UNIT 4 APPAREL MANUFACTURING

1.INTRODUCTION

Garments Manufacturing: - A complete garment has to face several processes from its order receiving to shipment. During garments manufacturing, a process flow chart must be needed to complete an order easily. Also, a process flow chart helps to understand a garment manufacturing method that how the raw materials are converted into wearable garments.

Each process of garments manufacturing flow chart is discussed in the below with the details*:*

1. **Design**:-Design is provided by the buyer. After placing an order buyer send the technical sheet and art-work of an order to the merchandiser. This process is done both manually or by using the computer.

2.Fabric layout - To cut the fabric properly fabric is spread inlay form. Fabric Spreading is done manually or by using a computerized method.

3. **Fabric Cutting:** - Fabrics have to cut here according to the marker of garments. The fabric Cutting process is done by using a manual method or computerized method.This is the major operation of the cutting room when they spread and cut into garments. Of all the operations in the cutting room, this is the most decisive, because once the fabric has been cut, very little can be done to rectify serious defects.

- A first planning consideration is whether the totals arrived at in the cutting room are the same as those required to maintain full production in the sewing room and subsequently the planned delivery schedule. Any cloth problems created in the cutting room can affect the output in the sewing room. Assuming all components of fabric, design, and trims are acceptable and correctly planned and cut, the next stage is to extend the cutting room programme to the sewing room.
- All cutting operations are carried out by straight knife cutting machines.

4.Stitching: - All the parts of a garment are joined here to make a complete garment. The sewing process is done manually.Stitching or sewing is done after the cut pieces are bundled

according to size, colour and quantities determined by the sewing room.Garments are sewn in an assembly line, with the garment becoming complete as it progresses down the sewing line. Sewing machine operators receive a bundle of cut fabric and repeatedly sew the same portion of the garment, passing that completed portion to the next operator. For example, the first operator may sew the collar to the body of the garment and the next operator may sew a sleeve to the body. Quality assurance is performed at the end of the sewing line to ensure that the garment has been properly assembled and that no manufacturing defects exist. When needed, the garment will be reworked or mended at designated sewing stations. This labor-intensive process progressively transforms pieces of fabric into designer garments.

- The central process in the manufacture of clothing is the joining together of components.
- Stitching is done as per the specification is given by the buyer.
- High power single needle or computerized sewing machines are used to complete the sewing operation. Fusing machines for fusing collar components, button, and buttonhole, sewing machines for sewing button and buttonholes are specifically employed.

5.. **Garments Inspection:** - After completing sewing, inspection should be done here to make fault free garments. Garments Inspection is done by using the manual method.

6. **Garments Ironing and Finishing:** - Here garments are treated by steam; also required finishing should be completed here. This process is done by using the manual method.

7**. Final Inspection**: - Finally, the complete garments are inspected here according to the buyer's specification. Final Inspection is done by manual method**.**

2.CUTTING - FABRIC SELECTION AND DESIGN

Fabric selection is a crucial step in designing a project because fabrics are designed for specific applications, a fabric manufactured for one purpose, may not be adaptable for another use.Therefore selecting the appropriate fabric is only the first step in providing serviceable fabrics for apparel manufacturing.Designers specify the fabric as part of their design concept. Designers may develop new styles for fabrics that have been successful.

1. Various aspects of Fabric selection

Fabrics used in garment manufacturing can be categorized into two groups: properties and characteristics. A property is a static physical dimension such as yards per pound; whereas, the characteristic is the reaction of the fabrics when a force is imposed upon it. Elongation, elasticity, shrinkage and seam strength are examples of characteristics. These are the measure of reactions to dynamic conditions. Characteristics are physical or chemical changes in the fabric resulting from the application of outside forces.

2. GENERAL CONSIDERATION OF FABRICS FOR APPAREL MANUFACTURING

The apparel producer is interested primarily in the characteristics of a fabric. Although fabric characteristics are related to fabric properties, a fabric property is of no interest to the apparel manufacture unless it controls a fabric characteristic or cost factor vital to him, or unless the property itself such as thickness or weight, has definite utility or style value.There are three viewpoints to stipulating fabric selection

- The consumer's viewpoint
- The fabric producer's viewpoint
- The garment producer's viewpoint

The consumer's interests lie solely in the appearance and wearability characteristics of the fabric; the durability, utility and style values.The garment producer is interested in the garment production working characteristics of the fabric, the cost of producing a given garment with the fabric. If the garment producer is a jobber or manufacturer who sells the garment directly or indirectly to consumers, he will be interested, also, in all the consumer values. If the garment producer is a contractor his interest lies only in the field of the production cost aspect of the working characteristics.The same applies to the fabric producer. If he fabricates cloth for garment manufactures, he must consider garment production work characteristics. However, if the fabric producer makes cloth for over the counter retail sales, he does not have to consider whether the working characteristics are good enough to produce the garment with industrial equipment and methods.

In the sampling stage, factory learns the garment construction details and material required for a given order. The sampling department is also work as a research and development (R&D) section for the factory. Sampling process helps production team start the bulk production without many

issues.

Selection of fabric: There are thousands of fabric designs and fabric quality. Fabric selection is done based on fabric quality required, like fabric color, fibre content, surface texture, hand feel, physical and chemical properties. If the required fabric is already available in the market, factory purchases those fabrics from the stock. For this factory need to explore various places for finding the required fabrics. Otherwise, they work with the fabric supplier to develop the desired fabric quality.

Designing

The designers work in different ways. Some sketch their ideas on paper, while others drape fabric on a dress form and some others use computerized design system. These systems are becoming widely used and provide the designer with a highly versatile and flexible tool for creating new designs in the shortest time. The designer with the help of forecasting trends of style, colour and fabrics develops the illustrations/sketches for haute couture or readymade or mass market.Designers make designs as per the latest trends and buyers test. For big manufacturers, the designing department plays an important role in retaining customers by showing new designs to their buyers in every season.

3. DESIGNING: FUNCTIONS OF DESIGNING SECTION

- Apparel design department is responsible for product development. They focus on developing garment designs in similar product categories the company does its business. Designers develop new design collection every season. Designers make designs as per the latest trends and buyers test. For big manufacturers, the designing department plays an important role in retaining customers by showing new designs to their buyers in every season.
- Designers develop a library for fabrics, trims and accessories, and for garments.
- Apparel retailers and brands those have own manufacturing set-up, normally set up the design department for developing new designs.

Design Department - The design department can be considered as the research and development department of a clothing factory, because it is in this department that the prototypes of garments are developed and prepared for selling and production. For most factories the process of product development involves seven stages;

1. Forecasting
2. Designing
3. Collection Planning
4. Pattern Making
5. Technology
6. Production of sample garments
7. Pattern Grading

1. Forecasting

   Fashion forecasting is information that offers effective and highly accurate trend predictions to the fashion, style and related industries. Fashion intelligence and industry experience shape the reports which are creative, inspiring and highly focused on various product. This provides analysis of current and future fashion trends and a very comprehensive coverage of Colour & trend direction, 18 months in advance of the season followed by design reports for each trend, 12 months ahead.

2. Designing

   The designers work in different ways. Some sketch their ideas on paper, while others drape fabric on a dress form and some others use computerized design system. These systems are becoming widely used and provide the designer with a highly versatile and flexible tool for creating new designs in the shortest time. The designer with the help of forecasting trends of style, colour and fabrics develops the illustrations/sketches for haute couture or readymade or mass market.

3. Collection Planning

   This process is in effect the pre production phase of sampling and the objectives are to set out in detail the styles, fabrics and colors which will represent the company's proposals for the forth-coming season. The designer works in close co–operation with the marketing department and tighter they attempt to determine the best possible style, fabric and price combinations. Using the sketches of core collection, various alternatives and approaches will be examined:

   - Developing the variations from the core designs,
   - Trying the same cloth on a number of different designs,
   - Modifying some of the ideas to make garments more acceptable to a wider range of customers,

- Addition of ‘fill-in’ type garments for which there may be a steady demand throughout the season.
- Inclusion of garments which some of the larger buyers have indicated an interest.
- Balancing the contents of the collection so that it contains the optimum style and price combinations.

4. Pattern Making

Pattern making may be done manually by a trained patter maker with a paper and measuring tools or by using an auto CAD or by draping fabric directly onto the dress form. The resulting pattern pieces are used to construct the garment in required size. Various shapes and sizes of pattern pieces can be produced for various styles of garments.

5. Technology

Technological innovations in the garment industry have been tremendous. Each and every department of the apparel industry has the scope of highly efficient machines. Use of sophisticated and advance ,machine improves the quality of the product and maximizes the profits of the company.

6. Production of sample garments

Sampling unit within the industry makes sample garments supervised by the pattern maker or the designer. Sampling is a continual process during the development of new product. A sample needs to conform to the design, fabric and color trends along with the perfect fit analysis. Cost of each sample must be accurately calculated in order to determine the cost price and then the selling price.

7. Pattern Grading

Pattern sizing and grading done on computer or manually is link between pattern design and generation and preparatory stages of cutting in different sizes. It is the process where patterns of different sizes are produced from the original master pattern.

4.FABRIC:WASHING, CHECKINGRAINLINE,STRAIGHTENING PRESSING

WASHING DEPARTMENT - The garment is sent to the **washing department** until complete with all the operations and is then finished in line with the buyer's requirements for that particular style and thus plays an important part in the final look and texture of the garment, which must be faithful to the buyer's specifications 100%. There are various types of washing procedures involved and they are categorized as follows: standard washing/water, washing/drying, softener washing, desize washing, enzyme washing, stone enzyme washing, rubber ball washing, denim washing, bleach washing, tinting / T-staining. The process which is used to transform the outlook appearance, warmness & fashion appeal of the garments is called garment washing. Garment pre- wash became popular, especially since 1978 when jeans garments started pre- washing and got instant popularity. It gave different a look of the clothes. Garment washing is mainly done after stitching. Wash types usually depend on the product natures and usages. Based on consumer demand and fashion trend, the buyer will fix the washing type of any product. For example, stone enzyme wash is required for denim item, but light softener wash is perfect for a knitted item. Garment wash here refers to garment pre- wash performed after production of garment's before using it for the consumers. Garment washing is utilized for the following reasons:

(1) Usually, some Garment shows up hard, feeling rough, stiff and not responsive enough for wearing if not pre- washed.

(2) Garment is often made bigger and larger. Pre- wash returns those to the right size and dimensional instability.

(3) After pre- wash garment becomes fit as they get rid of shrinkage; as a result, the garmentbecomes a soft hand feels and become size free.

(4) After wash some garment's become more attractive, lucrative and lively, such as jeans, twill, cotton, gabardine etc.

(5) Different washing methods are being used to make an additional appeal for customers/Buyers.

(6) During manufacturing dirt, spot or oil mark may add to the garment's what may eliminate by washing process.

(7) To eliminate starch and chemicals what used during fabric manufacturing and dyeing process.

There are different varieties of garment wash used nowadays:

1. Normal wash
2. Pigment wash
3. Bleach wash
4. Stone wash with or without bleach
5. Acid wash
6. Enzyme wash
7. Caustic wash
8. Garment wash and over-dye
9. Whitening

A simple outline about different garment wash has given here:

1) **NORMAL WASH:** Normal wash consists of washing garments in hot water with adequate detergent and softener, rinse with plain water and dry in tumble dryer until it is 100% dry. Some sodium is added to lend the garment a prominent washed look. Water temperature, proportion of

components of wash is adjusted as per requirement of wash and types of fabric; the garment is made of.

2) **PIGMENT WASH:** Pigment Wash is similar to normal wash but a bit costlier. The garment is solid color pigment dye. The requirement is that the color should fade evenly to lend the garment a prominent washed look. Pigment wash requires a higher temperature of water than a normal wash.

(1) Use hot water 50-60 degree C.

(2) Load the tumble washer not more than 70 % of its capacity. It enables garment to move inside smoothly. If fully loaded with garments due to the friction of the garments with tumble body.

3) **BLEACH WASH:** -Bleach wash means that bleach chemical is used in water while washing in a tumble washer. Strict washing time is a requirement with such wash because otherwise the garment may be over bleached and the color cannot be reversed.

4) STONE WASH: - Stone wash means washing garments with special stones so that garments achieve a very strong washed effect. Volcanic stones are used in such wash abrade exposed parts of the garments, this idea of washing with porous volcanic stones is to give the garment a strong and rough wash to achieve the pronounced washed effect through abrasion on the exposed areas, such as the seams and pocket corners.

Sometimes, bleach is added to the wash so that the color fades in a more pronounced manner. This is done to make navy blue jeans into a more faded light blue. Such wash requires a lot of skill, experience; workmanship and expertise so that desired results are achieved

5) ACID WASH: It is a patented process and can be used only by permission. It is also a kind of stone wash. The wash is performed in two steps: in the first step, garment is washed without water and in the 2nd step with water.

(1) Soak volcanic stones in potassium permanganate solution. Stones absorb chemicals and become saturated. The stones are then dried in normal air or sun. The stones are ready for work.

(2) Denim garments are now made ready for wash. They are desized/detached in water in a tumble washer and dried in a spin dryer.

(3) The garments are put in a separate tumble washer filled with *treated stones*. Water is not added. Now run the tumble dryer wash the garments without water. Tumble washer is run to wash the garments without water. Stone will abrade the garments, especially, the exposed parts. Hidden parts will not be abraded.

(4) After that, the garments are taken out of the tumble and transferred to another tumbler filled with water for washing and rinsing. After rinsing is over, the prominent acid wash effect will show up.

The treated stones carry the chemical to bleach the exposed parts and bleach them to white. But the hidden parts remain untouched. Whitening agents are often added to water during rinse to make the white color in the blue jeans whiter to display acid wash.

6) ENZYME WASH: Enzyme wash is performed with a kind of live cell. Enzyme can break some fibers of fabric and gives the fabric special effect desired on the garment. Enzyme wash provides the fabric a soft, sanded or “peached” effect very desirable on many garments. Enzyme wash is also useful for indigo denim.

In this case, enzyme can replace stone but gives denim a stone wash look, with better and nicer blue and white contrast on the fabric. Enzyme wash is, however, costlier than stone wash.

7) CAUSTIC WASH: Caustic wash is a pre- printing wash. Caustic is a strong chemical with highly corrosive features. Prior to printing on cotton fabrics, gray goods are treated in boiling water with caustic, which also has strong cleaning power, especially for grease. This wash can remove all soil, dirt, grease, fine particles of cotton seeds as well as all foreign materials. As a result, only pure cotton fiber in the fabric for printing is left. It leads to stability of printing and well-cleaned fabric. However, when we want to do caustic wash on garments, we just do the opposite of the above; prior to printing, fabric is not treated with caustic wash for cleaning.

8) GARMENT WASH AND OVER-DYE: This type of wash is also used for denim garments to give them an exclusive look. This is performed in the following way:

Wash the denim garments with stone so that the double needle seams, pocket flaps, and exposed parts get washed down to light blue color or white.

(8.2) Put into dye the tumble to dye the garments to get the desired color.

(8.3) A coat of new color will appear on to the garment, especially, in areas where the garment has been washed to a light shade. It creates a unique but different look. In this process of wash, the lining or pocketing will pick up the color too. By this wash, direct dye or reactive dye same as dyeing fabrics or yarn may be used. Direct dye is cheap. So, direct dye may be utilized with the concomitant use of color fixing agent, after dying to make the color more stable. In case of solid color fabric staining within the garment is not a problem. However, if garments of different colors are washed together by the consumers, color may transfer to other garments. Reactive dye is always preferable in this case.

9) WHITENING: Whitening agents are used to create a super white look. (Unless the garments you wash is all colored namely no white color at all in the fabric, you should use whitening powder in the rinsing process to make the white part more white) In denim where there are colored warp threads and white weft threads. If such garments undergo “stone wash and bleach” whitening powder is used for the final rinsing. It makes the white threads in the fabric whiter and generates a stronger contrast between blue and white on the surface of the fabric. After washing, denim checks the reverse side of the fabric to *evaluate if adequate* whitening agent has been used during rinsing. It is a common practice that garments having white parts should be washed with whitening powder at the time of rinse. It generates a quick and desired look.

CHECKING GRAINLINE OF THE FABRIC

After the fabric is purchased and before cutting and sewing process, the following two procedures must be undertaken in order to avoid any deformities during construction.

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.

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.

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.

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

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.

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'.

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.

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 raveling.

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.

Straightening of fabric grain - Woven fabrics especially of lower quality are often slightly "*off grain*", it means lengthwise and cross wise threads are not completely perpendicular to each other. To make sure that the lengthwise and cross wise threads in the fabric are at right angles to each other, referred to as "*on-grain*", it is necessary to straighten one of the cut ends.

Methods of straightening woven fabrics

1. **Pull The Thread From Selvedge To Selvedge** - This method is appropriate for loosely woven fabrics.
    1. In woven fabric one filling yarn is carefully pulled until the fabric puckers.
    2. Cut along the puckered line to the pulled yarn.
    3. Repeat the pulling and cutting process until the opposite selvedge is reached.
    4. The cut edge will be on grain and can be used in cutting patterns.
2. **Cutting Along A Prominent Filling Yarn /Print Line -** When a filling yarn is readily visible the fabric may simply be cut from selvedge to selvedge.
    1. This method can be used for a striped or plaid fabric with lines that run along the crosswise grain. The stripe or plaid must be *woven* into the fabric.
    2. Cut along one of these lines from one selvedge to the other, close to the cut edge of the fabric.
3. **Tearing -** This method is appropriate for tightly woven fabrics. Loosely woven fabrics may stretch out of shape with this method.
    - Clip into the selvedge near to the cut edge of the fabric.
    - Tear the fabric all the way down to the opposite selvedge.

4.**Steam press method:** If the above mentioned method does not work, clip the selvedges at intervals, sprinkle water on the fabric and press with a hot iron in the appropriate direction till the fabric become grain perfect.

5.**Immersion method:** This is the most effective method for straightening washable fabrics. The fabric is folded lengthwise and the selvedges are tacked together. It is then immersed in water until completely wet, and excess water is squeezed out. The fabric is hung up, till it is half dry. The half dry fabric is placed near the corner of a table and stretching process is carried out

to make it grain perfect. After straightening, it is kept on a flat surface and dried. When dry, press with an iron, remove the tacking stitches along the edges.

Note: If a printed fabric is off-grain the fabric grain can be straightened but not the print. Hence it is necessary to carefully inspect print of the fabric before purchasing. It is better to avoid any printed fabric that is badly off-grain.

5.PATTERN LAY OUT

The placement of pattern on the fabric, in an economical manner, that is without wasting fabric is known as pattern layout. All the patterns should be arranged prop-erly following grain of the fabric. Example the bodice centre front will be in straight (lengthwise direction) grain.

Objective of layout

Once a design is finalized, the next step is to construct it. The various steps involved in garment construction include pattern making for the chosen design, fabric estimation, layout on fabric, cutting, assembling, stitching and finally finishing. The main advantage of a pattern layout is that it minimizes fabric wastage, thus helping to optimally utilize the fabric.

A layout can be defined as a methodical arrangement of various pattern pieces on the fabric. The main objectives of a layout is

1. To ascertain if the fabric bought is sufficient for the design planned.
2. To minimize fabric wastage
3. To optimize the use of fabric

Importance of layout

Layout and cutting of clothes have become complex of late and an exciting art. Layout can be viewed as a process of placing all pattern pieces of a garment style correctly on fabric to ensure economical usage. It is simple if the basic principles are learnt thoroughly and clearly if designers pay attention to incremental changes in fashion demand (Aldrich, 1997). Layout procedure has two main media involved. These are final patterns and fabric on which the patterns are to be laid. Knowledge and understanding of these media is an essential tool for successful layout and appreciable constructed garments. Fabric is the prime raw material in garment construction. 70 percent of the garment cost is incurred by the fabric. Therefore every centimeter of fabric saved is money saved! It is one of the preliminary processes in garment construction. It involves planning of pattern layout on the fabric. It is a crucial process which influences the economy of the fabrics

consumed for a garment. it also allows to take care of any defects in the fabric by subjecting it through checking for quality. it helps to minimize quality issues like bowing, shade variations or pattern defects with in a garment. it calls for higher accuracy. Therefore layout plays an important role in arriving at most economical fabric consumption.

Principle of layout

The principle of layout is based on the thumb rule of following grain direction and fit of the garment greatly depends on the grain of the components cut. The way a particular garment fits or hangs will be the resultant of the grain properties. Especially in woven fabrics, lengthwise grain is primly followed to cut major components, crosswise for those parts which undergo more stress. Off-grain or bias for maximum stretch or give.

Factors that influence the layout –

- Type of the fabric – refers to the construction, woven, knit or leather.
- Directions in the fabric – lengthwise grain, width wise grain, off grain, courses, Wales or non-direction materials like leather.
- Width of the fabric – narrow, medium, double with or tubular fabrics.
- Surface of the fabric – brushed, un-brushed.
- Pattern of the fabric – whether solid dyed, chequered, plaids, all over printed, randomly designed.
- Style of the garment – type of component to be cut out like symmetric, asymmetric.
- Number of components to be cut.

- Press the fabric without any wrinkles before laying the patterns.
- Place the fabric on a large or a hard flat surface, which is easy for work.
- Place the larger patterns first. Place sim-ilar pattern together, with same length. Example placement of bodice front and bodices back next to each other, such that the side seams are close to each other.
- Place the smaller patterns in gaps in between the larger pattern.
- If pattern is to be cut in more num-ber, example two sleeve patterns, place them on fold. This concept is not pos-sible when the fabric has a one way design or when the patterns have dif-ferent front and back patterns.
- Keep weight, pencil, pins ready in hand, to draw, or pin or place weights on patterns, so that it remain in cor-rect position.

Types of Pattern Layouts

Based upon the place-ment of the patterns, the layouts are classified as

Open Layout - Open layout is the simplest layout. The fab-ric is spread on the table and the patterns are laid from left to right one after the other. This is easy for beginners. No fold is made in this method. It can be used for all patterns. This is used especially for designs with dif-ferent left and right patterns.

Lengthwise Centre Fold - The fabric is folded in the lengthwise direction. The selvedges of both sides are placed one on top of the other and folded in the middle. The fabric forms a fold at the centre. All folded patterns are placed along this fold. This fold is also used for different type of frocks, shirts and blouses.

Width wise Fold - The required width needed for the pat-terns is taken on the fabric and folded in the lengthwise direction. This is com-monly seen when many small patterns are found in garments. The fold should be parallel to the selvedge. This is used for many garments from simple baby's panty to integrated men's coats.

Bias /Crosswise Outer Fold - Crosswise centre fold is similar to length-wise centre fold. In this fold, the fabric is folded in crosswise direction. It is best suited, when the patterns are too narrow to be fitted in the lengthwise fold. This fold can also be used when special effects are needed like having a dress with hori-zontal strips using a material with length-wise stripes.

Double Fold or Combination Fold

In combination fold the fabric is folded in lengthwise and crosswise grains together. This layout is used for sari petticoats and jablas (Figure 11.4)

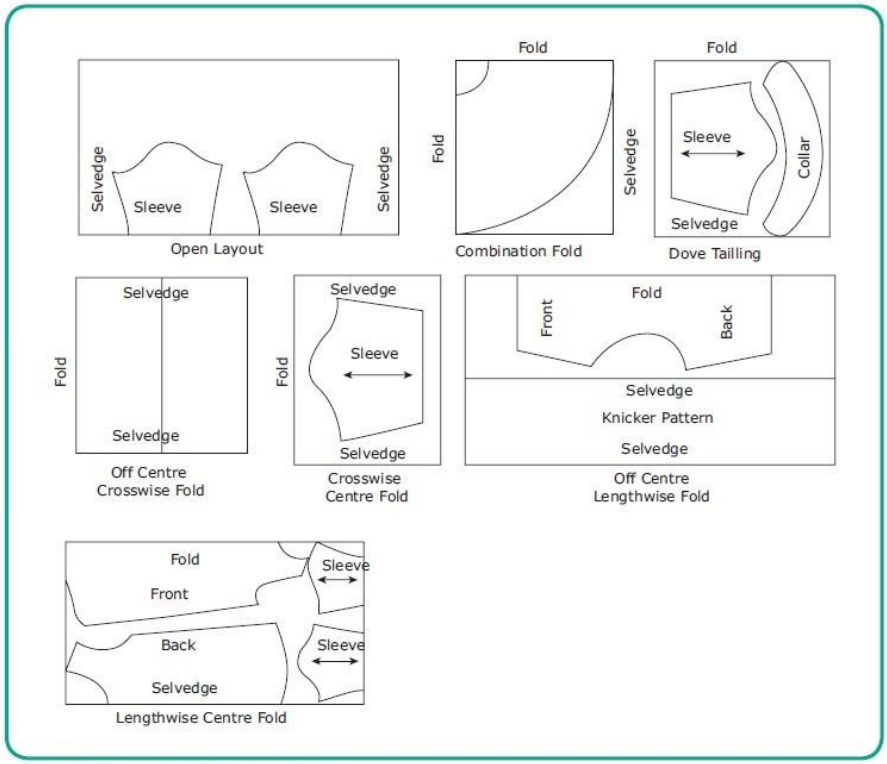


Figure 11.4 Different Types of Layout

Make a trial layout by keeping weights or two pins per pattern, to make sure that cloth will be sufficient. Rules 6 to 9 must be borne in mind while making the trial layout.

Straight grain lines on patterns must be kept parallel to the fabric selvedge. To ensure this, measure and adjust the pattern so that both ends of the straight grain line are the same distance from the selvedge and pin the pattern to the fabric along the grain line arrows.

Fold lines on the patterns must be kept on folded edges of fabric.

Leave enough space between patterns for cutting outward notches and marking seam allowance (if the patterns do not include seam allowances). Also make sure that there is enough material left for cutting out belts, facings, etc. for which you may not have made paper patterns.

Fabrics with one way design – When cutting these fabrics, you must take care to see that all the pattern pieces are arranged in the same correct direction.Any fabric that has a woven, knit or printed design that needs to be running in one direction on the finished garment is called a one-way design.

These designs can be any type of pattern or design including:

- floral,
- abstract shapes,
- stripes,
- plaids,
- checks.

The pattern may be all over the fabric (overall print/motif) or only on one edge (border print/design).

Many prints are treated as one-way designs when they have a dominant motif that needs to be placed carefully.

In a two-way pattern half the motifs face upright and half are upside down so that the pattern gives the same feeling in either vertical direction Fabrics printed with one-way or two-way patterns, however, must always be utilized in a consistent direction. That is, fabrics so printed must always be cut with respect to the "top" and "bottom" of the pattern so that a piece of fabric showing upside-down motifs is not placed next to a piece showing right side-up motifs. Because direction of motifs is a consideration in the utilization of these patterns, they are referred to as directional.

Fabrics with nap and pile – have to be treated like fabrics with one way design **Fabrics with bold designs such as plaids, and crosswise stripes** – Match plaids and stripes so that they form continuous lines across seam openings or meet at equal angles.

Asymmetric designs – These designs call for right and left sides to be cut separately from a single layer of fabric, taking care to see that you are not cutting both the sections for the same side. If the material has no right and wrong side, this problem will not arise.

Rules to remember in pattern layout

- Press the fabric before laying it out on the table.
- A large table is useful for comfortably laying out all the pattern pieces.
- For an open layout (where single thickness of fabric is used) place the fabric with the right side up.
- For all other layouts, fold the right sides facing each other so that the wrong side faces seamstress.
- If a combination fold is used, lay and cut the lengthwise pattern pieces first before refolding the cloth for crosswise layout.
- Since most garments are made with the lengthwise grain running vertically on the body, align the pattern pieces on the fabric accordingly, with the grain line of pattern parallel to the selvage.
- Pin all the pattern pieces to the fabric. Use only dressmaker’s pins as they do not damage the fabric. Pins should be perpendicular to the stitching lines and the cutting line.
- Place large pattern pieces first and then fit in the smaller ones.
- Lay the pieces as close to each other so that fabric is not wasted.
- Fit pattern pieces that are similar in shape next to each other. This process is called ***dovetailing***.
- Always test out to see if all the pattern pieces fit into the fabric being used.
- Mark seam allowances on the fabric if the pattern indicates so.
- If pattern details are being transferred using a carbon paper, use a paper that is as close to the colour of the fabric as possible.

- Mark pattern details only on the wrong side of the fabric.
- Keep the fold lines of patterns on the folded edge of the cloth.
- When using a lining material, mark only on the lining than on the actual fabric the garment is made.
- Try to fit the wide end of one piece to the narrower end of the other
- Arrange all pattern pieces before cutting the cloth**.**

6. Cutting:

Fabric cutting is a very important process for manufacturing garments. Apparel can be rejected if the cutting process will not be perfect. As a result, some points should consider before cutting which helps to minimize the probability of garments rejection by the buyer. The clarification of cutting is very complex. In readymade garments industries, the fabric is cut from lay and spreading with accuracy and properly which is known as fabric cutting. Marker outline is used to cut the fabric. During garments manufacturing, fabric cutting is very important as if something is cut in the wrong way which is not be rectified. .

Basic steps to cutting fabric -

1. Ensure that you have lightly pressed the fabric with a medium hot iron. For accuracy in cutting you need to get the wrinkles out.
2. Use the sharpest scissors you can get your hands on for cutting
3. Layout your fabric on a large hard surface (I use my big dining table for cutting) – gives you a perspective. Also ensures smooth cutting. It will be best if you can find a big surface where you can rest the full or the folded cloth without any edges hanging outPrepare the paper pattern by cutting it out.

   2.Prepare the fabric by prewashing and pressing. Learn more about prewashing fabric before sewing here.

4.Most of the time there will be creases in the paper pattern; use a dry iron to take them out.

5. If the fabric has a one-way design then lay all of your pattern pieces in the same direction with the finished project in mind.

6.Accurate notch size. If it is large in size, it can be seen after sewing of fabrics. Also, there is a great probability of producing problems in the matching of patterns after sewing.

7.Lay out the fabric on your cutting surface as per the grain. Should position the pattern pieces on the fold or the grainline as indicated.

8.You can first layout all the pattern pieces on the fabric and see which pattern arrangement works. Try out different arrangements to get the prints/nap etc correct, save on fabric. You need to know that all your pattern pieces will fit into the fabric you have at hand. So ensure that all the pattern pieces will fit within the fabric. This has to be done before cutting. If they do not fit you may have to adjust the placement of the pieces. Likewise, if you are marking directly onto the fabric mark the big pieces first, then the smaller pieces. This way if the cloth is not enough you can adjust and cut smaller pieces better than big pieces.

9.Pin paper pattern to fabric. You can also use pattern weights. This ensures that there will be no shifting of the paper pattern. Pin near the outer edge as well as inside. Pattern weight can also be used. I prefer pins but there are people who say pins distort the fabric.

10.Trace around the pattern.. Mark the darts etc by tracing with a carbon paper or by tailor's tacks.

11.Remove paper pattern.

12.Or alternatively, you can keep the paper pattern and cut it. In this case, keep one hand on the pattern to keep it from moving. If you lift the pattern even once the whole thing may get distorted.

13.Make long strokes of cutting with your scissors – this is advised for cutting long straight edges. But for cutting curves take short strokes.

14. Cut off the excess fabric outside the marked lines using a scissors or a rotary cutter.

Cutting tips for different fabric types

Cutting plain fabric This fabric can confuse you – both the face and the back of the fabric can look almost the same. You will have to mark the face of the fabric with a chalk before cutting this. You can choose the side which is smoother without any lines of the weave as the face (front).

Leather or faux leather If you are cutting leather or faux leather you can save a lot of frustrations by using a rotary cutter and mat. That is not to say you cannot use scissors. But rotary cutter cuts best.Never ever pin the pattern to the faux leather. Pin holes look horrible and it is better to use pattern weights. You can use paper clips or binder clips also clipping the pattern to the edges. I have even used tic tac hair clips

Printed fabric One of the joys of sewing your own clothes for me is matching prints on the seam line.If you are cutting stripe, plaid and other fabric with prints and designs do not follow the lengthwise grain. Instead, you can follow the print. Cut the pattern pieces out of a single layer of fabric. Then match the design of the second piece with the first.

Striped fabric – Check out the post on the 16 different types of stripes in fabric. One important thing to note when cutting stripes is to ensure that the two sides left and right gets the same

amount of stripes. Otherwise, it could look unbalanced.Lengthwise stripes elongate a body, so if you want a slim look choose this direction for cutting the fabric – you would also consider lengthwise stripes when cutting sleeves. You can check out this post on tips for making you look slim with the right clothes and prints. If you cut striped fabric on the diagonal and join it, you get interesting results.

Check fabrics it is unpardonable when you have both sides looking unbalanced checks.It is very difficult to match. The main things are to get the checks in balance on both sides, where are the dominant checks placed, whether you want crosswise matching.You need the same number of checks on both sides of pattern pieces.- this should be ensured especially for sleeves, legs, etc. This is called crosswise matching. For eg you may want to match the chequered pattern on the sleeve with the bodice so that they look continuous. It can look very nice but may be challenging. You can achieve this with careful planning. Match at the seam lines and not at the cutting lines.

Printed/patterned cloth Check out the post on the different types of fabric patterns in dress materials. With printed clothes you have a challenge in getting prints similar for two sides – like getting the same prints on both sleeves may prove to be difficult if you have only so much fabric. In such cases, it becomes imperative that you buy more fabric than is required if you require this kind of pattern matching.

slippery fabrics like chiffon This is a tricky and frustrating space – cutting slippery fabrics. You can use thin paper, tissue paper underneath to cut these fabrics without disaster. Also use serrated scissors.

Wetting the fabric lightly with a spray bottle will give some weight to the fabric. But you have to be careful with the cutting surface.

If you have an absolutely unmanageable fabric in your hands you can skip cutting before sewing altogether. Mark the pattern on the fabric. Sew the seams. Cut it out after sewing with enough seam allowances.

Delicate fabrics For tissue like fabrics you can keep a thin paper/ tissue paper along with the fabric and cut together. use this method for silk also .

Directional prints A very important thing to consider when cutting printed fabrics is the direction of the prints. You do not want an upside down design on your sewn garment (imagine an upside down house print). Keep all the pattern pieces in the same direction before cutting.

If you have a one way print fabric, care needs to be taken that all pattern pieces are cut in the same direction. The fabric has to be kept in one directions to get the print in the way you want.

- Sometimes you may also want a particular print on a special place of the garment. This is should also be taken into consideration when buying the fabric (may need more yardage) and placement of patterns
- You should be aware that if you want to match prints along the seam line you will need more cloth than the pattern calls for. This is because once we have cut one side of the

pattern, you will have to search for the matching portion in the rest of the cloth for the same print. When looking out for the matching print, take into consideration seam allowance along the seam also.

- Keep the part you have already cut on the matching printed portion. Mark around and cut it out. If you use invisible zippers along the seam you will not even notice that the fabric panel belongs to two pieces.

7.POINTS TO BE KEPT IN MIND WHILE STITCHING THE GARMENT

1 Select the best fabric

2. Prewash fabric before sewing

3 Learn to cut fabric properly

4. Get a good enough sewing machine

5 Press as you sew

6 Always interface where necessary

7 Maintain your sewing machine

8 Learn to make clothes from sewing patterns

9 Get some nice sewing supplies and tools

10 Plan the sequence of stitching in advance

11 Always clip and trim seam allowances wherever necessary

12. Buy the best quality sewing notions and trims

13 Follow couture sewing techniques

14 Hang garments before hemming

15 Check for loose thread trails and trim away

16 Follow the Fitting standards in clothing

1.Select the best fabric Quality fabric choice is the number one pre-requisite of a great looking polished sewn garment.

Buy as per your sewing pattern or follow the general guidelines to see how much fabric you need for your sewing

Different fabric types call for different types of sewing techniques – checkout relevant articles for sewing with sheers and transparent fabrics, satin, leather plastic, vinyl , pleather poplin polyester and denim.

3. **2. Prewash fabric before sewing**

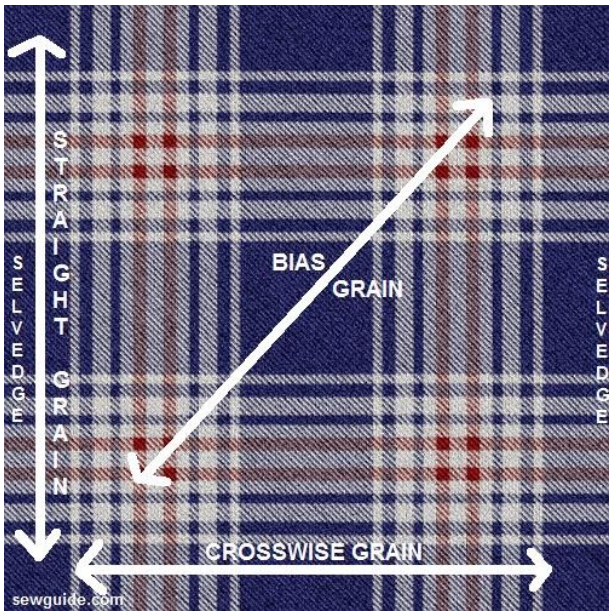
Most of the fabric shrink in wash. This will make your finished sewn garment unfit to wear after the first few washes if you have not prewashed the fabric.

Prewashing the fabric is nothing but hand washing it and drying it properly. Remember to iron all the wrinkles out before using it.

3. Learn to cut fabric properly

Use Sharp good quality scissors to cut fabric

- Find the right side of your fabric. For your knits, stretch it by the crosswise grain – it will curl to the rightside. For wovens usually the right side will look brighter with a good sheen. If you still cannot, look for the selvedge holes – you will find open holes on the wrong side. There may also be thread knots /slubs on the wrong side.
- Ensure that the fabric is cut on the lengthwise grain for dresses pants skirts etc for proper drape and good fall. Learn more about cutting the fabric properly here and about grainline and how to cut fabric on the bias



4. Get a good enough sewing machine

Your Sewing machine doesnot have to be a fancy piece for you to take up sewing. An ordinary straight stitch or zig zag sewing machine will suffice.

5. Press as you sew

It is very easy to skip the pressing when sewing clothes.

Pressing is such an important thing when sewing, the whole look of your final product may depend on this.So ignore pressing while sewing at your own peril.

An iron can give that professional 'not- homemade' look to your home made clothes. Always sew the seams open.

6. Always interface where necessary

Interfacing is a fabric material which is used to give firmness, strength, stability and weight to seams and fabric surfaces.The fabric would just flop around if not for the interfacing- I cannot imagine a collar or cuff without interfacing.

You can use fusible interfacing on just about any fabric. Just place the glue side of this interfacing on the wrong side of your fabric and then use a hot iron to press in place.

Always use interfacing on facings and seams with stresses like butonholes, zippers, behind pockets.

interfacing does for you

- Reinforces
- Prevents sagging
- Neatens edges
- Stabilises
- Give shape

7. Maintain your sewing machine

Your sewing machine can make your sewing life hell if you do not give it the care it deserves.

9 Get some nice sewing supplies and tools

You most likely already have the most essential sewing tools like sewing machine, tape measure, scissors, pins, chalk and pattern paper.

10 Plan the sequence of stitching in advance

You can stitch the sections as per the sequence detailed below or as per your pattern instructions.

11. Always clip and trim seam allowances wherever necessary

For seams to work nicely this is a necessity, especially if you have curved seams. Your pattern pieces have curves and you stitch straight lines . To conform to the curves the seam allowances should be trimmed to the minimum and clipped at intervals

12. Buy the best quality sewing notions and trims

Sewing notions and trims you use on your clothes shout the quality of the final product. Even a well tailored clothing in a good fabric can be ruined with a cheap looking zipper or button. So do not compromise on this.

13 Follow couture sewing techniques

Finishing the fabric edges, using delicate invisible stitches are all techniques designers use to finish their exquisite creations. Learn and follow them.

14.You may think that it is simple enough to leave the inside fabric edges as is. But after a few tumbling in the washing machine the fabric edges will definitely fray and create a mess inside your garment. It looks professional and polished if you have finished fabric edges inside your garment too.

14 Hang garments before hemming

Most fabric stretches. To ensure that the stretch is done away with before hemming hang the dress for at least 12 hours before you hem it. You will eliminate the stretch of newly sewn clothes this way.

15 Check for loose thread trails and trim away

Nothing is nore unsightly than loose threads on a garment you are wearing. When you back stitch at the start of a seam and when ending, it you will be leaving lot of thread tails – just clip all of them at the end of your session painstakingly.

16 Follow the Fitting standards in clothing

There are some standards of clothing that you should ensure that your finished sewn product should adhere to. Ensure that they are followed so that you make something that you are proud of

You should ensure that the garment you have sewn meets the following criteria

- Buttons fasten easily, neatly and securely.
- There are no loose seam stitching or hanging threads
- Buttons and buttonholes are all placed at an equal distance from the edge
- Stitches are all even and smooth
- Collars are neatly finished, equal on both sides, undercollar doesnot roll to the front collar. The corners are neatly turned out.
- Darts are lying smooth without any projections. Dart on either side of the bodice are placed equally and look the same.
- Facing at the neckline is neatly turned inside the garment without any bulges. The fabric edges are finished
- Prints and patterns of the cloth you have chosen look neatly joined.
- Hem stitching is looking smooth without any projections or bulges and at an even distance from the hem edge
- The pant hem is ending 2 cms from the ground when you are wearing shoes. Long sleeve hems are touching the top of your hands.

  Dressmaking is rewarding. But shoddy work is not encouraging. Make clothes you can wear with pride by following these tips.

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8.TYPE OF FABRIC AND NEEDLE

Sewing Machine Needle Type	Needle Size	Fabric Type
Universal needles	(10)	Voile, sheers, delicate silk
	(12)	Shirtings, poplin, rayon, light wool

	(14)	Medium - heavy, calico, linen
	(16)	Heavy fabric, upholstery, bag making
	(18)	Extra heavy fabric, upholstery
Sharps needles	(10)	Voile, microfibre
	(12)	Shirtings, microfibre, patchwork
	(14)	All Sharps produced perfect top stitching
Ball point needles	(10)	Light knits, tricot
	(12)	Interlock, Lacoste
	(14)	Medium heavy knits, double knit
Stretch needles	(11)	Light lycra, elasticised fabrics
	(14)	Elastic, heavier lycra, elasticised fabrics
Jeans needles	(14)	Denim, tightly

		woven fabrics
	(16)	Heavy denim, vinyl, furnishings
Leather needles	(14)	For all leather and suede
	(16)	Do not use on synthetic leather
Metafil needles	(12)	Decorative sewing on various fabrics
Quilting needles	(12)	Quilts made from cotton, wool or polyester with wadding centre
Embroidery needles	(11)	Decorative sewing on lightweight fabrics
	(14)	Decorative sewing on heavier fabrics
Twin needles	Various	Decorative sewing on most fabrics

9.FINISHING – IRONING OF DIFFERENT FABRICS

PRESSING

Pressing or **ironing** is the most important finishing process in the readymade **garments sector** which is done by subjecting a **cloth** to heat and pressure with or without steam to remove unwanted creases and to impart a flat appearance to the **garments**. **Pressing** or **ironing** is also done to introduce creases in the **apparel**.

Objects of Pressing or Ironing:

Pressing or ironing has different types of objects which are mentioned below:

1. Removal of unwanted creases and crinkles,
2. Shaping,
3. To apply creases where necessary,
4. Under pressing,
5. Final pressing.

1. Removal of unwanted creases and crinkles: - Various types of unwanted creases and crinkles arise during manufacturing the garments. These may be formed due to the washing of garments. Pressing or ironing is done here to remove those unwanted crinkles and creases from the garments.

2. Shaping: - In the apparel dart and seam are used for proper shaping to the wearer. Pressing is done here to increase the beauty and attractiveness of the created shape by using dart and seam. In some cases, it needs to shrink or stretch of garments parts for shaping.

3.To apply creases where necessary:

In the garments manufacturing industry, pressing or ironing is done for applying a creasing effect in the apparel to increase the beauty. Also pressing or ironing is done before sewing the garments to increase the beauty and proper sewing.

4. Under pressing:

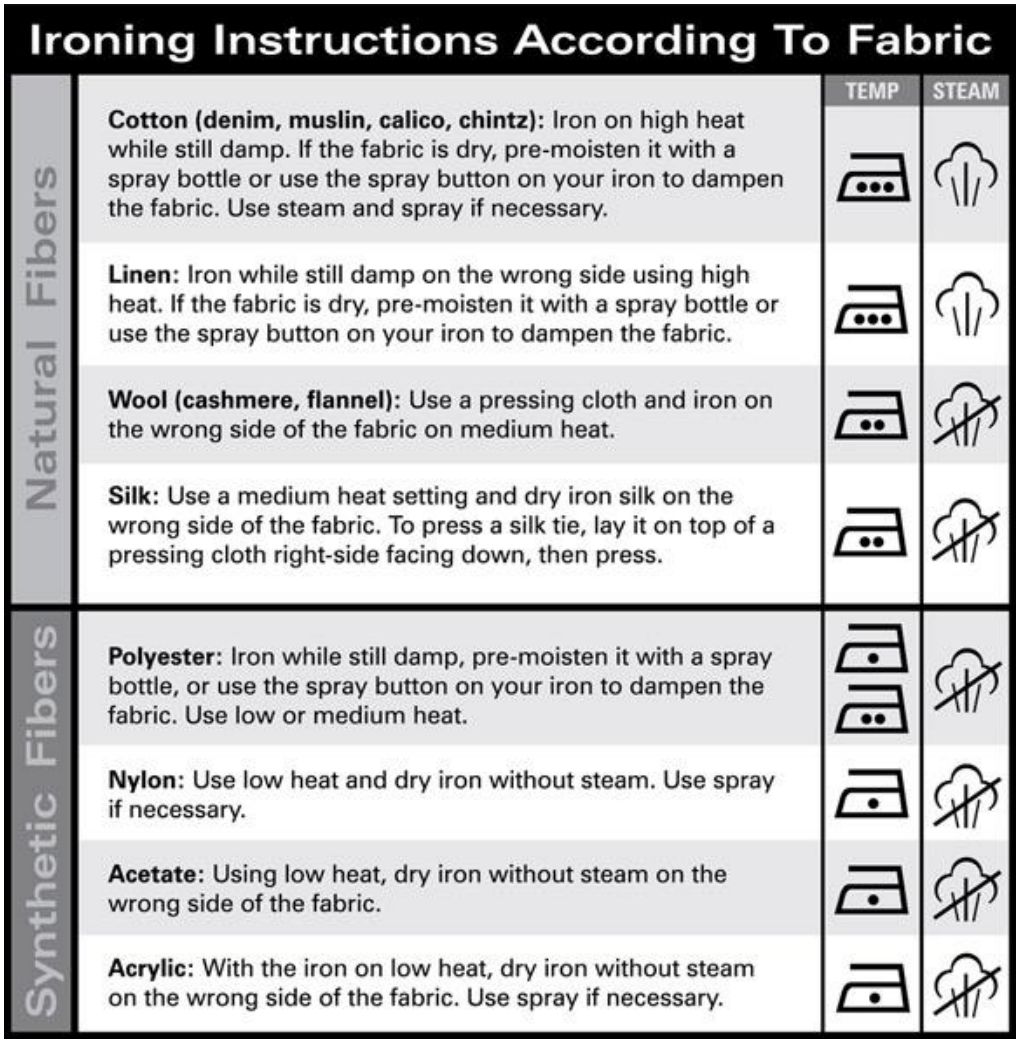
Before sewing the garments, some parts needed minimum pressing to sewing easily and beautifully which is called under pressing. In the readymade garments industry, under pressing is done for making coats, jackets, and trousers.

5. Final pressing:

After making the garments, pressing is done finally before folding which is called final pressing. Pressing or ironing is done here to increase the beauty of garments and to impart a flat appearance to the clothing.

As every fabric is different, your ironing technique may need to be adjusted to make sure you don't damage your favorite linen pants or cashmere sweater. Make sure to check the label inside your clothing or linens to see the recommended fabric care instructions, including ironing recommendations. Follow these simple rules if you are missing a label:

- If you are ironing a piece of clothing but don't know what the fabric is made out of, use the lowest temperature first and test on an inside seam.
- Use a low-temperature setting if you are ironing a fabric blend
- If you are ironing clothing made of multiple types of fabric, start on a low setting



Natural Fibers

- **How to Iron Cotton** (denim, muslin, calico, chintz): Iron on high heat while still damp. If the fabric is dry, pre-moisten it with a spray bottle or use the spray button on your iron to dampen the fabric. Use steam and spray if necessary.
- **How to Iron Silk:** Use a medium heat setting and dry iron inside out. To press a silk tie, lay it on top of a pressing cloth right-side facing down, then press.
- **How to Iron Wool (cashmere, flannel):** Use a pressing cloth and steam iron inside out on medium heat.

Synthetic Fibers

- **How to Iron Acetate:** Using low heat, dry iron without steam on the wrong side of the fabric.
- **How to Iron Acrylic:** With the iron on low heat, dry iron without steam on the wrong side of the fabric. Use spray if necessary.
- **How to Iron Nylon:** Use low heat and dry iron without steam. Use spray if necessary.
- **How to Iron Polyester:** Iron while still damp, pre-moisten it with a spray bottle, or use the spray button on your iron to dampen the fabric. Use low or medium heat.

Whether you are ironing linen, silk or cotton, the most important thing is to have an iron that works well and is up to making your clothing or fabric wrinkle-free. Look for an iron that not only has temperature settings but includes specific fabric types so you don't have to guess.

The finishing department is the department that comes after all the departments and plays an equally important role in the garment's final appearance.

Activities of the finishing department are listed below -

- **Thread trimming**
- **Attach button and button holing in case these jobs are done in the stitching section**
- **Checking of garments**
- **Stain removing**
- **Garment Pressing / Ironing**
- **Folding and Tagging**
- **Packing**
- **Communicate with internal department**

1. Thread Trimming: -In the stitching department, thread trails and thread chains are not trimmed neatly. Uncut threads and thread tails in garments are trimmed in the finishing department by helpers. Uncut and loose threads on garments are considered defects.

2. Checking garments: - All garments are checked at the finishing stage for visuals and measurement. Finishing checkers check the complete garment inside and out. Checking is done for garment detailing, such as care labelling, and trims.

3. Button attach and Butting holing: - Products those have trimming like button, snap button, eyelets are attached in finishing section.

4. Removing stains:-Stains and spots are found on garments. Spots are removed using a hand spot gun or by using a stain removing machine prior to pressing. Dust and stains can be removed by machine washing. So, many times finishing department wash garments inside department.

5. Repair work and mending - Defective garments may need to repair for stitching and fabric defects. All repair activities are done in finishing department itself instead of sending defective garments to stitching department.

6. Ironing garments: - Garments are ironed using a steam iron. This is done to remove creases in the garment. For knitted garments measurements are set by steam press. Vacuum pressing tables are used for garment pressing.

7. Folding and tagging: - Pressed garments are folded in a specified dimension. Tags, such as price tags and hang tags are attached to the garment by means of a kimble gun or threads.

8. Packing garments: Finally, properly folded garments are packed into poly bags as per customer requirements. Individual poly bags are then packed into bigger cartons.

9. Preparation of packing list: The packing in-charge prepares a packing list for the shipment. After packing is completed for an order, the finishing department informs the concerned merchant.

10. Internal shipment audits - Quality department perform internal shipment audit in the finishing department. This audit is done prior to final inspection.

11. Documentation and reporting- Like other departments, finishing department maintain production records for pressing, and packing.

10.QUALITY INSPECTION

QUALITY INSPECTION -

Garment Inspection? - Garments inspection is an important term in the readymade garments sector. Quality inspector is the main in apparel inspection, who certifies the garments export order, whether it is perfect for shipping or not. The quality inspector has to ensure perfect quality

according to the buyer's instruction in various stages of garments inspection, which have been discussed in this article.

BENEFITS OF QUALITY INSPECTION

Improve Product Quality- Automated quality inspections can improve product quality. It's true that a manual quality inspection process is labor intensive and prone to human error. When the quality inspection process is automated it becomes more accurate and repeatable, ensuring that products are produced at the highest quality levels. The process is also much quicker, meaning that products are able to get to market more efficiently.

Business Growth - Quality inspections that are automated can also help facilitate business growth. When the quality inspection process is made more efficient via automation it has a positive impact on the bottom line of the company as a whole. Product quality overall is improved which means that the products are more in-demand. In addition, an automated system is able to collect data for every feature on all products which is attractive to potential buyers. The quality data is right there for them to see as they make decisions.

Cost Effective- Automating the quality inspection process is also morecost effective. While there is an upfront cost associated with an automated inspection system, it is a one-time investment. The long-term ROI of the inspection system must be considered. Over the lifetime of the system it will amount to significant cost-savings compared to the cost of labor associated with a manual quality inspection process. Employees expect to be paid more as they become more experienced whereas an automated inspection system involves no additional costs.

Customer Satisfaction - Using quality control tools and processes like **Test Measurement Calibration** and **TraQtion** not only ensures that your product are safe and exactly as they should be, but it also ensures that your customers are not disappointed by the foods they by. The better quality your products, the happier the consumer, will be and the more money you will make selling your stuff to them. By effectively inspecting and exercising control over your company's production processes, you can lower your production costs by ensuring that inferior products and defects are kept to an absolute minimum. This has the knock-on effect of being better for the environment too. If you want **improve the custumer experience in your business** this is a good article to read.

Can Use Your Resources More Effectively- Quality control procedures enable you to use the resources available to you in the most effective way possible so that nothing is wasted and you don't have to worry about going over budget.

Increase Morale - Implementing better quality control procedures can actually boost the morale of your employees because it can make them feel more like they are working towards a common goal, creating high-quality goods for the market. It can also help to foster a happier

atmosphere because staff know exactly what is expected of them, which means they won't be caught off guard by a disgruntled manager who isn't happy with their work.

Products are Uniform- When you run a business, you need to ensure that every product you put out meets the same high standard. If some products are of a higher quality than others, disgruntled customers, who've paid more for an inferior product than their friends, are sure to rear their heads. Luckily. Effective quality control is an easy way to ensure that every product you sell is the same.Asyou can see, there are so many advantages to quality control that you can't afford not to implement it in your business.