer. It is very suitable for gentle curve line Cutting. This is used to cut the larger part of the garment.

Measuring tools

It is important to take accurate measurements to stitch a well-fitted garment or any article. Proper selection of measuring tools is essential for taking the accurate measurements of the body. Accurate Measurements are needed for making correct pattern to ensure proper fitting of the garment.

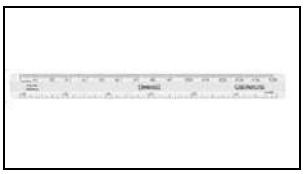
Different type of measuring tools

Measuring tape

It is a metal tipped cotton or plastic tape to take Measurements. Generally, the size of a measuring Tape is ½ inch to ¼ inch wide, 60 inches long and has ⅛ divisions (Fig. 2.1). At one end, it has a small Metal cover and at the other end of the tape, there Is a metal strip of about 3 inches long attached to Take measurements from points like round chest, round Waist and length of the garment, etc.

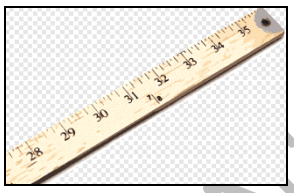
Ruler

It is made up of plastic, metal or wood. It is better to have two rulers—one being 1 inch wide and 6 inches long, and the Other one being 2 inches wide and 18 Inches long. The 18-inch ruler is with ⅛ inch grid. A Ruler is convenient for measuring small measurements. A transparent ruler is used to draw straight lines or Bias lines.



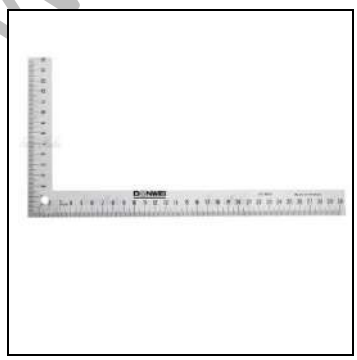
Yardstick

It is a straight edge tool used to physically measure the lengths up to a yard. It is a flat wooden tool with Markings at regular intervals Yardsticks are Very useful to draw long seam lines on paper or fabric.



L-square

It is an L-shaped wooden or metal ruler, the long arm of which measures 24 inches and the short arm measures 14 inches. The L-square has a perfect right-angled Hem or skirt marker. It is used to mark the hem length accurately. It is adjustable and is used as a measuring guide for marking Width for various sections of the Garment like pleats, hems, seam allowances, Etc., accurately using notches provided at regular Intervals along the gauge



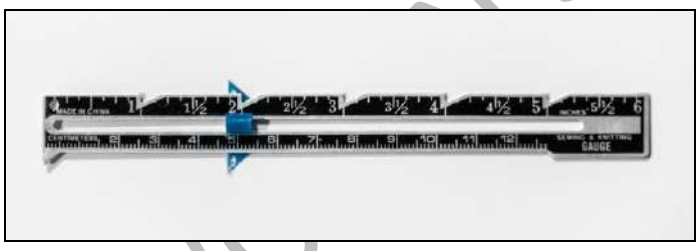
French curves

It is a template made of plastic, Wood or metal composed of different curves. It is used In making drafts to draw smooth curves of varying Radii. The French curve is placed on the material and a pencil is traced around its curves to produce the required curves. In garment making, French curves are mainly used for pattern drafting, pattern alteration and for shaping the armhole and neckline (). The Transparent, light and unbreakable plastic material is most commonly used in French curves. Vary from curvet is the most accepted contour ruler. It is basically an Elongated French curve. This tool is used by pattern Makers, graphic artists, illustrators, etc., to sketch

Smooth curved lines. The vary from curve draws a wide Variety of curves by turning smoothly. They are especially helpful to the pattern makers for drawing more defined Curves of the neckline, collar design, sleeve caps, pocket Contour, armhole, elbow, skirt, trousers, or when a Specific contour is required.

Seam or sewing gauge

It is a small 6-inch metal ruler that has a sliding distance indicator. It has inch markings on one edge and centimetres on the other edge. It can take exact measurements of small portions such as Hems, pleats, and buttons, or for other Alterations. This is a useful tool for detail designing and for small repetitive designs.



Marking tools

The printed symbols and markings on the Patterns must be transferred to the fabric to accurately match the seams and position of pockets, folds, buttonholes, darts, tucks And pleats. The object is to create precise Marks that do not remain permanently or stain the fabric, but are visible during Construction.

Tracing wheel

It helps in marking the measurements and Pattern on the wrong side of the fabric using Tracing paper. Tracing wheels are available in two styles, one with small serrated edge which is appropriate for most fabrics, and another, with a smooth edge used on fine or knit fabrics to avoid snagging of the Yarns. The tracing method is to keep the First layer of the right side of the fabric facing the ground, the second layer is that of the tracing paper, and the third layer is A paper pattern on which the tracing wheel Is moved to transfer the markings.

Tracing papers and sheets

A tracing paper is used with the tracing Wheel/pen/pencil to transfer pattern Markings to the wrong side of the fabric Care must be taken when choosing from the wide range of available Colours, since most varieties produce a Mark that remains in the fabric until it has been laundered.

Tailor's chalk

It is made of colored powder that is used to transfer Markings on to the fabric. The tailor's chalk is available in assorted colors and in different shapes, mainly Rectangular and triangle. It is also available in the form of a pencil.

Tailor's wax

It has a consistency like that of a crayon. It is especially suitable for use on wool or worsted materials. It is Available in a wide range of colors that is, white, yellow, Red, blue, black and fluorescent green, etc. The marks it produces can only be removed from the fabric with heat or

laundering. Thus, it is advisable to test the tailor's Wax on a small scrap of fabric before using it on the Right side of the material.

Fabric-marking pens

Such pens are air erasable or water soluble. These are specifically used for marking designs. After tracing the Design, the color can last for a long time but disappears Completely at once when damped with water Air-erasable pens are especially used for dressmaking, Shoe making, handicraft, embroidery, etc., for temporary Marking (Fig. 2.13). After drawing, the color evaporates After 2 to 10 days. Sew the garments shortly after Marking, or seal the marked fabric in a plastic bag with the air squeezed out. To remove the marks, you can dab the marks with a cotton swab soaked in alcohol.

Pins

Dressmaking pins are mainly made of stainless steel or Brass and are sized from 10 to 32. Size 17 is the general Purpose dressmaker's pin, but there are several special Varieties that can be useful (Fig. 2.14). Its main function is to hold the paper or fabric in position during marking, Cutting and stitching. The correct selection of pins for the specific fabric (based on the size and material of the pin) is important as a wrong pin used may create a Defect in the fabric.

Embroidery Needles

You can't sew without needles, and having the right needle for the right job is very important. There are three basic needles used for embroidery tools and they come in different sizes. The three main needles are crewel, tapestry and milliner needles.

Embroidery Hoops

Next on the list of essential tools are hoops and frames. Made of wood, bamboo, or plastic, they hold the fabric taught while the embroidery is being stitched. They help keep the tension of the fabric and the stitches taut. Hand embroidery hoops are round or oval, while machine embroidery hoops can be square.

Embroidery Scissors

Another essential basic tool is a small sharp pair of scissors. Embroidery scissors differ from normal scissors because they are smaller and more pointed. They have smaller sharper blades that enable them to cut close to the threads.

Lighting

The fine work involved in embroidery requires good lighting. This can be in the form of a really good spot by the window or a proper lamp. Magnifying lamps are a great asset for really fine work

Embroidery Floss and Thread

There is a wide variety of choices to make when it comes to embroidery thread. Select the type most suited to your project and your fabric. There is floss, cotton, wool and metallic there's to choose from. Make sure the thread is durable and washable.

Embroidery Tools
EMBROIDERY TOOLS & MATERIALS TUTORIAL
BASIC HAND EMBROIDERY TOOLS

Here are the basic 5 embroidery tools you will need to start. In the next section, I have outlined all the extras you will slowly need to accumulate. Many of the ones in the second section you may have already.

1. Embroidery Needles

You can't sew without needles, and having the right needle for the right job is very important. There are three basic needles used for embroidery tools and they come in different sizes. The three main needles are crewel, tapestry and milliner needles. Crewel needles have a short sharp tip. The eye of the needle is medium to long and the eye is slightly bigger than the shaft. The crewel needles come in sizes from 1 – 12 with 1 being the largest and 12 the smallest size. These are the most common needles used for embroidery. Buy a packet with assorted sizes to suit different projects.

Tapestry needles have a shorter shaft and a longer eye. The tip of the tapestry needle is blunt or rounded. This enables the needle to pass through the fabric without snagging. Tapestry needles come in sizes from 13 – 28 with 13 being the smallest.

Milliner's needles have short sharp eyes useful for stitches that are wrapped such as French Knots. Milliner needles are also known as straw needles. The eye and the shaft are the same sizes. This makes the milliner needle perfect for wrap-around stitches like bullion and French knots.

2. Embroidery Hoops

Next on the list of essential tools are hoops and frames. Made of wood, bamboo, or plastic, they hold the fabric taught while the embroidery is being stitched. They help keep the tension of the fabric and the stitches taut. Hand embroidery hoops are round or oval, while machine embroidery hoops can be square.

MATERIALS – Plastic and wood are perfect for beginners, while brass versions of hoops are available for the more experienced seamstress. I prefer the wood hoops as the plastic ones I have don't hold the fabric as tightly. If you purchase plastic, get good quality hard plastic.

SIZES – Buy a few sizes for different projects keeping in mind that you can always move smaller hoops around for larger items. I have a couple of larger hoops that I rarely use as I prefer the way smaller hoops are easier to handle.

3. Embroidery Scissors

Another essential basic tool is a small sharp pair of scissors. Embroidery scissors differ from normal scissors because they are smaller and more pointed. They have smaller sharper

blades that enable them to cut close to the threads. Many of them have storks and designs but a plain pair will do the job just as well. If you have ever watched any of my YouTube videos, you will recognize the gold stork pair below.

4. Lighting

The fine work involved in embroidery requires good lighting. This can be in the form of a really good spot by the window or a proper lamp. Magnifying lamps are a great asset for really fine work.

If you don't have lighting budget then remember sunlight is free and far stronger than any of these lamps. I do use a magnifying lamp occasionally when I need a section to be especially perfect but couldn't do a whole project under a magnifier. I think you would go cross-eyed.

5. Embroidery Floss And Thread

There is a wide variety of choices to make when it comes to embroidery thread. Select the type most suited to your project and your fabric. There is floss, cotton, wool and metallic there's to choose from. Make sure the thread is durable and washable.

Embroidery tools

Embroidery Tools – Threads

Cheaper craft threads should only be used for projects which won't need to be washed. You will also find that some cheaper threads are more likely to tangle and knot. DMC is a brand known for good quality embroidery floss. To keep costs down I usually use a mixture of cheaper and more expensive brands. Most of my embroidery doesn't need to be washed. Embroidery floss usually comes in 6 strands that you can unwind and pull apart for finer embroideries. You would need to be very patient to do 1 strand embroidery. Most people tend to use 3-6 strands.

Best Fabric for Embroidery

Once you have all the tools in place there needs to be a suitable fabric to place your design on and get to work. There is a wide range of fabrics available and it is important to choose the correct fabric to suit the type of stitches you plan to use. For example, cross stitch needs a canvas-type fabric with evenly spaced holes to sew between.

Pressing Extras Some of these tools are not yet in my sewing room and I don't necessarily deem them essential to ironing, but they all help to make ironing your garments easier.

Sleeve Board

Useful for ironing sleeves and other hard to reach places.

Needle Board

Helpful for pressing fabrics with a deep raised nap like velvet, velveteen and corduroy. It has a needle-like surface that the nap falls so you can steam the fabric without crushing it.

Point Presser

These are sometimes included as part of a clapper. Inserted into points to press hard to reach seams.

Seam Stick

Presses open seams without leaving iron imprints.

Cuff Clam

Tool for steaming and pressing cuffs while keeping their shape.

Pressing Mitt

A glove with a padded surface that helps protect your hand from steam and heat while reaching into hard to reach places.

Iron Cleaners

It's good to have a cleaner for both the heat plate and the water reserve container. I use natural homemade cleaners to clean mine.

Steam Press

Quickly steams by applying pressure and pressing a garment quickly

Body measurement – importance

Perfect body measurement is every designer's aim to satisfy the collection's theme. Body measurement plays a vital role in the fitting, style of the dress, looks, and durability. A perfect body measurement helps maintain the fabric's quality with effective use of fabric in a better way. A single inappropriate measurement disturbs the entire collection set and eventually impacts the

fashion brand's value. The fashion designers leave some cushions in the design to adjust the measurement according to the dress patter

Method of taking measurements for ladies and measurements:

For women:

Bust: Measure around the fullest part of the bust.

Waist: Measure around the narrowest part of the waist.

Hips: Measure around the fullest part of the hips.

Inseam: Measure from the crotch to the ankle for pants length.

Dress length: Measure from the shoulder to where you want the dress to end.

For men:

Chest: Measure around the widest part of the chest.

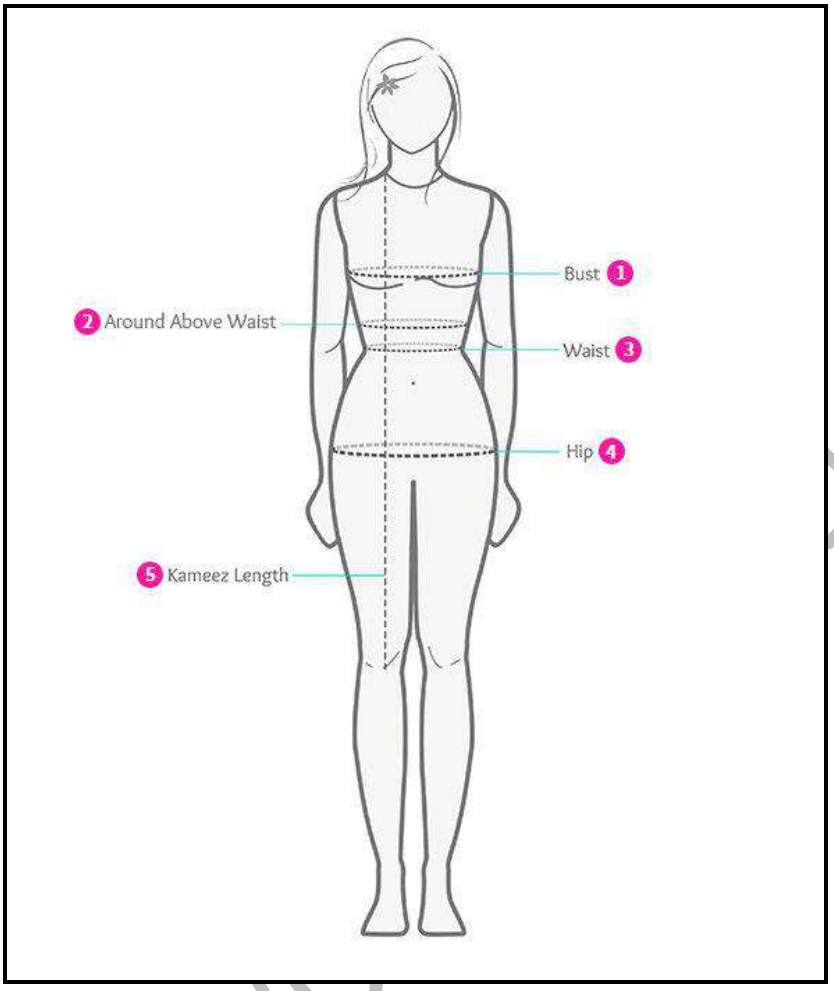
Waist: Measure around the natural waistline.

Hips: Measure around the fullest part of the hips/buttocks.

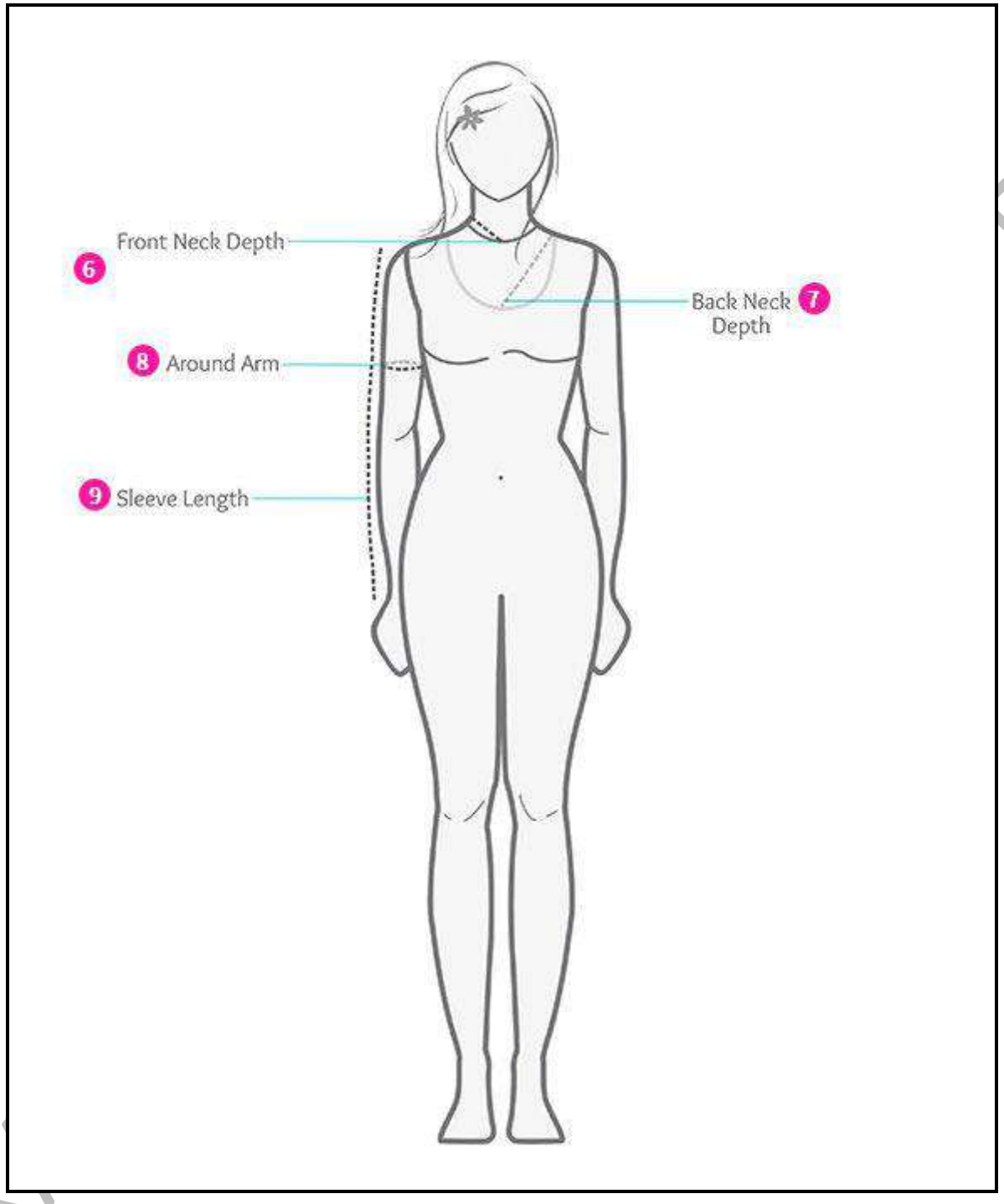
Inseam: Measure from the crotch to the ankle for pants length.

Shirt length: Measure from the base of the neck to where you want the shirt to end.

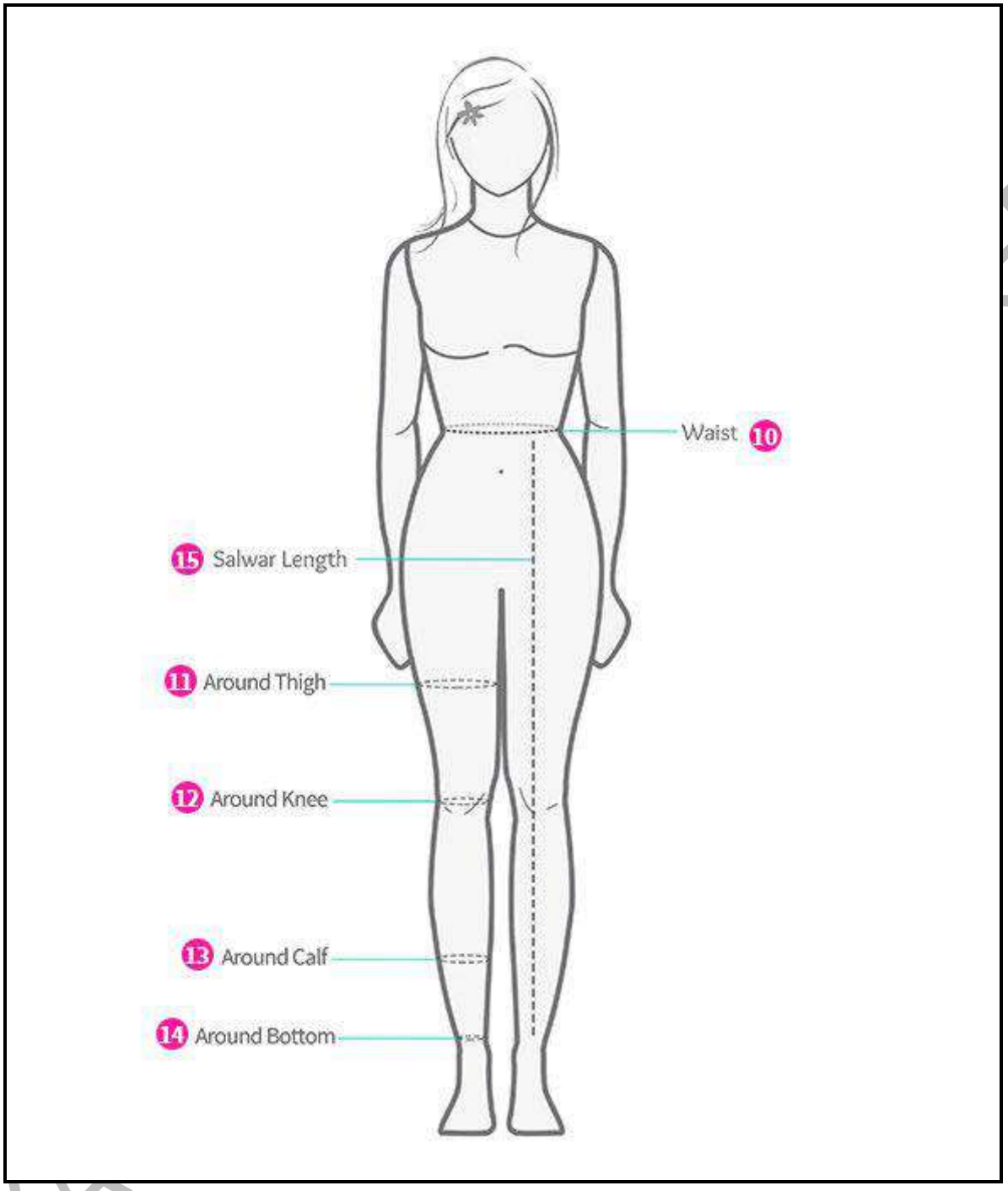
Measurements required for women's salwar and kameez.



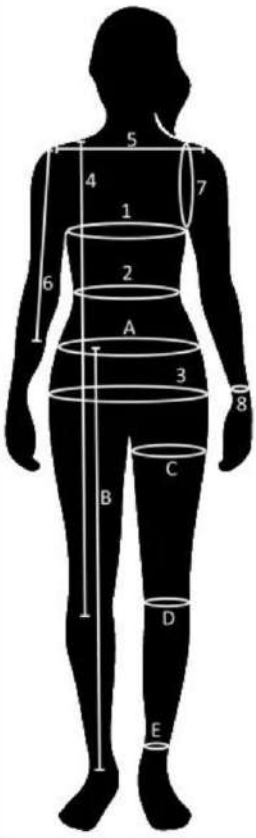
KAMEEZ MEASUREMENTS BY BODY SHAPE



KAMEEZ MEASUREMENTS BY STYLING NUANCES



BOTTOM WEAR MEASUREMENTS BY STYLE & FRAME

SALWAR KAMEEZ	KAMEEZ (TOP)	
	1. BUST:	Measure around the fullest part of your bust. Keep the tape not too loose or tight.
	2. WAIST:	Measure around the slimmest part of your waist. Usually above belly button.
	3. HIP:	Measure around the widest part of hip. Keep the tape parallel to the floor.
	4. KAMEEZ LENGTH:	Measure length from shoulder point to your desired point.
	5. SHOULDER:	Measure shoulder from one shoulder point to other shoulder point from your back.
	6. SLEEVE LENGTH:	Starting from the edge of the shoulder bone, measure down to the desired length.
	7. ARMHOLE ROUND:	From the highest point on your shoulder, measure around armhole.
	8. WRIST ROUND:	Measure around your wrist. Keep the tape not too loose or tight.
	SALWAR (BOTTOM)	
	A. WAIST TIE:	Measure around the part where you normally tie your Salwar (Lower).
	B. SALWAR LENGTH:	Measure from where you tie your Salwar/Lower down till your desired length.
	C. THIGH ROUND:	Measure around the fullest part of your thigh. Keep the tape parallel to the floor.
	D. KNEE ROUND:	Measure around your knee. Keep the tape parallel to the floor.
	E. ANKLE ROUND:	Measure around the ankle of your foot. Keep the tape parallel to the floor.

Measurements required for men's shirt and Pant.

Numeric sizing references the neck measurement and sleeve measurement. But that's not all that goes into shirt sizes.

There are four measurements to note when you're on the hunt for a quality button-up:

- Neck
- Sleeve
- Chest
- Waist
- Shirt length
- Shoulder width

Firstly, you need a tape measure for a more accurate outcome. Alternative measuring methods you may employ include the popular string against a ruler technique. It may be a bit cumbersome, but at least it gets the job done.

You may also visit a professional tailor to get your measurements taken, and if you want to remain within the comfort of your home, using one of your best-fitting shirts may be your best bet at getting the correct size.

Collar circumference

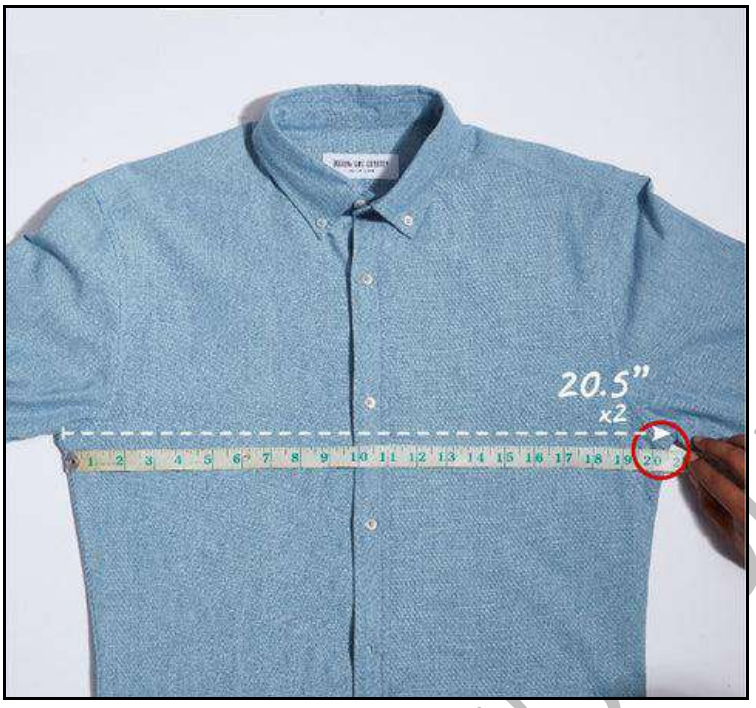
First, unbutton your collar. The next step is to measure between the two points where the collar attaches to the collar band, then add half an inch to the measurement for a relaxed fitting

Sleeve length

Neatly fold down your shirt sleeves, then place your tape measure where the sleeve meets the shoulder down to the edge of the cuff to get your final sleeve length.

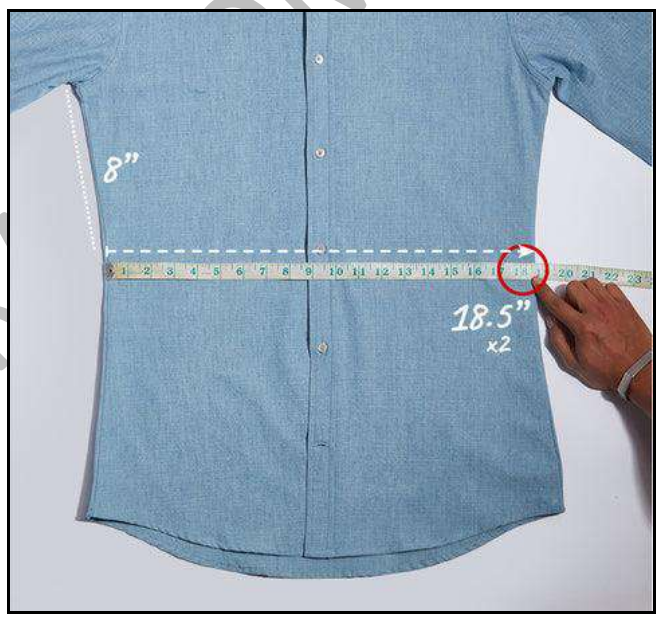
Chest circumference

Neatly button up or button down your shirt and lay it flat (flatten out any creases). Place your tape measure just below the point where your sleeve meets the armpit, then measure evenly from one edge to the other and double the number obtained to get your final chest size.



Waist circumference

The waist area is usually about 8 inches from your shirt's armhole. Thus, place your measuring tape 8 inches below each of your shirt's armpits, then measure across, from one end to the other and double the result for your final waist size.



Shirt length

Place your tape measure where the shoulder seam and collar connect and measure down to your desired length. Tip- an ideal shirt should lay right at the middle of your pants zipper.

Shoulder width

Neatly button-up or button-down your shirt and lay it flat with its backside at the top. Place your tape measure at an inch below the shoulder tip and measure across the shirt to the other end to obtain your shoulder size.

Now that all the measuring work is complete, you can obtain your proper size by comparing the obtained measurements against a men’s size chart for shirts.

Next Steps

Have you figured out how to take your shirt measurements on your own? If not, you are welcome to walk into any of our outlets to have your measurements taken by our stylists.

If you want to look good in your shirt effortlessly, investing in custom-made shirts may be a solid step towards that.

If you still need more clarification on the alpha or numeric size chart for shirts, feel free to reach out to one of our stylists at Bombay Shirt Company to get personalised expert styling and men's shirts size chart advice.

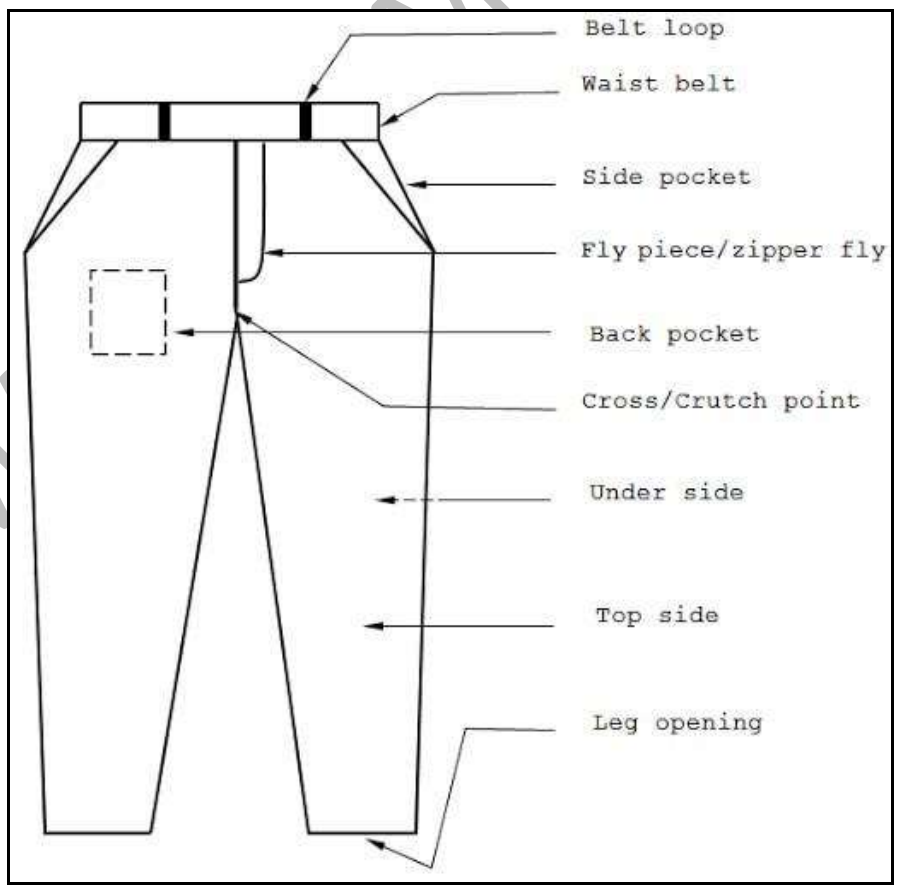
Connect with us today to help elevate your wardrobe with our timeless customisable pieces.

What is Pant?

No longer considered avant grade, pants or trousers are a staple of the modern man's and woman's wardrobe, an alternative for unpopular skirt hem lengths and an option for comfort and variety. Pant is the very popular item of garment for both men and women. But men's pants sizes are easier to take measurements than women's pants sizes. Before buying a new plant with perfect size, it is very important to know about your pants size. For getting an actual measurement and a perfect look of a basic long pant, you should know the right measurement procedure. For taking a right measurement of a basic pant, you have to know the different parts of a basic men's long pant. Remember it, which is the main part for a measurement process. But measurement techniques are totally different according to different types of pant styles. Here I will discuss step by step measurement procedure for a basic men's pant with picture.

Different Parts of a Basic Pant / Trouser:

Here I will mention different components of a basic pant with picture



Size chart for men's pant

The size may differ by 1~2cm depending on measurement methods Please, check the size chart before purchasing

inch

Tag Size (drop box)	US UK EU AU SIZE	Waist size	Front Rise	Hip Size	Inseam	Hem Width	Total Length
30	29	29	9.8	36.5	32.8	12.2	42.5
32	31	31	10.2	38	33	12.4	43.3
34	33	33	10.6	39.7	33.2	12.6	43.7
36	35	35	11	41.3	33.4	12.8	44

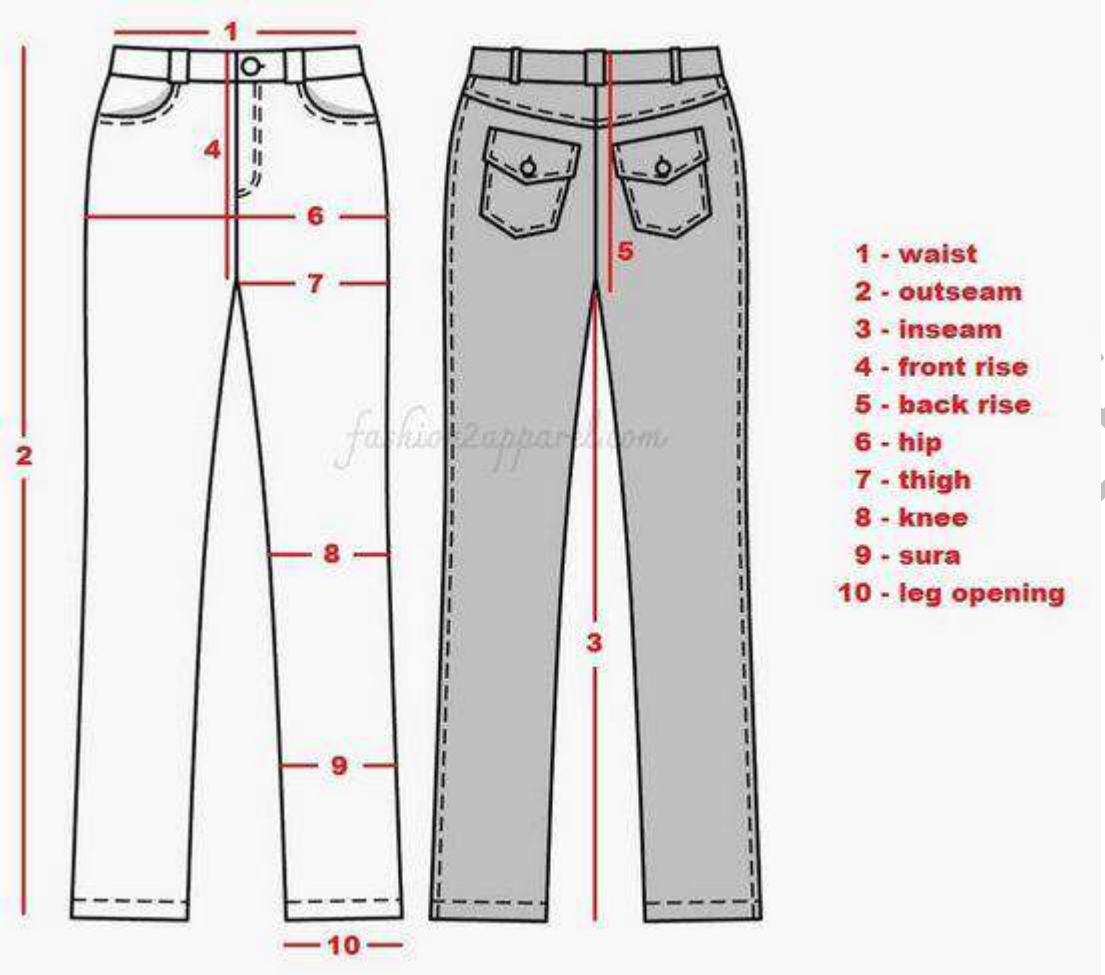
Required Tools for Taking Measurement:

Some proper measurement tools that are must need to complete this task successfully.

- Measurement tape
- Size chart
- Flat surface or table (If you take measurement from another pant)
- Full-Length Mirror
- Helpful assistant

How to Take Measurement of a Men's Pant or Trouser:

Pants can be made all the more stylish by tapering or widening them. There is more to it than just adjusting the leg seams. If you simply taper the seams on an existing pants pattern or on ready-to-wear pants, you will typically find that there is still more fabric below the seat and under the belly than you want. Here is how-to take-out part of the width from the side and inseams and part from within the pattern, in both front and back.



How to measure a basic pant or trouser? It is very simple and only 8 steps are help to take a measurement for a basic men's pant. Here I will discuss step by step measurement techniques for a pant with picture. Hope it will be helpful for you.

Waist: Keep the pants on a table with the front facing the inspector. Measure straight from one side of the waist band to another.

Hip: Keep the pant on a table with the front facing the inspector. Measure 2" down from bottom of waist band from side seam to side seam.

Seat: Keep the pant on a table with the front facing the inspector. Measure from side seam to side seam 4" above crotch.

Thigh: Place the pant sideways on a table in such a way that inseam and out seam remains in one line. Measure from side to side 2" down from crotch.

Knee: Place the pant on a table as mentioned above. Measure from side to side 12" below crotch.

Lag opening: Measure bottom of leg from one side to another.

Inseam: This is a length from crotch point up to leg bottom.

Front rise: Place the pant on a table with its front facing the inspector. Measure from crotch point up to top of waistband.

Back rise: Place the pant on a table with its back facing the inspector. Take care to eliminate any wrinkle on the hip or seat. Measure from crotch point to top of waistband.

Out seam: Measure from top on waist band up to leg bottom.

UNIT - II
PATTERN MAKING AND FITTING

Pattern Making – Types

Meaning of Pattern Making

A pattern is a blueprint for the garment that is used to cut the fabric. It is the drafting, or technical drawing, of a garment. Measurements are taken using standard size charts, dress forms, or the human body; these measurements are then translated into 2D patterns from which clothing is created. To be able to create various clothes, a fashion designer now needs to create patterns. For a student, pattern making is both fascinating and crucial because it enables them to interpret designs and comprehend them technically. There are numerous ways to create patterns. The most popular ones are draping and flat pattern making.

Types of Pattern Making (Drafting, Draping and Commercial Patterns)

Drawing, draping, and flat paper patternmaking are the three types of patternmaking used to create patterns.

Draping

Draping entails wrapping a two-dimensional piece of fabric around a form and letting it take on the contours of that form to produce a three-dimensional fabric design. A paper copy of this muslin is used as the final pattern (Armstrong). The garment is made more comfortable to wear by including space for easy movement. The benefit of draping is that, before the garment piece is cut and sewn, the designer can see how the finished design will look on the body form. It takes longer and costs more money than flat pattern making, though.

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Advantage of draping
• Draping is advantageous because without cutting the fabric one can know the entire effect of a garment rather than just minute details. • It is a three dimensional method, the design can be visualized while draping and any necessary changes can also be made.

- Dress form can be of particular size or of standard measurements.
- This helps the designer to achieve the difficult designs by draping different fabrics. For designs such as cowls this method alone can offer good results.
- In draping we can see the features of garment, and characteristics postures in relation to fabric and time into which we are going drape it, and immediately we can sense the harmony between draped fabric and wearer.

Limitations of draping techniques

- It is an expensive technique of garment construction and not so common in India.
- Draping requires more talent than required for flat pattern design.
- Initially dresses are draped on dummy with a cheaper fabric so sometimes the look of the garment cannot be assessed precisely by this method.

Drafting

This process involves taking precise measurements on a person, a piece of clothing, or a body form. To complete the pattern, ease allowances and measurements for the chest, waist, hips, and other body parts are marked on paper, and construction lines are drawn. To create fundamental, underlying, or design patterns, drafting is used.

Advantages of Drafting Method

- It is easy to understand and easy to work with drafting method for a new worker.
- Drafting is very useful for personal use and for small scale garment production like local tailors, boutiques.
- Clothes made from drafting techniques are based on individual measurements and hence are perfect in fitting for an individual.

Limitations of drafting method

- It is a two-dimensional method, thus look of a design can be seen only after stitching a garment.
- Drafting method is limited by its dependence on a chart of specified measurements, which makes it impractical for creating the ever-changing designs.
- Rapid changes in designs and sizing are very difficult and long process in drafting technique.
- Drafting pieces do not contain seam margins, notches, stitch lines, some other details.

COMMERCIAL PATTERN:

Development of Commercial Patterns: Commercial patterns were first made, in U.S.A in the 1850's by Ebenezer biter of who was a tailor. In the beginning they were crude patterns in rough paper, for simple demonstration only. The first pattern was of men's and boy's clothing Patterns for women and children were also developed later and became, available commercially. You may have seen fashion magazines like Vogue, McCall's Pictorial Simplicity etc. and their pattern books.

Commercial patterns are usually done on tissue Paper. Since tissue paper is not bulky, it allows many piece of pattern to be packed compactly in an envelope. In commercial patterns seam allowances are included for safety. Patterns of established companies are usually printed and marked clearly with straight grain lines. Seam lines, cutting lines, darts, centre lines and all the necessary construction details. Good patterns are carefully labelled with the following information; the pattern size, name of each pattern (back, front, sleeve etc), number of pieces to cut horn each pattern piece etc. In addition some companies provide instruction sheets explaining the steps involved in using the pattern to cut out the garment, transferring pattern markings, and constructing the garment.

Advantages of using Commercial Patterns
Advantages

- Patterns are already cut to size.
- The amount of fabric need is stated on the pattern. This avoids wastage.
- Notions are written in exact size and number.
- Step by step instructions are available and no guessing is required.
- The pattern can be used again.
- It may be cheaper than to buy or pay someone for a new garment.

Methods of transferring pattern markings;

Transferring pattern markings from paper
Once the pattern is ready, the details on the pattern should be transferred to the cloth by marking. Accuracy in marking and cutting is necessary to construct a well fitted garment. The various methods of transferring patterns markings onto the fabric is done using • Dressmaker's Carbon • Tailor's tacks • Tailor's chalk The type of fabric governs the choice of method.

Dressmaker's Carbon

The carbon paper method requires dressmaker's carbon, tracing wheel, ruler and pins. The carbon marks must not be visible on the right side of fabric being cut. This method is suitable on any firm fabric.

- Place carbon paper between fabric and pattern, with the waxed sides of carbon facing the wrong side of the cloth.
- Mark lightly and only once with a tracing wheel

Tailor's Tacks

This method uses a double strand machine thread to transfer pattern markings onto the fabric. It is good for silks and sheer fabrics.

- Use double thread
- Do not knot the thread end.
- Take a stitch through both layers of fabric, leaving 1 ½" of thread at the beginning of the stitch.
- Take a second stitch at the same point with a 1" loop
- Repeat the same process along pattern lines (darts)
- To remove the pattern from the fabric, cut the threads between tailor's tacks and pull gently and cut threads between two fabric layers

Tailor's Chalk

Tailor's chalk can also be used to transfer the pattern markings. Only the outer edges can be transferred while the marks on the pattern can be transferred using through carbon paper and tracing wheel.

Method of Marking	Advantages	Disadvantages
Dressmaker's carbon	• Quick, easy and accurate • Entire stitch line details transferred • Identical marks on both layers	• Shows on right side if fabric is flimsy or if marked heavily • Difficult to remove by washing • Markings distort on stretchy fabrics
Tailor's tacks	• Easily removed • Visible on both sides of each fabric layer	• Time consuming • Threads are to be removed after all construction processes

		• Danger of snipping fabric while cutting threads between fabric layers
Tailor's chalk	• Inexpensive • Easy to rub off the marks	• Difficult to achieve accuracy • Need to sharpen chalk edge for fine lines

Grain and its importance

Grain is the direction of the yarns in a fabric. Grain can be lengthwise grain, crosswise grain, and bias. Grain is very important when constructing garments since it determines how a garment will hang, fit and appear. All fabrics that are made up of yarns have grain or direction. Technically, the term grain only refers to woven fabric while the term direction is frequently used with knit fabrics.

All fabrics made from yarns are 'grain perfect' after knitting and weaving. Looms and knitting machines construct fabrics in a grain perfect manner. However, a fabric can become off-grain during the processes of finishing (dyeing, printing, permanent finishing, and/or packaging, winding onto a bolt). Garments that are not cut and sewn according to the fabric grain can stretch in places they should not, have sagging hems and be uncomfortable to wear. Patterns are specifically designed with grain in mind so that the body can take advantage of the amount of stretch or lack of give in the fabric.

1. Woven Fabric

The lengthwise yarns (sometimes called the warp) run parallel to the selvage edge of the fabric. They are usually more tightly twisted, stronger, and more stable than the crosswise yarns.

2. Selvage – the firm edge along the lengthwise direction of a woven fabric.

The crosswise yarns (sometimes called the woof, weft, or filling) are perpendicular, or at right angles to the selvage. They are woven under and over one or more yarns to create the fabric. These yarns are usually somewhat more loosely twisted and weaker than the lengthwise yarns.

3. Bias is any diagonal direction on a fabric. The fabric will 'give' or stretch.

4. True bias is the 45-degree angle or middle between the crosswise and lengthwise grain. Fold the fabric so lengthwise and crosswise yarns lie on top of and parallel to each other. This is where a woven fabric will have the greatest stretch. True bias is used for bindings, facings, pipings, folds, cords etc. It equally severs both warp and woof threads.

5. On grain print is a fabric wherein the prints on both the crosswise and lengthwise yarns run at right angles. This kind of fabric has perfect right-angled corners and is said to be 'grain perfect'.

6. Off grain print is a fabric which does not show perfect right-angled corners and the lengthwise and crosswise lines/print does not run at right angles. Such kind of off-grain printed fabrics are difficult to sew because it is impossible to match the seam lines, at centre front, at centre back and at shoulders.

7. With the grain When the edges of yarns along a bias cut edge tends to close up compactly when stroked with fingers, it is referred as with the grain. While working with a bias edge, it is better to work with the grain to avoid stretching or ravelling.

8. Against the grain When the edges of yarns along a bias cut edge tends to fray or come apart when stroked with fingers, it is referred as against the grain.

9. Garment Bias Any slanting line or cut in a garment that is not at 45 degree angle is referred to as garment bias. Basically a bias cut in cloth is a slanting or diagonal severing of the material. Both warp and woof threads will be cut.

Types

Lengthwise Grain

The term "lengthwise grain" describes the threads that run parallel to a fabric's selvage along its whole length.

- Runs parallel to a fabric's selvedges, or closely woven edges.
- Has the least stretch due to the fact that the warp threads are often the strongest and most closely spaced?
- Because it drapes well and has strong threads, the majority of clothing is cut on the length of the grain. As a result of the sturdy threads, a garment cut on this grain will last the longest.

Crosswise Grain

Crosswise grain refers to the threads that run parallel to the fabric's selvage or cut edge as it is removed from the bolt.

- Runs from selvedge to selvedge across the fabric.
- Usually has some give or stretch to it. Due to the cross grain's tendency to stretch across the shoulders with arm movement and other movements, this can be particularly helpful for creating clothing that is both pleasant to wear and has a longer lifespan.
- Does not hang as well as long grain. (For cotton, this distinction isn't really significant.)
- Can be applied to create unique effects like borders or stripes. To take advantage of a pattern like horizontal stripes or a border print along the selvedge of cloth, you may want to cut a garment on the cross grain. When this is the case, don't stress too much over the distinction between cross grain and length grain; the distinction isn't crucial.

Bias Grain

The thread line that is 45 degrees out of alignment with the fabric's lengthwise and transverse grains is known as the "bias grain." A garment cut on the bias will hang differently than one cut on the straight or across grain because the bias in woven fabric has elasticity.

- Runs with the length and crosses the grains at a 45-degree angle.
- Has a lot of give or stretch.
- Because of the stretch, it may be challenging to work with. Because bias can sometimes not recover after it has been extended, it must be managed carefully.
- Highly adherent when draped. Consider the lovely gowns from the 1930s, which were frequently cut on the bias and were so opulent and magnificent Fitting - Standards of a good fit.

Five basic factors which determine a good garment fit

Five basic factors present in every fitting decide whether a garment fits well or not. There are

- ease,
- line,
- grain,
- set, and
- Balance.

These five factors are interrelated

Ease

The garment, which seems to be right size is neither too loose not too tight. Ease is also the difference between the actual body measurements and garment measurements. This amount varies with the fashion, type of garment and personal taste. A garment constructed with optimum ease would be the right size. Pulling and drawing across the bust, shoulders or hiplines show that the ease is insufficient. Excess ease causes folds across the loose areas giving a baggy appearance to the garment. Too much ease will be seen in too long shoulder seams, many folds across the neck and chest and waistline being too loose. If a garment is of a good fit then it should fit without any wrinkles or strain.

Line

The basic silhouette shows the lines in a garment. The circumference lines include neckline, armhole, waistline, and wrist line. Lines should be smooth without folds and neat. There should be smoothly graded curves in back and front. Armhole should be oval, but not pointed or round in shape. It follows natural creases made where the arm joins the body. The curve lines should not be too low which will hinder the movements of the hand. Inset in sleeves, the side

seam line should be straight from armhole to the hem or lengthwise line. Front darts should end at the top of the bust and darts at the side to hands, bust should be in the line with the top. Round waistline should be as far as possible parallel with the floor but slightly lower at the back and slightly lower and round in the front to fit at front waistline. Waistlines and hemlines should be parallel to the floor. The lines obtained by darts, pleats, and yokes are within the garment and they should be grateful and smooth. Design lines within the silhouette such as pleats, darts and seams should be graceful, direct and smooth. Lines to observe in fitting are the basic silhouette seams, the circumference seams, and the style or design lines. The circumference lines include neckline, armholes, waistline, waistline, and hemline. They should be smoothly graded curves following the natural body curves. Such design lines within the silhouette as pleats, darts, and gores should appear to hang perpendicular to the floor generally at right angles to the circumstance lines they enter, or to radiate from the circumference they enter. Curved lines like yokes should be direct, smooth, graceful and exactly alike in symmetrical effects.

Grain

The placement of warp and weft yarns form grain. It denotes the direction of the threads. Usually, the lengthwise or warp threads are heavier than crosswise or filling threads. Heavier threads tend to drape well on the figure with graceful folds when gathers, pleats, and ruffles occur on the straight grain. Lengthwise grain should be perpendicular to the floor, at the centre front and centre back, unless, off-grain seams are present. The crosswise yarns are parallel to the floor at the centre front and centre back. On the bust and hiplines, the grain on the right half of the garment should match that on the left half except in the case of asymmetric draping. If the crosswise grain covers up or down where it should be parallel with the floor it is because of some bulge or hollow in the body directly above the curve. If the grain line is not corrected, wrinkles or sagging occur. Sometimes the grain line is off when the material is not cut carefully. Threads or yarns, the units that make cloth, are called, “the grain”. Be careful today “crosswise grain” or “lengthwise grain” for clearness. Graceful folds ingather, pleats, ruffles, and skirts occur if they follow the heavy threads. In the standard basic pattern at centre front and back at both bust and hip, the lengthwise grain is perpendicular to the floor (unless bias seams are in the design) and the crosswise grain is horizontal or parallel with the floor from the grain on the right half of the garment should match that on the left half, except in asymmetrical designs as in a side draped skirt. In a plain sleeve, the lengthwise threads should lie vertically from top of shoulder to the elbow and crosswise threads in the upper sleeve should be parallel with the floor. If the crosswise grain curves up or down where it should be parallel to the floor, it is because of somebody bulge or hollow directly above the curve.

Set

A well-fitted garment has a smooth set without any wrinkles. The slanting wrinkles are caused by the garment being strained over some curves or bulges of the body.

Slanting wrinkles in sleeves and near the shoulder are unbecoming and uncomfortable. Crosswise wrinkles occur because the circumference below them is fitted too tight. The wrinkles point towards the shoulder blade is caused by protruding shoulders. To remove them, extra length and width should be provided for the garment. A smoothness of “set” or freedom from wrinkles is required for a good-looking fit. Graceful folds created by gathers or un-pressed pleats or draped features are style lines not to be confused with wrinkles, those slanting triangles straining from some curve or bulge of the body.

Balance

The garment should look balanced from left to right and front to back. The skirt should hang so that it extends the same distance from the centre to the right and left sides. The necklines should fit neck snugly at all points. If the shoulder seam stands away from shoulder at neck point and fits tightly at armhole point, the garment will look out of balance. The standard skirt should hang so that it extends the same distance from the legs from right to left and from front to back. The shoulder seam should rest evenly on the shoulder. Diagonal wrinkles point away from the bulge.

UNIT - III

SLEEVE AND ITS TYPES

Sleeves – definition, types,

What is sleeve?

Sleeves have been used as a device for changing the silhouette of garments throughout the history of fashion. Sleeve is an important part of clothes. It has both aesthetic and practical functions. Sleeve styles depend on time and fashion.

Type of sleeve:

1. Set-in sleeve
2. Non set-in sleeve (Drop Shoulder)
3. Raglan sleeve (bodice plus sleeve combination)

Above types of sleeve are elaborately classified below:

A. Set-in sleeve:

1. Puff- (with gathers and pleats)

- At the top
- Bottom
- Melon (balloon)
- Double puff
- Drawstring at bottom puff
- Frill at bottom puff
- Fancy puff (extended caps)-
- Crescent-shaped
- Gathered crescent-shaped

2. Pagoda-

- With frill (gathers and pleats)
- With circular (half and full)

3. Lantern

4. Bishop

5. Leg-o-mutton

- With gather
- With pleats

6. Cowl

7. Petal

- Two piece
- Flared
- Puffed

8. Virago

9. Bell

10. Shirt

11. Cape

12. Cap

13. Flare

14. Juliet

15. Wedding

16. Cartwheel circle

17. Long buttoned

18. Two piece tailored (for coat & jacket)

19. And stylized

Non set-in sleeve (Drop Shoulder)

1. Kimono
2. Dolman
3. Magyar
4. Square
5. Batwing
6. Extended shoulder
7. And stylized

C. Raglan sleeve (bodice plus sleeve combination)

1. Saddle
2. With shoulder dart
3. Two piece
4. With yoke
5. Peasant
6. And stylized

Set-in-sleeves

Set-in sleeve is a classic design where the sleeve is sewn into the armhole at the shoulder, creating a clean, structured look. This technique allows for a tailored fit that contours the body's natural shape. It's a staple in garment construction, offering both comfort and style. How does this affect your clothing choices? Explore the impact on fashion with us

Definition: Set-in sleeves are sleeves that are sewn into the armholes of a garment. They are attached to the body of the garment after the shoulder seams have been sewn. This type of sleeve construction creates a tailored look and is commonly used in shirts, blouses, jackets, and dresses.

Plain Sleeve:

This type of sleeve has no fullness at lower edge or top edge and is commonly used on sari blouses. ELFGH is the pattern for a short plain sleeve. HG is the lower edge of the sleeve. EG and FH are side seams. ELF is the top edge of the sleeve (sleeve cap seam line) which is attached to the armhole edge of the bodice. This pattern can be used to develop various sleeve styles. The vertical lines drawn within the sleeve pattern are the lines through which the sleeve can be slashed or cut to develop it into other types of sleeve styles.

Puff Sleeve

Puff sleeves are a type of sleeve that sometimes, but not necessarily, gather at both shoulders and all around the cuff. Sometimes, they are puffed up, and other times, they aren't! This can vary from piece to piece.

This type of sleeve is often seen in dresses and blouses and can add a touch of femininity to any outfit. While puff sleeves can be a bit tricky to style, they are definitely a unique and eye-catching detail that is worth considering for your next garment.

A traditional puff sleeve gown is like a sheer cone that covers a woman's arms and creates skirts full of volume. Puff sleeves are also referred to as elastic sleeves because they stretch over your arms but leave some room to move. Puff sleeves can be made out of fabric with many different materials, such as satin, taffeta, organza, sailcloth lace, and tulle!

Bell Sleeve

A bell sleeve is a type of sleeve that is wide at the bottom and becomes narrower towards the top. It is named after its resemblance to a bell. Bell sleeves are often found on dresses and tops. They can be made of various materials, such as cotton, linen, or silk.

Bishop Sleeve

The Bishop sleeve is a type of raglan sleeve named after its inventor, Bishop Robert Stokes. The distinguishing feature of the Bishop sleeve is the use of a single piece of fabric for both the front and back of the sleeve, with a seam running down the outside of the arm. This construction method eliminates the need for a separate sleeve lining and results in a lighter and more comfortable garment.

Circular Sleeves

The circular sleeve falls softly and looks rather like a mini circular skirt covering the arms. The longer and wider the circle is, the more flow there will be to the sleeve. This is a very flattering type of sleeve and looks best when attached to a fitted bodice

Modified armhole
Introduction:

- Armholes are a critical aspect of garment construction, as they directly impact the fit and comfort of a garment.
- Modified armholes refer to variations in the shape, size, or positioning of the armhole in a garment pattern.
- These modifications are often made to achieve specific design or fit objectives.

Types of Modified Armholes:

Raised Armholes:

- Raised armholes are positioned higher on the garment, closer to the shoulder.
- They are commonly used in tailored garments to create a sleek, fitted look.
- Raised armholes can restrict movement slightly but are preferred for a more structured silhouette.

Lowered Armholes:

- Lowered armholes are positioned lower on the garment, away from the shoulder.
- They are often found in casual or relaxed-fit garments, allowing for more freedom of movement.
- Lowered armholes are suitable for garments where comfort and ease of movement are prioritized.

Extended Armholes:

- Extended armholes are enlarged versions of the standard armhole, providing extra room around the arm.
- They are used in garments where a looser or more relaxed fit is desired, such as in sportswear or some types of outerwear.
- Extended armholes can enhance comfort and range of motion but may result in a less tailored look.

Shaped Armholes:

- Shaped armholes refer to armhole contours that are altered to accommodate specific body shapes or design details.
- They can be curved, angular, or asymmetric, depending on the design requirements.
- Shaped armholes are customized to fit the body contours more precisely, enhancing both fit and aesthetics.

Considerations for Modified Armholes:

- When modifying armholes, designers and patternmakers must consider the garment's intended use, target audience, and design aesthetics.
- Factors such as fabric stretch, ease allowance, and intended movement should also be taken into account.
- Proper fitting and testing are crucial when working with modified armholes to ensure that the final garment meets both functional and aesthetic requirements

Squared armhole

Introduction:

- Squared armholes are a distinctive feature in garment construction, characterized by their angular shape.
- They are commonly used in tailored garments and outerwear to achieve a specific look and fit.
- Squared armholes can vary in their degree of angularity and placement, depending on the design requirements.

Characteristics of Squared Armholes:

Angular Shape:

- Squared armholes have straight or slightly curved edges that form a distinct angle at the shoulder point.
- This angular shape sets them apart from traditional curved armholes and contributes to a more structured and tailored appearance.

Shoulder Emphasis:

- Squared armholes often place emphasis on the shoulders, creating a broader or more defined shoulder line.
- This design element can enhance the silhouette of the garment, especially in styles where a strong shoulder presence is desired.

Tailored Look:

- The angularity of squared armholes lends a tailored look to garments, making them suitable for formal or structured designs.
- They are commonly used in jackets, coats, and structured tops where a crisp, clean line is desired.

Design Versatility:

- Despite their structured appearance, squared armholes can be adapted to various styles and designs.
- They can be paired with different sleeve types, such as set-in sleeves or raglan sleeves, to create a range of looks from classic to contemporary.

Considerations for Using Squared Armholes:

- When incorporating squared armholes into a garment design, designers and patternmakers should consider factors such as fabric drape, ease allowance, and intended movement.
- The angle and placement of squared armholes should complement the overall design aesthetic and the wearer's body shape.

Cap sleeve and Magyar sleeve
Introduction:

- Cap sleeves and Magyar sleeves are sleeve styles that contribute to the overall design and silhouette of a garment.
- Both styles offer unique design possibilities and can be adapted to various garment types and aesthetics.

Cap Sleeve:
Definition:

- Cap sleeves are short sleeves that cover only the upper part of the shoulder, resembling a cap.
- They are often seen in dresses, tops, and blouses, adding a delicate and feminine touch to the garment.

Characteristics:

- Cap sleeves can vary in their width and length, from narrow caps that barely cover the shoulder to wider caps that extend slightly down the arm.
- They are usually cut in a single piece with the bodice of the garment, creating a seamless look.

Styling:

- Cap sleeves are versatile and can be used in both casual and formal designs.
- They are suitable for warm-weather garments or as a design element in sleeveless garments to provide a bit of coverage without full sleeves.

Magyar Sleeve:

Definition:

- Magyar sleeves, also known as batwing sleeves, are characterized by their wide, roomy fit and a distinctive diagonal seam that extends from the neckline to the underarm.
- They are named after the traditional clothing of the Magyar people of Hungary.

Characteristics:

- Magyar sleeves are cut with a deep armhole and a wide, often exaggerated sleeve width that tapers towards the wrist.
- They create a draped, voluminous effect around the arms and torso, adding drama and elegance to the garment.

Styling:

- Magyar sleeves are popular in both casual and formal wear, adding a touch of glamour to a variety of designs.
- They are often used in flowing, drapery fabrics to enhance the fluidity of the sleeve silhouette.

Considerations for Cap and Magyar Sleeves:

- When designing garments with cap or Magyar sleeves, factors such as fabric choice, ease allowance, and the overall silhouette of the garment should be considered.
- Cap sleeves are suitable for garments where a more fitted and tailored look is desired, while Magyar sleeves are ideal for designs that require a more relaxed and draped silhouette.

Conclusion:

- Cap sleeves and Magyar sleeves are distinctive sleeve styles that offer designers a range of design possibilities.
- By understanding their characteristics and styling options, fashion professionals can utilize these sleeve styles to enhance the aesthetic appeal of their garments.

Sleeve and bodice combined –raglan, kimono and dolman

Introduction:

- Combined sleeve and bodice styles, such as raglan, kimono, and dolman sleeves, are integral to garment construction, impacting both aesthetics and functionality.
- These styles offer unique design possibilities and are often chosen based on the desired silhouette, ease of movement, and overall garment design.

Raglan Sleeve:

Definition:

- Raglan sleeves are characterized by diagonal seams that extend from the neckline to the underarm, creating a continuous line from the neckline to the sleeve cuff.
- The raglan sleeve design allows for a greater range of movement compared to set-in sleeves.

Characteristics:

- Raglan sleeves are often used in sportswear and casual garments, as they provide a relaxed and comfortable fit.
- They can be styled in various lengths, from short sleeves to full-length sleeves, depending on the design requirements.

Styling:

- Raglan sleeves are versatile and can be adapted to different garment styles, including T-shirts, sweaters, and outerwear.
- They are suitable for both men's and women's garments and are popular in activewear due to their flexibility and ease of movement.

Kimono Sleeve:

Definition:

- Kimono sleeves are wide, straight sleeves that extend from the neckline to the wrist without a separate armhole seam.
- The design is inspired by traditional Japanese kimono robes and is known for its loose and flowing silhouette.

Characteristics:

- Kimono sleeves are cut as part of the bodice, with a wide, unstructured shape that drapes elegantly around the arms.
- They are often used in garments where comfort and ease of movement are prioritized, such as loungewear, dresses, and tops.

Styling:

- Kimono sleeves are popular in bohemian and relaxed styles, adding a touch of effortless elegance to the garment.
- They can be paired with various neckline styles, including boat necks and V-necks, to create different looks.

Dolman Sleeve:

Definition:

- Dolman sleeves are wide at the armhole and narrow at the wrist, creating a distinctive batwing-like silhouette.
- The sleeve is cut as part of the bodice, with a seamless transition from the neckline to the sleeve cuff.

Characteristics:

- Dolman sleeves are known for their relaxed and draped fit, adding volume to the upper body while tapering towards the wrist.
- They are often used in casual and oversized garments, providing a comfortable and stylish look.

Styling:

- Dolman sleeves can be styled in various lengths, from short to three-quarter or full-length sleeves, depending on the desired look.
- They are popular in tops, sweaters, and dresses, adding a fashionable and contemporary touch to the garment.

Considerations for Combined Sleeve and Bodice Styles:

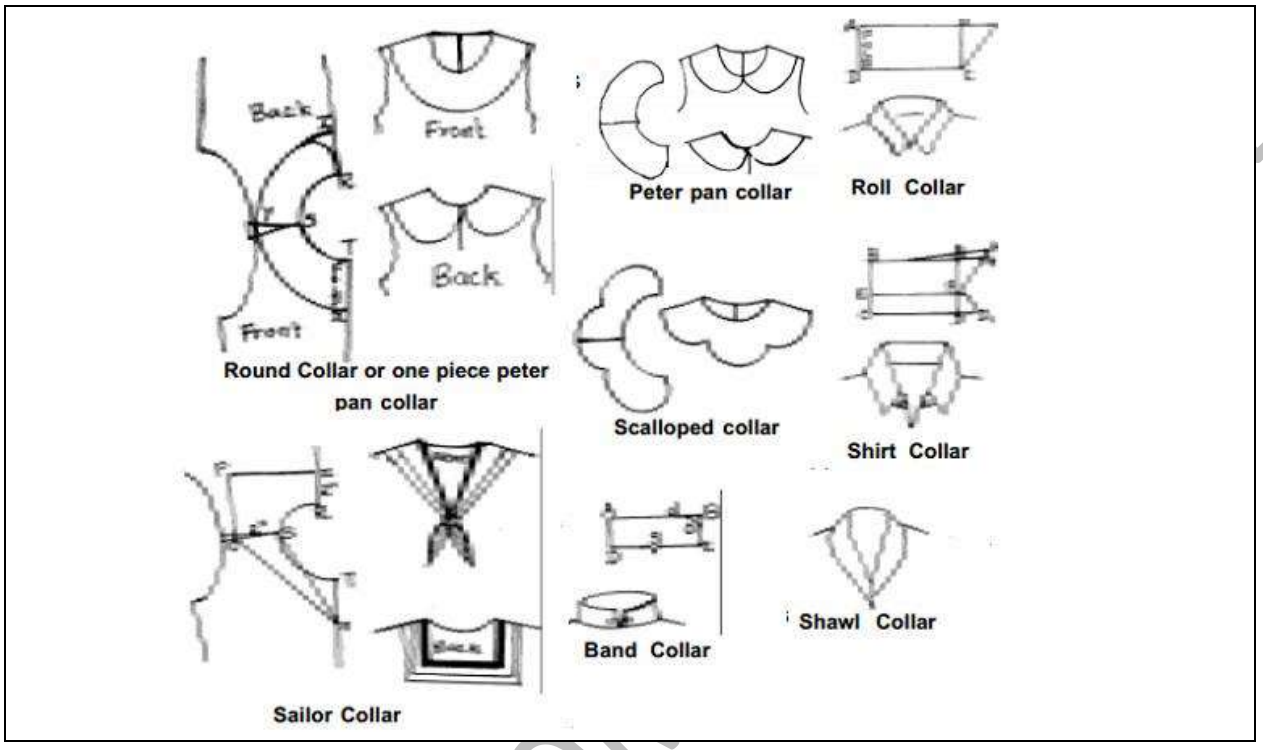
- When choosing a combined sleeve and bodice style, designers should consider factors such as fabric drape, garment silhouette, and the desired aesthetic.
- Each style offers unique advantages in terms of fit, comfort, and visual appeal, which should be aligned with the overall design concept of the garment.

Conclusion:

- Raglan, kimono, and dolman sleeves are versatile styles that can significantly impact the overall look and feel of a garment.
- By understanding their characteristics and styling options, fashion professionals can leverage these sleeve styles to create garments that are both stylish and functional.

UNIT - IV

TYPES OF COLLARS AND YOKES



TYPES OF COLLAR:

A collar could be made close to or away from neckline and the collar edge could be round, curved, square, or pointed (long or short) depending upon design variation.

Collars may be attached to a garment fabric or may be finished separately. They can be cut on bias, lengthwise or crosswise grain depending upon the effect desired according to the style. There are four main types of collar such as flat, stand, roll and shawl. All collars take on one of these shapes and needs interfacing to stiffen them, and must fit accurately to the neckline. Even slight alteration to the neck edge can throw out the fit of the collar unless these alterations have been allowed for when making up the collar.

Collars need careful trimming and layering so, if they are curved make snipping otherwise they will neither turn well have a neat, sharp finish. Pressing is also very important. A collar should be pressed to its shape. eg., roll collar should be pressed in a roll-it should not be pressed flat. Always press the neck join after attaching and before proceeding to finish.

Some of the types of collars are

1. Round collar
2. Peterman collar
3. Scalloped collar
4. Sailor collar
5. Roll collar
6. Shirt collar
7. Band collar
8. Shawl collar

Peter pan

- The Peter Pan collar is a flat collar with rounded edges that lies flat against the neckline.
- It is named after the collar worn by the character Peter Pan in J.M. Barrie's famous play and subsequent adaptations.
- The collar became fashionable in the early 20th century and has seen various revivals in fashion history.
- Peter Pan collars are often associated with a youthful and feminine look.
- They can be found on dresses, blouses, and even some jackets or coats.
- The collar can be simple or embellished with lace, embroidery, or other decorative elements. Peter Pan collars can be paired with a variety of necklines, such as scoop necks, boat necks, or V-necks.
- They are versatile and can be styled to create both casual and more formal looks.
- When designing garments with Peter Pan collars, considerations should be made for the collar's size, placement, and how it interacts with the overall design of the garment.
- The collar's shape and size can influence the perceived proportions of the wearer's face and neckline.
- Care should be taken in selecting fabrics for Peter Pan collars to ensure they maintain their shape and structure.
- Overall, the Peter Pan collar is a timeless and charming detail that adds a touch of whimsy to various garments.

Scalloped collar

- A scalloped collar is a type of collar that features a series of curved edges resembling the shape of scallop shells.
- This collar style is often seen as a decorative and feminine detail in fashion design.
- Scalloped collars can be found on a variety of garments, including blouses, dresses, and jackets.
- The scalloped edges can vary in depth and width, allowing for different design variations.
- The collar can be made from the same fabric as the garment or can be a contrasting or complementary color or material for added visual interest.
- Scalloped collars can be simple or embellished with lace, embroidery, beads, or other decorative elements.
- When designing garments with scalloped collars, considerations should be made for the collar's size, placement, and how it complements the overall design of the garment.
- The collar's shape and size can influence the perceived proportions of the wearer's face and neckline.
- Care should be taken in the construction of scalloped collars to ensure that the edges are neat and the curves are smooth.
- Scalloped collars can add a whimsical and romantic touch to garments, making them popular in vintage-inspired or feminine styles.

Puritan collar

- The Puritan collar is a type of collar that is characterized by its wide, flat, and rounded shape.
- It is named after the collars worn by the Puritans, a religious group that played a significant role in the history of England and America during the 16th and 17th centuries. Puritan collars were typically worn by both men and women and were part of the modest and simple clothing styles associated with the Puritan movement.
- The collars were often made of white or off-white fabric and were designed to cover the neck and shoulders, reflecting the Puritans' emphasis on modesty and humility in dress.
- Puritan collars were often detachable, allowing them to be easily cleaned or replaced without having to launder the entire garment.

- In contemporary fashion, the Puritan collar has been reinterpreted and incorporated into modern designs, sometimes with added embellishments or variations in shape.
- The collar's historical significance and association with a specific period in fashion history make it a popular choice for vintage-inspired or historical-themed garments.
- When designing garments with Puritan collars, considerations should be made for the collar's size, shape, and how it complements the overall design aesthetic.
- The collar's historical context can also influence its styling and placement within a contemporary garment

Sailor collar

- A sailor collar is a type of collar that is traditionally associated with sailor uniforms and nautical-inspired fashion.
- It is characterized by its wide, flat, and square or rectangular shape that extends from the neckline of a garment.
- Sailor collars are often white and feature contrasting piping or trimming in navy blue or other nautical colors.
- The collar is named after its association with the uniforms worn by sailors in various navies around the world.
- The sailor collar became popular in fashion during the 19th century when nautical themes were fashionable, especially in children's and women's clothing.
- Sailor collars are commonly found on dresses, blouses, and sailor suits for children.
- The collar is often embellished with decorative elements such as stripes, anchors, or nautical motifs to enhance the nautical theme.
- Sailor collars are known for their crisp and clean appearance, which adds a touch of nautical flair to garments.
- In contemporary fashion, the sailor collar has been reinterpreted and incorporated into modern designs, sometimes with variations in shape or color.
- When designing garments with sailor collars, considerations should be made for the collar's size, shape, and how it complements the overall design aesthetic, especially in maintaining its nautical theme

Square Collar

- A square collar is a type of collar that features a square or rectangular shape at the neckline of a garment.
- This collar style is known for its clean lines and geometric silhouette.
- Square collars can be found on a variety of garments, including blouses, dresses, and jackets.
- They are versatile and can be designed in various sizes and styles, from small and subtle to large and statement-making.
- Square collars can be made from the same fabric as the garment or can be a contrasting or complementary color or material for added visual interest.
- When designing garments with square collars, considerations should be made for the collar's size, placement, and how it complements the overall design of the garment.
- The collar's shape and size can influence the perceived proportions of the wearer's face and neckline.
- Square collars are often associated with a modern and structured look, making them popular in contemporary fashion.

Rippled Collar

- A rippled collar is a type of collar that features a wavy or rippled edge, resembling the shape of waves or ripples on water.
- This collar style is known for its soft and flowing appearance, adding a sense of movement and fluidity to a garment.
- Rippled collars can be found on a variety of garments, including blouses, dresses, and tops.
- They are often made from lightweight and fluid fabrics that can hold the rippled shape, such as chiffon or silk.
- Rippled collars can be simple or embellished with additional details like ruffles or lace to enhance the rippled effect.
- When designing garments with rippled collars, considerations should be made for the collar's size, shape, and how it complements the overall design aesthetic.
- Rippled collars are often associated with a romantic and feminine look, making them popular in soft and elegant styles.

Full Shirt Collar

- A full shirt collar is a type of collar that extends around the entire neckline of a shirt, forming a complete circle.
- This collar style is commonly seen on dress shirts, formal shirts, and some casual shirts.
- Full shirt collars can come in various styles, including point collars, spread collars, button-down collars, and more, each with its own characteristics and suitability for different occasions.
- The collar's size, shape, and stiffness can vary depending on the shirt's style and design.
- Full shirt collars can be made from the same fabric as the shirt or can be a contrasting or complementary color or material for added visual interest.
- When designing shirts with full collars, considerations should be made for the collar's size, shape, and how it complements the overall design of the shirt.
- The collar's style can influence the perceived formality of the shirt, with some styles being more suitable for formal or business attire, while others are more casual.

Open Collar

- An open collar refers to a shirt collar that is not fastened at the top button, leaving the neckline open.
- This style is often associated with casual or relaxed looks and is commonly seen on polo shirts, casual button-up shirts, and some dress shirts worn in less formal settings.
- Open collars can be designed in various styles, including point collars, spread collars, and more, each offering a different look and level of formality.
- The open collar style allows for a more relaxed and informal appearance, making it popular for leisurewear and casual occasions.
- When designing shirts with open collars, considerations should be made for the collar's size, shape, and how it complements the overall design of the shirt.
- The collar's style can influence the perceived casualness of the shirt, with some styles being more suitable for relaxed or informal settings.

Chinese Collar

- A Chinese collar, also known as a Mandarin collar, is a short unfolded stand-up collar style that is typically found on traditional Chinese garments such as the cheongsam or the Changsha.
- Chinese collars are characterized by their straight, narrow shape that stands upright against the neck and does not fold down.
- This collar style is often used in modern fashion to add a touch of Eastern influence to garments, and it can be found on shirts, dresses, jackets, and coats.
- Chinese collars can be made from the same fabric as the garment or can be a contrasting or complementary color or material for added visual interest.
- When designing garments with Chinese collars, considerations should be made for the collar's size, shape, and how it complements the overall design aesthetic.
- Chinese collars are often associated with a clean and minimalist look, making them popular in contemporary fashion.

Turtle Neck

- A turtle neck, also known as a roll neck or polo neck, is a high, close-fitting collar that covers most of the neck.
- Turtle necks can be found on a variety of garments, including sweaters, dresses, and tops.
- This collar style is known for its warmth and versatility, making it popular in cold climates and as a fashion statement.
- Turtle necks can be made from a variety of fabrics, including wool, cotton, and synthetic materials, each offering different levels of warmth and texture.
- When designing garments with turtle necks, considerations should be made for the collar's height, snugness, and how it complements the overall design of the garment.
- Turtle necks are often associated with a sleek and sophisticated look, making them popular in both casual and formal settings.

Shawl Collar

- A shawl collar is a type of collar that is turned back to form a continuous line around the neckline, resembling the shape of a shawl draped around the shoulders.
- This collar style is commonly found on jackets, coats, cardigans, and some dresses.
- Shawl collars can be made from the same fabric as the garment or can be a contrasting or complementary color or material for added visual interest.

- When designing garments with shawl collars, considerations should be made for the collar's size, shape, and how it complements the overall design aesthetic.
- Shawl collars are often associated with a sophisticated and elegant look, making them popular in formal and evening wear.

YOKES

Yoke is one segment of the garment that can be constructed on the garment. It can be seen in the garment of children, men and women. It is introduced in a garment based on the need and to hold the gathers. For decorative purpose, it is sewn at shoulder, upper and lower part of the hip. Yokes can be constructed with different structures, variations like 'V' shape, oval shape or with different colour according to the taste and need of person.

Types of Yokes

Yokes are classified based upon the pat-tern made and decorations as plain or basic yoke and decorative yoke.

Plain / Basic Yoke

- Plain or basic yoke has got simple structure. It can be placed on front and back part of men's shirt. According to the shape of garment, use of garment, age of per-son, yokes are suitably cut and joined. This yoke is a part of the garment which is cut and joined with a piping or seam.

  Example: Bodice block of a body front cut half way through to add with gathers to the rest of the garment.

- For drafting yokes take a bodice pattern and mark from the shoulder to the centre of the front bodice. This technique can be used to construct 'V' shaped and circular shaped yoke. To construct a straight yoke, marking should be made according to the length of yoke from arm to centre front

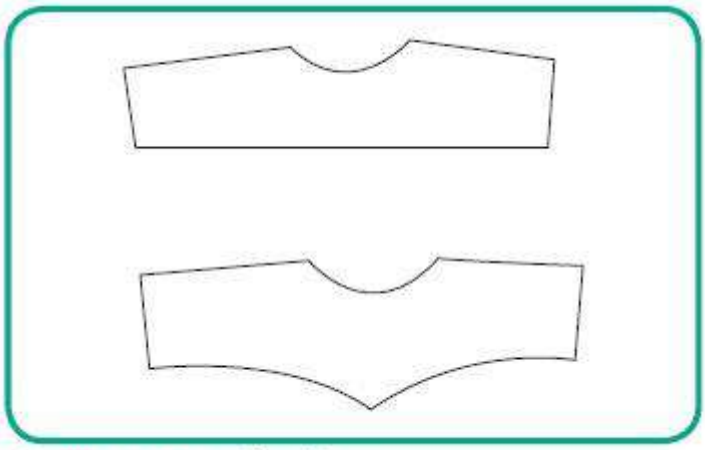


Figure 13.26 Basic Yoke

Decorative Yoke

Contrast colour materials can be used for making yoke. Use of various tucks, pleats and frills add interest to the garment. According to the wish of wearer, piping or frills can be stitched at the edges of the yoke.

Yoke can be joined using plain fabric or by adding one or more layers for stiffness. For skirts, yoke is cut to the shape of the waist line. Then the skirt part is gathered and attached to the yoke. The bottom of the yoke should match to the size of the gathering in the skirt.

To construct yokes with curved edges on panel skirt, lapped seam can be used. These kinds of yoke can be used on the bodice part of kid's front, upper part of night dresses and on the waist bands of skirts. Yokes of desired shape can be cut and stitched and decorations using embroideries can be added to the garment. (Figure 13.27).

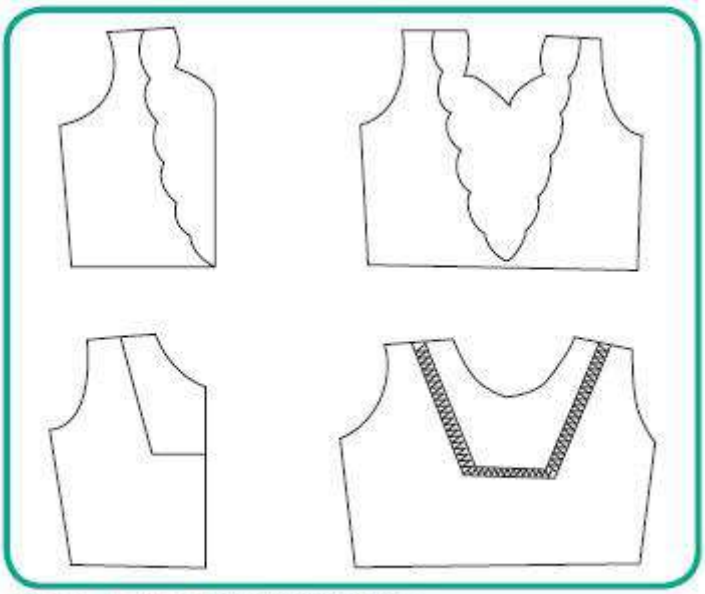


Figure 13.27 Decorative Yoke

Simple yoke

- A simple yoke is a basic pattern piece used in garment construction to provide shaping and support to the upper part of a garment, such as the shoulders and upper back.
- It is typically a single, unadorned piece of fabric that is shaped to fit the body's contours, often with a curved neckline to accommodate the natural curve of the shoulders.
- Simple yokes are commonly found in shirts, blouses, dresses, and some types of jackets.
- The primary function of a simple yoke is to distribute the garment's weight evenly across the shoulders, providing stability and structure to the garment.
- Simple yokes can be made from the same fabric as the rest of the garment or from a contrasting or complementary fabric for added visual interest.

- In terms of construction, a simple yoke is relatively straightforward, making it suitable for both beginner and experienced sewers.
- Depending on the garment's design, a simple yoke can be purely functional or can be a decorative element with added embellishments like topstitching, pleats, or gathers.
- When designing garments with simple yokes, considerations should be made for the yoke's size, shape, and how it integrates with the overall design aesthetic.

Yoke with fullness:

For this type of yoke, decorate the fabric with (tucks pleat, gathers, shirring and embroidery) any fullness must be finished first place the yoke pattern over the decorated fabric. Cut the required amount of fabric and stitch tucks according to the design. Keep the paper pattern on the tucked fabric and cut in the correct shape including seam allowance and attach it with the other patterns.

Yoke without fullness:

This type of yokes can be of variety with different shapes and size. To prepare the pattern for this, take the front bodice pattern and draw the yoke line from shoulder to center front as desired. For a curved or 'V' shaped yoke, this method must be followed, for a straight line yoke, draw line from armhole to centre front of bodice pattern. Label both the section.

Yoke Supporting Fullness Lecture Notes:

- When a yoke is designed to support fullness, it is usually structured and fitted, serving as a stable foundation for the gathered or pleated fabric below it.
- The yoke helps distribute the fullness evenly across the shoulders or upper back, providing support and structure to the garment.
- This design is commonly seen in garments where the fullness is desired for aesthetic or functional reasons, such as in gathered skirts or blouses with a billowy fit.
- The yoke's shape, size, and placement are crucial in supporting the fullness without adding unnecessary bulk or distortion to the garment's silhouette.
- Fabric choice is also important, as the yoke fabric should be able to support the weight of the fullness below it without sagging or losing its shape.

Yoke Releasing Fullness Lecture Notes:

- In contrast, when a yoke is designed to release fullness, it is usually less structured and more fluid, allowing the fabric below it to drape or flow freely.
- The yoke acts as a point of transition, releasing the fullness to create a softer, more relaxed silhouette.

- This design is commonly seen in garments where a more relaxed or casual fit is desired, such as in loose-fitting dresses or tops.
- The yoke's design should facilitate the smooth release of fullness, ensuring that the fabric below it falls naturally without creating unwanted bulk or tension.
- Fabric choice is important in this design as well, as the yoke fabric should complement the drape and movement of the fabric below it.

UNIT - V

PATTERN ALTERATION, LAYOUT AND GRADING

Pattern Alteration

A comfortable, attractive garment fits properly. It is neither too large nor too small and conforms to the contours of the body without binding, pulling, sagging, straining or wrinkling. Fitting problems usually involve one or more of these basic body areas: neckline, bust line, hipline, arms, shoulder line, back waistline or abdomen.

Pattern adjustments and alterations are often necessary to achieve a good fit, especially in a form-fitting garment. Making adjustments or alterations before the garment is cut from the fabric will eliminate many problems later

Principles of Pattern Alteration

- As far as possible make changes within a pattern by slashing and spreading or slashing and lapping. Patterns can also be altered by redrawing the edges of the pattern. (This is the method adopted for altering garments at the time of fitting.)
- But the first method is the best in altering paper patterns.
- To preserve the original grain line, make all slashes and folds parallel or perpendicular to the grain line (to centre front line, centre back line etc).
- Where there are darts, make changes between the tip of the dart and the outside edge.
- If an alteration in length is made along one edge of the pattern, take care to make an identical alteration in the adjoining edge. For example, if back shoulder seam is shortened the front shoulder seam should also be shortened.
- When tucks or darts are used for making a pattern smaller, remember that the width of these should be just half the amount to be removed.
- When decreasing or increasing the width of pattern pieces, if only half the pattern (half back or half front) is used, subtract or add only one fourth of the total adjustment to be made. For example, if waist measurement has to be increased by one inch, add ¼" to the half back pattern and the same amount to the front pattern. If only a front or back section needs adjustment, add or minus half the amount of the adjustment to the respective section.
- When the pattern alteration involves slashing and spreading, it is necessary to keep a sheet of paper beneath and to pin or stick to it the spread-out parts so that they will thereafter remain in position. On spreading or lapping after slashing, some edges of the pattern become jagged. These must be trimmed after drawing the new seam lines.

Importance of altering patterns

- **Custom Fit:** Altering patterns allows for a custom fit tailored to the wearer's unique body shape and size. Since standard patterns may not perfectly match individual measurements, alterations ensure that the garment fits well and is comfortable to wear.
- **Correcting Proportions**: Patterns are drafted based on standard body measurements, which may not always align with an individual's proportions. Altering patterns enables adjustments to be made to the length, width, or shape of pattern pieces to achieve better balance and proportion in the final garment.
- **Style Modifications**: Patterns can be altered to modify the style or design details of a garment. This includes adjusting neckline shapes, sleeve lengths, adding or removing fullness, or changing the overall silhouette to suit personal preferences or design requirements.
- **Improving Comfort:** Properly altered patterns ensure that the garment not only fits well but also allows for ease of movement and comfort. This is especially important for garments that need to accommodate specific activities or body movements.
- **Professional Finish:** Well-fitted garments created from altered patterns result in a professional-looking finish. Proper fit enhances the overall appearance of the garment and reflects the skill and attention to detail of the maker.
- **Minimizing Wastage:** By altering patterns to fit the specific measurements and requirements, the need for excessive fabric or material is reduced, minimizing wastage and optimizing resource utilization.
- **Personalization:** Altering patterns allows for personalization and customization, enabling individuals to create garments that reflect their unique style and preferences.

Common pattern alteration in a blouse

- **Full Bust Adjustment (FBA):** If the blouse pattern is too tight in the bust area, a full bust adjustment can be made to add more room in the bust without altering the fit elsewhere.
- **Small Bust Adjustment (SBA):** Conversely, if the blouse pattern has excess fabric in the bust area, a small bust adjustment can be made to remove the extra fullness.
- **Length Adjustments**: Length adjustments may be necessary to accommodate torso length variations. This can involve lengthening or shortening the blouse at the waist or hemline.
- **Shoulder Slope Adjustment**: If the blouse shoulders are too wide or too narrow, a shoulder slope adjustment can be made to alter the angle of the shoulder seam.

- **Neckline Adjustments**: Alterations to the neckline, such as raising or lowering it, changing its shape, or adjusting its width, can be made to achieve the desired look.
- **Sleeve Adjustments**: Sleeve alterations may include lengthening or shortening the sleeves, adjusting the width or shape of the sleeve cap, or changing the sleeve style (e.g., from a set-in sleeve to a raglan sleeve).
- **Back Width Adjustment**: If the blouse feels too tight or too loose across the back, a back width adjustment can be made to alter the width of the back pattern piece.
- **Waist and Hip Adjustments**: Waist and hip adjustments may be necessary to ensure a proper fit around the waist and hips, especially if the blouse is designed to be fitted in these areas.
- **Dart Adjustments:** If the blouse has darts, adjustments to the dart placement, length, or width may be needed to achieve the desired shaping.
- **Style Modifications**: Depending on the desired style, additional alterations may be required to customize the blouse pattern, such as adding or removing details like pleats, gathers, or cuffs.

Pattern layout - definition, purpose

Definition: Pattern layout refers to the process of arranging pattern pieces on fabric before cutting. It involves placing the pattern pieces in a way that maximizes fabric usage, ensures proper grain alignment, and accommodates any pattern matching or directional motifs in the fabric.

Purpose: The purpose of pattern layout is to optimize fabric usage while ensuring that the garment is cut accurately and efficiently. A well-planned pattern layout can:

- **Minimize Waste:** By carefully arranging pattern pieces, fabric waste can be minimized, which is both cost-effective and environmentally friendly.
- **Ensure Grain line Alignment:** Pattern layout ensures that the grainline of the fabric aligns with the grain line marked on the pattern pieces. This is crucial for maintaining the fabric's stability and drape in the finished garment.
- **Accommodate Pattern Matching:** For fabrics with a specific print or pattern that needs to be matched across seams, pattern layout allows for precise alignment of pattern motifs.
- **Consider Fabric Characteristics:** Different fabrics have unique characteristics, such as stretch or nap, that need to be considered when laying out the pattern pieces to ensure the best results in the finished garment.
- **Facilitate Cutting Accuracy:** A well-organized pattern layout makes it easier to cut the fabric accurately along the lines of the pattern pieces, reducing the likelihood of cutting errors.

- **Optimize Cutting Time**: An efficient pattern layout can streamline the cutting process, saving time and effort during garment construction.

Rules in layout

- **Grain line**: Ensure that the grain line of each pattern piece is parallel to the selvage (the finished edge) of the fabric. This ensures that the fabric's threads run parallel to the garment's lengthwise direction, providing stability and preventing distortion.
- **Nap or Directional Prints:** If the fabric has a nap (like velvet or corduroy) or a directional print (like stripes or plaids), all pattern pieces should be laid out in the same direction to maintain consistency in texture or pattern alignment.
- **Seam Allowance:** Leave enough space between pattern pieces to accommodate seam allowances. Typically, this is around 5/8 inch (1.5 cm), but it may vary based on the pattern's instructions.
- **Pattern Matching:** If your fabric has a pattern that needs to match across seams (e.g., plaids or stripes), take extra care to align the pattern when laying out the pieces.
- **Fabric Width and Layout:** Consider the width of the fabric when laying out the pattern pieces. If the fabric is narrow or has a directional print, you may need to adjust the layout to ensure that all pieces fit and are aligned correctly.
- **Cutting Direction:** Pay attention to cutting instructions on the pattern pieces. Some pieces may need to be cut on the fold, while others may need to be cut singly. Follow these directions carefully to ensure the pieces are cut correctly.
- **Notches and Markings:** Transfer all notches, markings, and other pattern details accurately onto the fabric. These markings are essential for aligning pieces during assembly.
- **Pattern Piece Placement:** When arranging pattern pieces, consider the fabric's drape and any areas of stretch. For example, place pieces that require more stability (like collars or cuffs) on areas with less stretch.
- **Test Layout:** If possible, lay out the pattern pieces on the fabric before cutting to ensure they fit and are positioned correctly. This step can help identify any issues before cutting into the fabric.

Types of layouts Pattern grading

1. Single Size Layout:

In a single size layout, the pattern pieces for only one size are laid out on the fabric for cutting. This is the simplest form of layout and is used when producing garments in a single size.

2. Nested Layout:

A nested layout involves laying out the pattern pieces for multiple sizes on top of each other, with the smallest size at the top and the largest size at the bottom. This allows for efficient cutting of multiple sizes from the same fabric.

3. Matrix Layout:

In a matrix layout, the pattern pieces for each size are arranged in a grid-like pattern, with each row representing a different size and each column representing a different pattern piece. This layout is efficient for cutting multiple sizes simultaneously.

4. Stacked Layout:

A stacked layout involves stacking the pattern pieces for each size on top of each other, with each stack representing a different size. This type of layout is useful when cutting large quantities of the same size.

5. Graded Piece Layout:

In a graded piece layout, the pattern pieces are individually graded to each size and then laid out separately on the fabric. This allows for precise control over the grading process but may be more time-consuming.

6. Computerized Layout:

With advancements in technology, computerized grading systems are increasingly used in the industry. These systems can automatically generate graded patterns and optimize the layout for fabric efficiency.

Definition, basic front, basic back basic sleeve

- **Basic Front**: The basic front of a garment refers to the section that covers the front of the body when the garment is worn. It typically includes the chest area for tops and dresses, and the abdominal area for shirts and blouses. The design of the front can vary greatly depending on the style of the garment, such as necklines, closures (like buttons or zippers), pockets, and decorative elements. The basic front is where most of the design details and embellishments are usually located, as it is the most visible part of the garment.
- **Basic Back:** The basic back of a garment is the section that covers the back of the body when the garment is worn. It is usually simpler in design compared to the front, although it can still feature elements like necklines, closures, and decorative details. The back of a garment is important for the overall fit and silhouette, as it contributes to the shaping and structure of the garment.

- **Basic Sleeve:** The basic sleeve refers to the part of a garment that covers the arms when worn. Sleeves can vary in length, style, and fit, and they can be a defining feature of the garment's overall look. Common sleeve styles include short sleeves, long sleeves, three-quarter sleeves, and sleeveless designs. The design of a sleeve can greatly affect the comfort and functionality of a garment, as well as its aesthetic appeal.