SURFACE ORNAMENTATION

Fabric embellishments are decorations that are normally added or attached to fabrics to make them more beautiful and add more value in terms of money. Today adding embellishments has become the ultimate tool of the decorator.. The embellishment on fabric can be achieved through printing, tie-dye, batik, stencils, lamination, bonding, Decorative cutting,Special seam applying and etc. The most important thing which designers should keep in the mind while embellishing the fabric is “principles of arts”. The design should have balance, proportion, emphasis, variety, movement, rhythm, and harmony.

“Textile embellishment refers to the process of adding color, pattern, texture or design to fabric through the use of outside mediums such as thread, ribbon, sequins, yarns, buttons, buttonholes and more” . Decorative design incorporates only exterior in the garments. It neither affects fit nor performance of the garment, but contributes to the over all purpose of the garment. It is least important among the three aspects of a design. It acts sub ordinate to and must agree with both structural and functional design. Functional components of the garments like openings, belts, buttons, structural seams, darts, gathers may be decorative due to the visual stimuli they provide besides contributing to the fit and performance. The design that offers only visual effects is decorative only . The colour, constructional details and decorative trims are three common ways to incorporate decorative design into structural design. A well designed garment thus offers adequate visual stimuli through structural lines and shapes, attractive fabric colours and creatively used textures.

Importance of Embellishments

· Embellishment is important as decorative detail or feature added to something to make it more attractive.

· Add value to the fabric.

· To make a product better than what it is already.

· To add beauty and increase profit in fabric.

· Make fabric good according to the taste and demand of consumer.

· Make fabric elegant and attractive with different techniques.

It is necessary for both male and females fabrics if enhance the beauty. There must be some limits of embellishment for male fabrics and even for female fabrics. The age of the end consumer plays a vital role in the fabric embellishment. It also depends upon the likes and dislikes of individual which vary from individual to individual.

Advantages of Embellishments

· Identity and Creativity.

· Add beauty to the fabric and Garment.

· Increase the value of the fabric and the Garment made out of it.

· Shows the personality of the wearer.

· Attract consumers.

· Simple material can be converted into many styles and shapes.

Types of textile embellishment techniques inwards sewing in addition to crafts: Here I volition bring upward the types of embellishment methods that are used to decorate surface pattern on textile or garments.

- Printing
- Dyeing
- Embroidery
- Quilting
- Appliqué
- Patchwork
- Trimming (Fringe trim, Sewing trim)
- Lacework (either pre-made or home-made)
- Piping (made from either self-fabric, contrast fabric, or a merely a cord.)
- Beads
- Batik
- Smocking
- Painting

Some other embellishment items that are used on garments for enrich beauty. For example:

- Buttons
- Zippers
- Buckles
- Grommets
- Sequins

In add-on to the multitude of structure in addition to finishing techniques used, the textile tin dismiss also live worked upon or embellished inwards a diversity of ways to lift its surface. Most embellishing methods, such every bit embroidery, quilting, applique in addition to bead-work are age-old techniques of decorating textile in addition to are yet largely executed past times hand. Influenza A virus subtype H5N1 specialized industrial sector inwards trimmings, lacework, embroidery in addition to other embellishments has also developed that uses innovative technology scientific discipline to recreate the hand-worked effects on an industrial scale in addition to pace.

2.Techniques of Embellishing on Garments

A few textile surface embellishing techniques are briefly discussed inwards below:

Printing: Textile printing is the process of applying colour to fabric in definite patterns or designs. In properly printed fabrics the colour is bonded with the fibre, so as to resist washing and friction. Textile printing is related to dyeing but in dyeing properly the whole fabric is uniformly covered with one colour, whereas in printing one or more colours are applied to it in certain parts only, and in sharply defined patterns.

In printing, wooden blocks, stencils, engraved plates, rollers, or silkscreens can be used to place colours on the fabric. Colourants used in printing contain dyes thickened to prevent the colour from spreading by capillary attraction beyond the limits of a pattern or design.

D**yeing;** Dyeing is the application of dyes or pigments on textile materials such as fibers, yarns, and fabrics with the goal of achieving color with desired color fastness. Dyeing is normally done in a special solution containing dyes and particular chemical

material. Dye molecules are fixed to the fiber by absorption, diffusion, or bonding with temperature and time being key controlling factors. The bond between dye molecule and fiber may be strong or weak, depending on the dye used. Dyeing and printing are different applications; in printing, color is applied to a localized area with desired patterns. In dyeing, it is applied to the entire textile**.**

Embroidery: Embellishing fabrics amongst stitches inwards yarn or thread, using a needle, is 1 of the oldest forms of art. While the library of embroidery includes hundreds of varieties of stitches, they tin dismiss live categorized broadly into 4 principal techniques – raised operate or stump-work where raised effects are created past times stitching over pads of wool in addition to cotton; couched operate – creating a pattern amongst cords past times sewing them onto the base of operations fabric; fl at running in addition to filling stitches of which at that topographic point are hundreds; in addition to counted thread embroidery, e.g. needlepoint in addition to cross stitch, where the stitches are placed over a counted let on of threads of the base of operations fabric. Schiffli embroidery is an instance of machine embroidery made on the 'Schiffli' machine that industrial plant sideways amongst a K needles. This machine embroiders amongst a top, decorative in addition to a back, binding yarn, in addition to is used for making laces in addition to sheer drapery fabrics. Many embroidery stitches tin dismiss right away live produced inwards digitized embroidery machines which, for large scale production, conduct keep multiple heads to attain a let on of identical designs simultaneously using an embroidery software program.

Quilting: Quilting is the technique of Embellishing fabrics stitching together, past times manus or machine, multiple layers of textile amongst a filling of cotton, foam or polyester batting inwards betwixt the layers. Quilting is widely used for making bedspreads, quilts, comforters etc. Single-needle, hand-guided quilting machines are used for making outline quilting, where the stitching lines follow the outlines of the impress design, vermicelli, which uses gratis motility all-over stitching patterns, in addition to trapunto or Italian quilting, a shape of 'couching' where a cord inserted in addition to stitched betwixt the textile layers creates a raised pattern. In mass-scale

automated production, multiple-needle machine quilting is used to brand uncomplicated geometric patterns. In stitch-less quilting, multiple layers of textile are fused together thermally or past times an adhesive, creating the appearance of stitched.

Applique: In applique, pocket-size pieces of textile or other stuff are couched or stitched onto a base of operations fabric. In contrary appliqué, the base of operations textile is on overstep of the stitched textile in addition to the overstep textile is cutting out to reveal the appliqued textile underneath.

Patchwork:Patchwork, used to a greater extent than oftentimes than non for making bed quilts in addition to cushions, is the technique of creating a textile layer past times joining pocket-size pieces of textile (traditionally scraps of quondam clothes or textiles) inwards geometric or abstract patterns. Being a hand-worked technique, it is to a greater extent than oftentimes than non produced on a pocket-size scale.

Trimming: Two types of trimmings are virtually popularly applied on textile or garments for decoration. Such as:

- Fringe trim: Fringe is an ornamental textile trim, applied to an border of an item, such every bit drapery, clothing ends, a flag, epaulettes, or decorative tassel, etc.
- Sewing trim: sewing Trim or trimming inwards have on in addition to abode decorating is applied to ornament or Embellishing fabrics such every bit gimp, ribbon, ruffles, button, bias tape, etc.

Lacework: Lace is an openwork fabric, patterned amongst opened upward holes inwards the work, made past times machine or past times hand. Lace is about other Embellishing items on fabric. It is the rattling mutual in addition to ancient arts and crafts to Embellishing fabrics.

Piping: Piping is a type of cut back or embellishment, which is used to Embellishing fabrics for making dissimilar mode line. Usually the textile strip is cutting on the bias, in addition to oftentimes it is folded over a cord. It may live made from either self-fabric

(the same textile every bit the object to live ornamented) or contrasting fabric, or of leather.

Beads: Beads are other types of embellishment. Beadwork is made past times needle in addition to thread to stitch beads to Embellishing fabrics, suede, or leather.

Batik: Batik is a cloth that is traditionally made using a manual wax-resist dyeing technique. For Embellishing fabrics batik is the rattling pop embellishment technique.

Smocking work

Smocking is an embroidery technique, used to et together textile in addition to then that it tin dismiss stretch. Before elastic, smocking was commonly used inwards cuffs, bodices, in addition to necklines inwards garments, where buttons were undesirable.

Fabric painting :techniques are ways of creating colorful pictures and designs on **fabric** using **paints** and brushes, markers or stencils. ... **Painting** over the stencil leaves the design on the **fabric**. In serti **painting**, often done on silk, a design is drawn on **fabric** and traced with a resist, a thick liquid that repels **paint**.

Fabric manipulation: There are dissimilar types of textile manipulation techniques. They include: Embellishment through addition, Beads in addition to beading, embellishment through subtraction in addition to structure techniques.

3 PRINTING AND DYEING

Block Printing

Hand Block Printing on textiles refers to the technique by which carved wooden blocks covered with dye are repeatedly pressed along a length of cloth to create patterns. The beginnings of the art of ornamenting textile fabrics by the stamping or printing on of coloured designs are lost in antiquity.

Block printing is believed to have originated in China towards early 3rd century. Around the 4th century, records of its presence were found in Egypt and some Asian countries from where it spread to Europe and other places.

Block printing was first developed in China and is said to be over 2000 years old. However, the earliest known example is the Diamond Sutra from 868 AD which is currently in the British museum.

HAND BLOCK PRINTING IN INDIA

India has been renowned for its printed and dyed cotton cloth since the 12th century and the creative processes flourished as the fabric received royal patronage. Evolution of different styles of designs has taken place in different parts of the country having its own particular local aesthetic.

Block Printing is mainly practiced in the

Andhra Pradesh:One of the earliest and complex techniques of block printing is Kalamkari. It was developed in Machilipatnam in Andhra Pradesh. It uses vegetable dyes for printing. The craft evolved with patronage of the Mughals and the Golconda sultanate at Pedana near Machilipatnam in Krishna district.

Gujarat:Hand printing has been practiced in Gujarat by the Paithapur families. They use the mud resist – printing method to print their textile and make intricate blocks. These prints are called Sodagiri (trader) prints. The popular patterns in Kutch are black and red designs of dancing girls, birds and animals. The saris of Ahmedabad and Baroda have large mango patterns against a red or blue background. The Ajrak resist-printing technique is found in Anjar and Dhamadka in Kutch. In several patterns, the painted Ajrak cloth has various colours like red, blue, black and white. The other well known centers for Block Printing in Gujarat are Bhavnagar, Porbandar, Vasna, Rajkot, Jetpur and Jamnagar.

Rajasthan:In Rajasthan, colorful Block Prints of birds, human figures, animals, gods and goddesses are famous. The main centers for this type of Hand Block Printing are Jaipur, Pali, Bagru, Barmer and Sanganer. Barmer is well -

known for its prints of red chillies with blue-black outlines, surrounded by flower-laden trees. The Sind region is the source of inspiration of these prints. Turbans, sarees and traditionally worn lungis are various items that are made in Barmer. The other famous prints are of horses, lions, peacocks and camels, called Sikar and Shekahawat prints. Villages of Jahota in Jaipur are famous for the jahota hand block printing. Maharaja Jai Singh and his wife are believed to have uplifted this art amongst the local artists. Sanganer and Bagru are the places where most of the Block Printing is done in Rajasthan. Kalamkari Prints and floral motifs with pastel colors are done on the fabric. The block print in Bagru is done mainly in black, red and beige. Shades of blue with more use of indigo blue dyeing processes are a characteristic of this centre. Hand block printing was patronised by the royal family. Sanganer, near Jaipur, is famous for its fine hand block printing in subdued colors. In Rajasthan, there are sandy stretches of desert where a unique method of cloth-dyeing is prevalent. The method is called Ajrakh and the print is in dark shades of blue and red with geometrical. The traditional block-printing running in parallel lines technique of Ajrakh has attain a peak of excellence at Balotra. The Resist Process called Dabu is used here involves using wax or gum. In the border town of Jaisalmer a kind of resist printing requiring very low temperatures is done. Therefore, it can only be processed during the night or in winter. Odhnis / chunris from Jodhpur are highly prized though they are made all over the state now. Udaipur and Nathdwara, the temple city here the designs are mostly religious in nature and are linked with Srinathji Lord Krishna.

Madhya

Pradesh:

Printed textiles are created by a community of printers called Chheepa (derived from the Hindi word chhapna meaning printing) in Madhya Pradesh. The printers of Bagh use vegetable and Natural Dyes, in bright shades of red and black and also occasional indigo. These prints have a tonal and a three dimensional effect which is impossible to replicate in the screen printing or machine printing process. The blocks are made of intricately stylized motifs,

which have evolved over hundreds of years. Bagh, which lends its name to the Bagh prints, is a small tribal town in Dhar district of Madhya Pradesh. The khatri community, who comprise the 'chhipas' or printers came here about 400 years ago. Javad prints in Indigo and Alizarine are used most of the time. In the wax resist process done here the wax is applied using the block which is carved upto 10 cm in depth. Other places in Madhya Pradesh besides Bagh are Behrongarh, Indore, Mandsar, Burhanpur.

Uttar Pradesh:Uttar Pradesh is an important centre for hand-block printing with the paisley designs, classical butis and the tree of life as the main traditional motifs used in a range of shapes and in bold colors. In Uttar Pradesh Benares, Farrukabad, Pilakhuan are the place where the blocks are made.

WestBengal Kolkata &Serampur :Each of these regions traditionally had distinct design elements with unique color schemes and motifsblock printed fabricby expert craftworkers from each of these regions are still identifiable by its region of origin.

TYPES OF BLOCK Mainly two types of blocks used by the printer at the time of printing

i. **Wooden block**: which is also two types
   a. Outlining block *(rekh)*
   b. Filling block *(gadh*

Blocks are hand carved of seasoned teak wood by trained craftsmen. On the bottom face the motif are engraved with steel chisels of different widths and cutting surface by the carver. Each block has a wooden handle and two to three cylindrical holes drilled into the block for free air passage and also to allow release of excess printing paste. To soften the grains in the timber, the new blocks are soaked in oil for 10-15 days. These blocks sometimes have metal over the wood.

ii. Metallic block

Metal sheets are beaten by hand and made wafer thin and malleable. Then, the thin sheets are cut into strips of even length. The pattern or design of the block is drawn on the wooden block and the thin metal strips are pressed onto the design and gently hammered in. The designs are filled in from the center to the outside to allow maneuverings of the hand. After the design is completed the design is checked to see if all the brass strips are of the same height from the wooden base as it ensures good quality of printing. Brass blocks are used in case of very fine designs and for a high level of clarity in print. They are more expensive and time consuming to make and also last much longer.

BLOCKS ON THE BASIS OF DESIGN

There are mainly three types of designs are carved on block:

1. Geometrical Design (lines and geometrical motifs are carved)
2. Floral Design (paisley, flowers, tree leaves wines etc.)
3. Tribal Design (daily life of tribal people)

Depending on the design, the shape (circular, square etc.) of the blocks can vary.

Blocks are mainly made in Farukhabad in Uttar Pradesh, and Paithapur in Gujarat. Banaras block *makers design their blocks to suit fine silk printing - sometimes seven colors are used in each design. Block designs get bigger and bolder and the delicacy is lost as one move towards the south or towards East. Mainly the blocks are 8cm-11 cm in breadth and 10cm-*

18cm in length. The sizes of blocks depends upon the design, sometimes it may be smaller and sometime may be larger than it.

For the making of blocks mainly two types of seasoned wood are used

i. Shisham (qualities same as sagwan, but require little more force during application)

ii. Sagwan (good capability of observing color and do not loose shape when water is applied.)

Characteristics of block:

i. Carving should be deep upto 2-3cm. ii. Surface evenness must be there.

iii. A hole should be there for exit of air

iv. Bonds of repetition.

v. Normally the cost of block ranges from Rs.300-Rs. 4000/piece depending upon the design and type of wood used

TECHNIQUES OF BLOCK PRINTING

Block printing can be divided into three ways

- **Direct Block Printing:**

  The cotton or silk cloth is first bleached in this technique. Then the fabric is dyed, unless a light background is desired. Thereafter, the fabric is printed using carved blocks; first the outline blocks are used, then the ones to fill color. The popular prints of Bagh (from Madhya Pradesh) and Bagru (from Rajasthan) are made using this technique. Either Cotton or silk fabric is used here. The cloth is first bleached and then dyed with the desired color. After that block printing is done on borders with carved wooden blocks then in the borders.

-

  In the resist technique, areas that are to be protected from the dye are covered with a mixture of clay and resin. Then, the dyed fabric is washed. Producing a rippled effect, the dye spreads into the protected areas through cracks. Block prints are then used to create further designs. Ajrakh

Printing of Kutch (India) and Sindh (Pakistan) and Kalamkari from South India use this technique.

- **Discharge**

  Printing:

  The fabric is dyed in this technique. Then, a chemical is used to remove the dye from the portions that are to have designs in different colour. These portions are then treated, so they may be re-colored.

BLOCKPRINTING

PROCESS

Step 1: First, the fabric to be printed is washed free of starch (size material) and soft bleached. If dyeing is required (as in the case of saris where borders or the body is dyed) it is done before printing. The fabric is again washed to remove excess dye and dried thoroughly.

Fig 7: Step 1 – Desizing Process

Fig 8: Step 2 – Attachment of the fabric.

Step 2: The fabric is stretched over the printing table and fastened with small pins. This is an important stage as there should be a uniform tension in the fabric with no ripples.

Step 3: The dyes or the pigments to be used are kept ready for application

Fig 9: Step 3 – Preparation of colour and block

Fig 10: Step 4 – Preparation of colour tray.

Step4: Under the pigment tray is another tray containing a thick viscous liquid made from pigment binder and glue. This gives the color tray a soft base which helps to spread color evenly on the wooden block. Small squeeze is used to spread the color paste over the tray.

Step 5: The printing starts from left to right. The color is evened out in the tray with a wedge of wood and the block dipped into the outline color (usually black or a dark color)

Step 6: When the block is applied to the fabric, it is slammed hard with the fist on the back of the handle so that a good impression may register. If it is a multiple color design, the second printer dips his block in color again and prints on top of the outline made by the first block. The third color if required follows likewise, precisely aligning the block each time. Skill is necessary for good printing since the colors need to dovetail into the design to make it a composite whole.

Fig 11: Step 5 – Printing over the cloth.

Fig 12: Step 6 – Printing of multi colour.

Step 7: The fabric is sun-dried, which is part of the colour-fixing process. It is rolled in wads of newspapers to prevent the dye from adhering to other layers and steamed in boilers constructed for the purpose. Silks are also steamed this way after printing. After steaming, the material is washed thoroughly in large quantities of water and dried in the sun, after which it is finished by ironing out single layers, which fix the color permanently.

MAKING OF DYE PASTE AND COLOR TRAY

Step 1: For making the color tray very first dye paste is prepared by mixing thickener, binder and dye. The dye paste should not be very thick (disadvantage: dye will not give even printing) or watery (disadvantage: dye paste will spread over the fabric).

Fig 14: Step 1 – Preparation of the dye solution

Step 2: Now the tray (palia) is taken which is made of wood, generally the size of tray is 7 inches in breadth and 10inches in length and 2 inches deep but sometimes sizes can be varies according to size of block. Now, the dye paste is transferred to the tray *(palia)* from the bucket.

Fig 15: Step 2 – Transfer of the dye solution

Step 3: After that put a net like square frame made of bamboo sticks called "*THARTHARI"* (bamboo sticks are tied with nylon thread in form of net)
Level of the color will be equal to the level of *harthari* on color tray.

Fig 16: Step 3 – Placing of Tharthari.

Step 4: On the top of the jute fabric, *mulmul* fabric is kept and above *mulmul*, georgette fabric is kept, if we want design with les intricacy. If the block is more intricate, then above the jute fabric, georgette fabric is kept and above georgette, *mulmul* is kept.

Fig 18: Step 5 – Preparation of printing tray.

DYES USED IN BLOCK PRINTING:

Pigment Dyes -Pigment colors are mixed with kerosene and a binder. The consistency should be just right, for if it is too thick it gives a raised effect on the material, which spoils the design. Small plastic buckets with lids are ideal for storing the mixed colors for a few days. The motif is printed directly on white or light-colored ground with a variety of pigment colors. Pigment colors are widely popular today because the process is simple, the mixed colors can be stored for aperiod of time, subtle nuances of colors are possible, and new shades evolve with themixing of two or three colors. Also the colors are visible as one prints and do not change after processing. Colors can be tested before printing by merely applying it onto the fabric. The pigment color is made up of tiny particles, which do not dissolve entirely and hence are deposited on the cloth surface while rapid dyes and indigo sols penetrate the cloth.

Indigo sols-Rapid fast Colors-In this process, the ground color and the color in the design are printed on white and/or light-colored grounds in one step. The dyes once mixed for printing have to be used the same day. Standard colors are black, red, orange, brown and mustard. Color variation is somewhat difficult and while printing it is not possible to gauge the quality or depth of colorIt is mainly for cotton. The dye easily penetrates through the fabric. The fastness property of the dye is good

Discharge Dyes-These dyes are used if you need to print onto a dark background. Medium to dark grounds are dyed on fabric with specially prepared dyestuff. The printing colors then used on the fabric contain a chemical that interacts with the dye. This interaction simultaneously bleaches the color from the dyed ground and prints the desired color on ts place. Areas can also be discharged and left white. The primary advantage of this process is that vivid and bright colors along with white can be printed on top of medium and dark grounds.

Napthol / Reactive dyes-As the name suggests, these are two sets of chemicals, which upon reaction produce a third chemical essentially colorful in nature. Fabric is dyed in one and later printed with the other. The chemical reaction produces a third color. However, the biggest drawback of this process is that there are just a few chemicals available, which produce colors upon reaction.Vegetable / Natural dyes Historically of great importance, these dyes have acquired even greater importance now because of their eco-friendly nature.

Bagru Black-This is derived by mixing acidic solution of iron - often rusted nails/horse shoes etc. with jaggery (country sugar) allowed to rot for about 10-15 days. Many other natural substances used for producing dyes are pomegranate skins, bark of mango tree, vinegar, slaked lime

Bagru Red -This is derived by mixing acidic solution of iron - often rusted nails/horse shoes etc. with jaggery (country sugar) allowed to rot for about 10-15 days. Many other natural substances used for producing dyes are pomegranate skins, bark of mango tree, vinegar, slaked limethis dye is achieved by combining a source material such as alizarin with alum, the results ranging from pink to deep red.

Indigo Blue-The internationally famous Bagru Blue is obtained from the indigo bush found throughout India.

INTRODUCTION TO STENCIL MAKING AND PRINTING

TECHNIQUES

The process of Stencil making and printing with the stencil is the first step to modern screen printing technique which is described in Unit 5 (Lessons 13, 14 & 15) of this course. In this lesson you will be introduced to the stencil making and stencil printing processes: The next two lessons will deal with stencil cutting and printing with stencils in greater detail.

Introduction

Stencil making involves cutting a design through a thin sheet and then transferring colour on to the surface to be printed through the cut out of the design. Printing with the help of stencils is one of the basic fabric ornamentation techniques. This is an art through which designing, printing and decoration can be experimented on different materials apart from fabrics. In this chapter, you will learn about the technique of making stencils and equipments required for it.

Historical Background

Stenciling technique is an ancient art which is said to have started in China and Japan, and was one of the widely used methods of printing. North Americans were amongst the first to start ways by which the stencils could be used in home decoration . In the 18th century, American wallpaper was considered to be a luxury which only the wealthy could afford. However, the people soon found out that with a little imagination and patience, and by repeating the same motif again and again they could achieve a uniform overall pattern just as good as the one produced by fine printing techniques.

The origin of this technique in India can be traced to the Gupta period (6th to 8th century) though even before the Gupta period, this process was used in the execution of paintings.

During the Mughal and Rajput periods the use of stencils for the decoration of textile material was very popular.

Materials and Tools Required

The materials and tools needed for making stencils and using them for printing on fabrics are either available commercially or can be easily made or improvised.

The stencil

The material for making a stencil should be thin and easy to cut. The following materials may be used for this purpose:

- Cartridge sheet
- Ivory sheet
- Bond paper
- Discarded photographic film negatives
- Discarded X-Ray film
- Plastic sheets

Devices for cutting stencils

- Paper cutter• Stencil cutting knife • Scissors• Razor blades
- Metal ruler (for cutting straight lines)

Colours for printing with stencils

There is wide variety of colours ranging from modern synthetic colours to most primitive traditional variety of colours. Some of these will now be briefly described.

- **Poster colours:** These are water soluble colours which are available in a wide range of shades in liquid form. They are best used undiluted. If they are used on

  wood, the application of several coats of polyurethane clear varnish, after the paint is quite dry, will render it waterproof and hard wearing as well as increasing the brilliance of the colours.
- **Acrylic colours:** These are also water soluble and quick drying colours which are available in a wide range of shades in liquid form They also are best used undiluted and maybe used to decorate wood using the same procedure as for poster colours.
- **Fabric colours**: They are usually water soluble and are fixed by ironing the printed fabric from the backside with a hot iron. Fabric colours can

also be sprayed and can be used on fabrics for stenciling and they produce a very subtle shade.

- **Glass colours:** These colours are available in a wide variety, ranging from water soluble to gels,
- **Acramin pigment colours:** Acramin pigment colours are not soluble in water and are used along with SLN binder and other ingredients to form a printing paste.

Tools for applying paint

- Cotton pads

  These are made by enclosing a small cotton ball in a white, coarse cotton rag and then tying it with a knot. This cotton pad helps in applying paint through theopenings in the stencil while printing.It is advisable to have a different pad for each colour to be painted.
- Stencil brushes- A stiff bristle brush (with trimmed bristles)

Other materials

- A sheet of glass to act as a surface for keeping the stencil paper while it is being cut
- Pencils
- Thumb pins
- Adhesive tapes
- Clean rags
- Old newspapers
- Drawing papers
- Carbon paper
- Graphite paper
- Tracing paper
- cleaning solvent like water, spirit etc.

The Stencil Making and Printing Processes

The stencil making and printing processes proceed as follows:

1. Selection of an appropriate design.
2. Transfer of the design on to the stencil material.
3. Cutting of the stencil.
4. Painting through the stencil on to the fabric.
5. Cleaning up of the stencil and brushes.

1 Selection of a design

An appropriate design suitable for the purpose of decoration in a particular context is first selected. The design can be taken from nature or from the surroundings or it may be based on some geometric pattern, Flowers, leaves, plants, birds or animals . cartoons, magazine illustrations, a piece of art or craft, or one's own drawings, or alphabetical letters etc., all these are appropriate. A bold type of design is good for an efficient stencil printing output . Some bold types of symmetrical designs are shown in . Good, clear alphabetical letters can also be produced easily and quickly using a standard alphabet stencil sheet.

A photocopier may be used to enlarge or reduce the size of the design according to the area of the surface.

2 Transfer of the design

The next step is to transfer this design onto a stencil card using a tracing paper or a carbon paper. A stencil card can be a suitable paper or plastic material. The stencil material may be fastened on to a glass sheet or a hard cardboard. The design outline is then transferred onto the stencil material using a carbon paper .

3 Cutting out the design on the stencil After transferring the design on to stencil card, the next step is to cut out the stencil carefully leaving the 'Ties', (explained in Lesson 8) and a thick border around the outline. Keep the stencil sheet on a hard surface, like glass or a hard board, for easy cutting. Cut the entire design through the stencil board, using a stencil-cutting knife or razor blade or a paper cutter.Try to make clean sharp cuts.

4. Printing with the stencil The final and the most interesting part is to use the stencil to print a fabric. This is done by first securing the fabric on a rigid support (like a table) in a tight stretched state and then applying the colour with the help of cotton padding or stencil brush or a painting brush or even a tooth brush. Using any of

these devices, the colour is applied evenly through the openings in the stencil onto wood, plastic, glass etc.

5. Cleaning the stencil Finally the stencil should be cleaned immediately before the paint left on it dries up and becomes difficult to remove. For cleaning, place the stencil on a newspaper and wipe it with a istened with water. Care should be taken that small bridges on the stencil are not broken while cleaning. Brushes should be cleaned thoroughly in solvent and then washed with warm soapy water.

6 Stencil Printing on Different Objects Stenciled motifs can be repeated over and over again to make a border or an all- over design. Delicate flower borders on sheets and pillow-cases or on a child's dress can be very effective, while all-over patterns can be used on a number of items, such as tablecloths, scarves and shirts. Straw hats and baskets, satin shoes and canvas items can all be stenciled.

Stencils can easily be applied to china or glass. As shown in they are used to label food storage jars. The simplest stencils can give character and beauty to any common household object, for example the wooden cups in figure Fig. 7.10. By cutting stencils one can produce designs according to one's own requirements. For example the birds printed at the back side of a plastic chair automatically give the chair an artistic look .

PRINTING WITH STENCILS

Introduction

Printing is the final stage after the stencils are cut and the printing paste is ready. This can be carried out in several ways incorporating different ideas and adapting different tools and equipments. By being a little more creative one can achieve novel effects through stencil printing. The broad spectrum of methods and the wide range of effects achieved using these methods, will form the subject matter of this

Assemble the colours to start printing with stencils and also the equipments to paint like, cotton pads according to the colour schemes decided, also arrange for a waste tooth brush and other painting brushes etc.

Printing with Stencils A variety of dyes and pigments can be used for stencil printing and a number of devices can be used to apply the colours. The various types of colours and pigments used for stencil printing were described in Lesson 7. In this lesson we will learn how the colours are applied to the stencil.

Printing by dabbing To start with, the washed and ironed fabric is placed on a rigid support in a tight stretched state and secured in this position with the help of pins. Then the stencil is placed at the appropriate location on the cloth. The stencil is secured with short lengths of masking tape on the cloth

A small amount of print paste is taken in a saucer and a sponge or cotton pad is dipped in it. The colour is applied by gently but firmly dabbing or pressing repeatedly over the open sections of the stencil by moving the piece of cotton or sponge firmly from outside the design outline towards the open areas .The stencil is then carefully removed. The masking tape can be re-used for the next position of the stencil. After the printing is over the fabric is spread in the Sun to let the prints dr

Printing with painting brush -Beautiful designs can be stencil - printed on a wooden object using paint. First make sure that the surface is properly cleaned, otherwise the paint will not adhere to that surface. Now start printing following the steps shown in

Spray Printing with Stencil- Spraying (as opposed to sponging fabric dye paste through a stencil) can produce a range of effects from a crisp clear-cut design to a freckled look or a delicately graduated, misty image. Three methods of spraying are described below:

- The first method employs an old toothbrush. The toothbrush is first wetted in paint of the right consistency. With the help of a spatula or a scale or a knife, the paint is spattered on the stencil over the cloth

- The second method makes use of a mouth-blown diffuser (Fig. 9.7). For the diffuser to work successfully it will be necessary to thin the dye paste a little more than that used for toothbrush spattering.

- Finally, the more professional approach is to use an airbrush, which you can buy from a model shop. An airbrush is more conveniently handled for giving misty effect to large printing areas.

Multi coloured design with stencils It is possible to use more than one colour within stenciled shapes by gradually merging one with the other, but you must bear in mind whether the two colours will produce the required effect when they actually meet.

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Multi colour printing

separate pad is used

Use a fresh piece of sponge for each colour, and use it only for that colour throughout the printing.

- Try printing your design in separate colours . If yours is a large scale design this is quite feasible with stencil printing. The gaps you are not printing should be covered with paper secured by masking tape.

Printing with two or more superimposed stencils More complicated multicoloured designs can be printed by separating the colour and making a stencil for each colour. By using several stencils one over the other, complicated designs can be produced without the insertion of too many ties in just a single stencil.

A Multi coloured design -When a number of superimposed stencils are to be used .Allow the paint of the preceding stencil to dry completely before positioning the next stencil to paint. Thus with the use of two or more tactically designed stencils beautiful multicoloured patterns can be printed, keeping one over the other one by one.

Making repeats -For printing repeats of a stencil on a fabric in a straight line or all over the surface of any other object, triangular holes are cut on the two diagonally opposite corners of the stencil . When the stencil is placed at the starting position to make a print on the starting point of the repeating pattern, the holes cut at the corners are also marked with a chalk at that place on the cloth. After printing, the stencil is placed at the next position according to the chalk marks of the first position.The whole process is repeated for the consecutive prints. If the motifs are placed quite close to one another , It is advisable to print alternate ones, coming back to fill in the space when these first prints are dr If your project requires repeating the same stencil in different colours, the registration of colour will be done by first placing the stencil for first colour to be printed in its correct position on the fabric. In the same manner, repeat the same process for the next colour.

Negative stencil designs

Till now only positive stencil printing has been considered. Try out the negative stencil idea too where you apply colour around the shape, leaving the shape itself with the colour of the fabric. You can use the pieces cut from the normal, positive type of stencil as templates to develop an interesting design. Use a weight or double sided tape to hold the template in position on the fabric when you print.

Instead of cutting out a shape some hard objects can also be used as stencils, e.g. leaves or petals of flowers. Masking tapes themselves can also be used strategically placed adjacent to create unique printed patterns .

Precautions to be Observed while Printing

One should take care of the following points while printing with a stencil so as to speed up the process of printing and to reduce the printing errors to a great extent.

- Apply the paint with almost a dry brush. Dry it by dabbing it to remove the excessive paint.
- Keep the stencil pressed with free hand while printing .
- Start with the brush or the cotton pad or the sponge at the centre of the painting area first .
- Always apply paint from outside into the middle of each open area .
- When painting near a tie, the tie should be kept pressed with a sharp object such as a pencil .

- **Dabbing off extra paints**
- **Apply paint at the center first**
- **Hold the tie while printing**

AN INTRODUCTION TO HAND PAINTING

Introduction

In this lesson, you will be introduced to hand painting, its historical background, and material required for hand painting.

Definition of Painting

Painting is the practice of applying pigment, suspended in a carrier (medium) and a binding agent (glue), to a surface (support) such as paper, fabric canvas or a wall.

Painting can also be defined as a creation of art, with aesthetic value, made through the application of paint to a surface.

Historical Background

The history and tradition of hand painting on fabrics goes back thousands of years. Ever since human beings learnt the art of making fabrics through weaving of fibres, Painting is one of the earliest methods of ornamenting fabrics. Techniques that were used to decorate the human body began to be applied to ornament the fabrics also. Two basic methods emerged:

- Colouring (directly drawing an image with colour on the fabric).

Patterning (painting or printing patterns on fabric with the help of the resist technique).

Material Required

Material required for Hand Painting is not very expensive. The main requirements relate to a good selection of dyes and pigments, some inks and some good quality brushes.

The important materials required for hand painting are listed below:

- Fabric Paints
- Medium – It is used to thin fabric paint.
- Fabric Brushes – Synthetic or nylon brushes in pointed, round and flat tips in various sizes are used.
- Fabric Markers – These broad line markers are good for decorating fabric.

- Glitter Glue – It is useful for ornamenting fabric.
- Board or Frames – Fabric should be stretched on a frame to paint. It must be large enough to fit the design.
- Designs – Can be transferred on fabric through Stencils, Tracings, or drawn free hand.
- Masking Tape – It is used to hold fabric in place on the board. Thumb-pins, large clothes pins or clips are used for this purpose.
- Palette and Mixing tray – It is used to mix and keep colours.
- Apron – Is used to protect clothes.
- Water Containers – Are used for rinsing brushes in clean water.
- Tooth Brushes – Are used for spattering paint on the fabric.
- Spray Bottle – Is used to spray colour on fabric.
- Miscellaneous – Napkins to wipe the brushes, scissors, pencil, iron, etc.
- Fabric – Is required to paint the design on. printed

Fabric brushes Brushes play a very important role in the process of hand painting. So it is important to learn how to choose right brushes. A right brush produces good results. A brush that is too stiff can damage the fibres of the fabric. On the other hand, a brush that is too soft will cause frustration while applying paint.

The most common type of brushes designed for fabrics are synthetic or nylon brushes. These brushes are specifically designed for use on fabric and come in a variety of styles. Fabric brushes are available in flat angles, pointed, rounds, liners and scrubbers.

Flat angles, pointed, rounds and liners are used mainly for brush-on fabric painting. They are used for finer woven or knitted fabrics such as cambric, silk and T-shirt type knits.You can buy paint brushes from stationers, art suppliers etc. Try to find a shop that offers a good selection, so you can compare different types, and pick one that suits both your requirement and budget.

Cheap brushes are made from artificial hair like nylon fibres. Brushes made from a hair/nylon mix, cost a little more. The best brushes, however, are real animal hair brushes, such as, sable, camel or squirrel. These brushes are also the most

expensive. When you have found a range you like, pick out a few brushes of the size you want and compare them.

Look for a brush that comes to a nice point, without any stray hairs coming out at unwanted angles. Good quality brushes are usually protected by a clear plastic guard. If you remove this guard to inspect the quality, remember to replace it carefully afterwards. It is worth spending a bit more on good quality brushes, since they are easier to paint with. You must, however, look after them carefully; then they will last a long time.

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Caring for your brushes

The following are some tips for care and long life of brushes.

- When you are painting, do not dip the brush completely into the paint. It results in paint wastage and also old paint will clog up and spoil the base of the brush.
- Use the right brush for the job – if you are painting a large area of flat colour, do not use the detail brush (small ize).
- Either set aside specific brushes for certain tasks, or keep a selection of old/cheap brushes for rough tasks. When you've finished painting, clean your brushes in clean water and store them safe.

- Do not leave the brush in water with the brush side dipped in water for long, else the tip gets spoilt.
- Always store the brushes either in a cloth case as illustrated above or with the brush side up; possibly with the plastic guard on.
- Even while intermissions during painting sessions, it is desirable to keep the brushes with the brush side up in the container.
- While painting, pressure should not be applied on the brush tip, lest it would spoil the tip.

Fabric Preparation

Always pre-wash the fabric you intend to paint on, to remove any dirt, starch or grease from the material. These agents do not allow the paint to penetrate into the fabric or become permanent.

Always iron the fabric to remove any wrinkles before transferring the design. It isdesirable to stretch and fix the fabric to a frame before starting to paint.

Transferring Design on fabric

Design can be transferred on the fabric in a variety of ways. Some of the most commonly used methods are:

- Stenciling
- Tracing
- Free hand drawing

Stenciling- A method of applying a design by brushing or sponging paint through a cut-out overlay placed on the surface .Stenciling the design on the fabric is an easy way of achieving beautiful designs. After stenciling the design is painted with the help of brushes or sponges.

Tracing -In this method, a design is first traced on a tracing sheet .Then with the help of a carbon paper the design is transferred onto a fabric.Dark fabrics are a little more difficult to transfer patterns on. You can use red or white carbon to trace on them.

Free hand drawing- You can also draw designs directly onto the fabric through the free hand method .For this, however, you must have a steady and practiced hand.

After a design has been transferred onto the fabric, the fabric will need to be positioned on a painting board. The surface of the painting board should be smooth and non- porous. The painting board should be larger than the design area to prevent having to move the fabric around. The fabric is required to be secured to the board with the help of clips or masking tape.

Tips for Paint Preparation

Water can also be used the medium for thinning the paint instead of chemical thinner. Paint consistency varies with the variety of fabrics. The paint should not be very thin i.e., dilute while painting on synthetic fabrics,. It is desirable to apply more than two coats. In case of cotton the consistency of the paint really does not matter much. The paint tends to thicken during painting, to avoid this keep wetting the brush frequently and also add few drops of water and mix the paint.

Difference between Dyeing and Printing

Dyeing -Dyeing is the process by which dye or pigment is applied onto textile materials like fiber, yarn, fabric. Dye molecules are fixed to the substrate by adsorption, sorption and diffusion. The bond may be weak or strong depending on the dye. Dyes should be solubilized and then applied to the substrate. Different fibers are dyed with different dyes. Acid, basic, reactive, vat, sulphur, azoic dyes are different dyes. Different dyes are applied to different substrate.

Printing-Printing can be said to be as localized dyeing. In this process, dyes and pigments are applied in the substrate in a given pattern. Printing can be done using different method like block printing, roller printing, screen printing, rotary printing etc. Printing can be done in different styles like discharge style, resist style, direct style of printing.

TIE AND DYE

The oldest form of designing with colour is resist dyeing. The resist material could be thread, pieces of fabric, or substances such as clay and wax that offer physical resistance. The most common method of resist is tying with thread. Tie and dye is the name of a technique in which the areas to be in pattern are resisted by means of tightly wound thread. When dipped into dye, the resisted areas retain the original colour of the ground. Bandhani, chunari, laheria are some of the names of materials in which the pattern is created by tie-dyeing the fabric after it is woven. A typical tie and dye design is *bandhej* where the patterns comprise of innumerable dots; another is the *laheria* type where the pattern is in the form of diagonal stripes. Gujarat and Rajasthan are the homes of this type of fabrics.

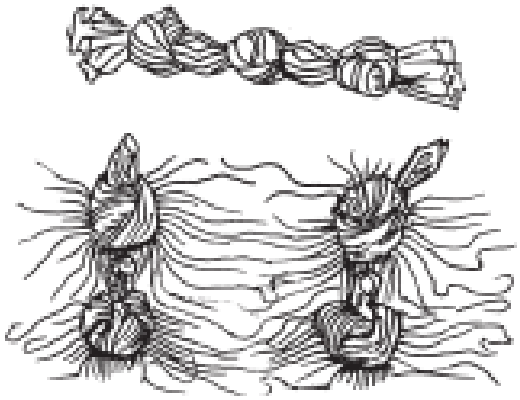
Purpose

1. To learn the concept of tie and dye

2. To learn the process of tie and dye through various techniques Conducting the Practical

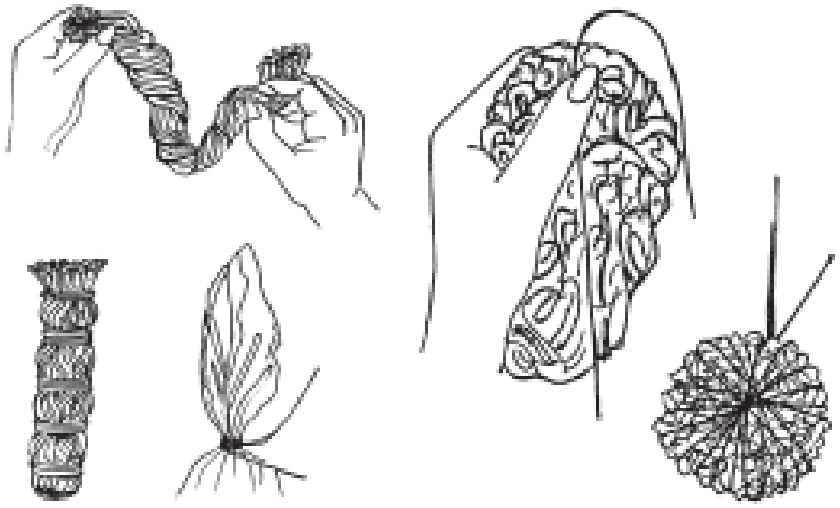
As a modern day craft, numerous techniques of tying are employed to get variegated effects. Resist can be offered by using threads of different thicknesses, or by the material itself through knotting, crumpling or folding and then tying over it. Some of the techniques are described below:

Knotting: It is one of the easiest and quickest ways of producing the design. Knots can be tied in several ways depending on the size, shape and grain of the fabric. The best results are achieved on fine fabric. It creates shaded circular patterns.



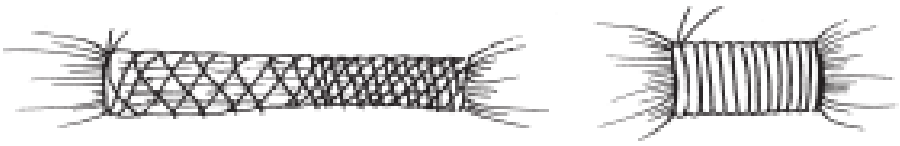
: Knotting

Marbling: This effect can be achieved in two ways. The material is gathered and turned into a ball and tied in all directions until it becomes solid mass. The fabric can also be twisted and coiled length wise and tied to create marbling effect. This method gives variegated and irregular cloud like effects. It is thereafter generally dyed in light colours, and may be repeated in two or more colours. It helps to create a multicoloured background, which can later be tie-dyed in a more definite pattern.



Making a Ball and Coiling

Binding*:* Certain parts of fabric are bound very tightly with thread before dyeing. Binding can be done in the form of a dot, a band, line, criss-cross or spiral. Designs are like stripes – straight or diagonal *(lehria)*, circles or spots *(bandhej).*

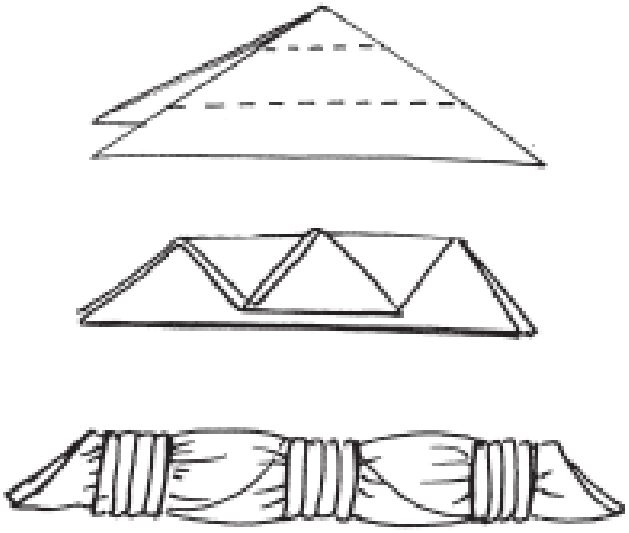


Binding

Tritik or sewing: The fabric is sewn with a needle using simple tacking stitches along a definite pattern. A strong thread is used with a large knot in the beginning. It is pulled so that cloth is gathered closely; and finished with a knot again to hold the gathers

together. The patterns created are pleasing bands of dotted textures of various shapes.

Folding: The fabric is folded in different forms, like pleats, squares, triangles. To hold the folds together binding or clipping is done using thread or clips respectively. The pattern created is in the form of symmetrical stripes, bands, squares etc. Best effects are achieved on thick materials because the fabric itself forms the resist. These patterns can be later used as background for block printing and embroidery.



DIFFERENCE BETWEEN DYEING AND PRINTING

Dyeing	**Printing**
1. By the dyeing process, dyes are applied on the whole fabric equally.	1. By the printing process, dyes are applied on the fabric localizedly to produce desired design.
2. Fabric, yarn and fibers are dyed by dyeing.	2. Generally printing is done on fabric.
3. In a dyeing process, dyes are applied on the both sides of the fabric.	3. Dyes are applied on olnly one side of the fabric.
4. No precise design is required for dyeing.	4. Design is must for printing.
5. In a dyeing process, only one dye is used.	5. In a printing process, one or more dye is used.

6. Precise temperature is required for dyeing.	6. In printing, it is not necessary to maintain precise temperature.
7. Thickener is not required for dyeing.	7. Thickener is must for printing paste preparation.
8. The density of dye solution is less than the density of printing paste.	8. In printing, the density of printing paste is higher than dye solution density.
9. Huge amount of water is required for dyeing.	9. Small amount of water is required for printing.
10. Steaming or curing is not necessary for dyeing.	10. Steaming or curing is must for printing to fix the dyes or pigments on the surface of the fabric.
11. Dyeing is comparatively cheaper than printing.	11. Printing is costly than dyeing.
12. Dyed fabrics are soft.	12. Printed fabrics are hard and harsh.

Difference between Hand embroidery and Machine embroidery

Hand embroidery begins with a piece of fabric tightly stretched over a wood or plastic hoop. From the time the first stitch is made, the crafter will make decisions about the color of thread and the type of stitch used. As the work of art unfolds, they may change their mind about which choices will produce the best results.

Hand stitching results in a unique piece of work every time it is created. Even if the exact pattern and thread colors are replicated, there will be subtle differences in the way the stitches are made and the area where colors and shading are used.

The type of thread used for hand embroidery differs from that used in embroidery machines too. Hand embroidery thread is stranded and comes in silk, cotton, or wool. The strands may be separated to make some areas flatter or more delicate, or combined for bulkier areas. This process gives the embroidery more texture and distinction between various areas.

- **Machine Embroidery**

The process of machine embroidery is much more exact and uniform than that of hand embroidery. Although the crafter can choose from thousands of designs and determine the thread colors they want to use, there is no room for editing along the way. Pre-designed patterns are loaded into the machine and the exact same pattern is produced

every time. Machine embroidery is like running papers through a copy machine; each piece is identical to the original.

The thread used in an embroidery machine is heavier than what is used for hand embroidery and it is typically made of polyester, metallics, or rayon. This thread is not stranded and cannot be separated to change the texture of any part of the embroidery. The same thickness will occur throughout the pattern, giving it a flatter appearance.

Which Is Best?

Hand embroidery and machine embroidery are two very distinct methods of stitching and each has its purpose. It just depends on your end-goal.

A hand embroidered work is more artistic and personal, making it the ideal way to create a special heirloom or a source of pride for the embroiderer. The process requires an investment of time and heart to include the details that will make the embroidery stand out. Depending on the skills of the person with the needle, hand embroidery can result in a lifelike piece of art that will make a unique display to be enjoyed by all.

Machine embroidery, on the other hand, produces more professional looking work in a fraction of the time it takes to do something similar by hand. The broad selection of designs available today provides everything that is needed for personal use and for small businesses as well.

Some home embroidery businesses focus on monograms while others might embroider men’s caps. These are all uses that require the professional results of an embroidery machine.

The same is true for sewers who want the versatility that an embroidery machine brings to their craft. They may want to add decorative detailing to home items like placemats or curtains, or add cute animals or cartoon characters to their children’s clothes. Even the smallest embroidery detail adds interest and value to all types of everyday items.

If embroidery is a new area of interest for you, your lack of experience doesn’t mean that you are limited in your choices. Every person who has become an artist with a needle and thread had to start with their first piece.If you prefer machine embroidery, no previous embroidery experience is required. Today’s embroidery machines are virtually decision-free! Once you decide what you want to embroider and in what colors, the machine will do the rest.

Tools USED FOR HAND EMBROIDERY

- **Embroidery hoops** are used to hold fabric taut while stitching. We use plastic ones for stitching and wooden ones for framing embroideries.
- **Different types of thread**

Like the selection of fabric, needle and style of design, it is important to learn about the selection of thread used for embroidering a particular design. The factors to keep in mind while selecting a thread are colour, texture,length, thickness and suitability to the final effect of the embroidery pattern. Threads are one of the basic materials needed for embroidery. The most commonly used threads are stranded cotton threads. These threads have mostly six separate strands which can be used together, or separated and used singly or in groups. These threads, often referred to as ‘stranded silk’ though they are actually mercerised cotton, are lustrous and suitable for most types of embroidery. The benefit of stranded cotton thread is that the strands can be separated and recombined in any number to achieve differing thickness and effects. Sometimes, different brands offer different numbers to the thread. The embroiderer can select the threads according to his/her requirements. Wonderful effects can be achieved by using different threads, like pearl cotton, silk threads, metallic thread, fine woolthread, and viscose rayon thread—the list is endless.

Metallic threads-This category of threads is an innovation in embroidery work. The use of metallic threads adds shine and glamour to the embroidery work. These are available in the market in colours like gold, silver, platinum, copper and antique or aged versions. Metallic threads are quite durable and require less care.

Satin and rayon threads-It is a term used for synthetic threads which give a brighter and shimmery look in the embroidery. These threads have a satin-like shine and are usually packaged as floss that can be separated in different ply.

Overdyed threads-These are shaded threads. These threads have more than one colour in a single strand. They can be hand dyed or mass produced in cotton or silk embroidery floss.These threads are available in different weights. Using these overdyed threads gives the embroidery pattern a totally different look because of changes of colour at short intervals.

Wool threads -These are used in some special embroidery forms where a thick woollen look is required in the embroidery. These threads are available in a variety of weights and colours. These threads are most commonly used in counted thread work.

Novelty threads -These include a wide range of styles, textures and material. Novelty threads can be fuzzy, metallic textured, leather, plastic, etc. They are used to give the embroidery pattern a special look.

Pure silk sewing thread-Embroidering on fine fabrics such as silk, a silk sewing thread can be used for fine embroidery such as faggoting, pin stitch and hem stitch, etc.Many other types of threads with special characteristics are available in the market with different brand names. These threads can be selected according to the suitability of the fabric, design, liking of the user, etc. Now, we are almost set for starting embroidering. We have even read the about threads now. Let us see how we can hold all these material together for a neat outcome.

3.Different types of fabric -Fabric is used to make garments and home furnishing items. Most fabrics are made from yarns, but the basic component of textile fabrics is fibre. These may be natural fibres, like wool, linen, cotton, silk, etc., or synthetic fibres, like acrylic, polyester, acetate, etc., Fabric is formed using a variety of techniques, like weaving, knitting, felting and netting (the four basic ways of constructing fabric). Mostly, natural fibres (with the exception of silk) are short and are called **staples**. The long continuous strands of silk and man-made fibre are called **filaments**. These staple and filament lengths are then twisted into yarns. The appearance and durability of the yarn is affected by the degree of twist. Gently twisted yarns are suitable for napped fabrics which are soft and rather weak. Tightly twisted yarns are used for smooth fabrics such as gabardine. In general, the tighter the twist, the smoother and the stronger would be the yarns.

Following are the fabrics commonly used for hand embroidery:

(i) Linen It is a fabric made from natural fibres, like from vegetables or animals and insects like silkworm. It is relatively soft, smooth, lustrous and is very strong textured. It is used for shirts, safari suits, kurtas, kurtis, and children's wear. It is also used for aprons, bags, upholstery and many home furnishing items.

(ii) Cotton It is a fabric made from cotton which i obtained from the cotton plant. It is soft, smooth and absorbent. Cotton is suitable for garments worn close to the skin to keep the body cool in summers, since it aids air circulation. A large variety of kurti, leenga-choli, saree, salwar-suit, shirt, kurta-pyjama, jackets, safari suit, trousers and children's clothes are made of cotton, and decorated by hand embroidery. It is also used for home furnishings like bed sheets, pillow covers, table cloths, table runners, curtains, etc. Cotton is suitablefor embroidery as it is easy to pull a needle and thread through it. When the weave is loose, it is easy to pass the needle with the thread, but when the weave of the fabric is tighter, it will be difficult or even painful for the fingers of the embroiderer while pulling the needle and thread through. The weave of the medium-to-heavy weight coarsely woven cotton is a little loose, hence making it easy to pull the needle and thread through the fabric.

(iii) Crepe It is a light-to-medium weight fine fabric and is used for making flowing garments since it drapes very well. It has crinkled surface due to the high-twist silk yarn or chemicals. This look can also be given by a special weave called the crepe weave. Crepe fabric was originally made using only silk, but nowadays different kind of fabrics, such as chiffon, cotton, and rayon, etc., are commonly used to create crepe fabric. Fur, silk and original leather, blended silk, crepe, linen, chiffon, etc. are being liked and used in the fashion industry. Among the contemporary fabrics, crepe is well-liked by customers and designers. Mostly, crepe has a creased or grain surface that has very small folds or ridges. It can be embroidered, embellished with different designs to create a more ethnic, traditional look for the end product. Different types of crepe include Moroccan crepe, wool crepe, plisse crepe, crepe de Chine and crepe georgette

(iv) Satin It is a fabric woven in warp-faced stain weave and has a smooth and shiny surface. Satin is a smooth, delicate and medium-weight fabric. It falls gently down the surface it has been draped on enhancing the natural shape of the surface. It has a lot of shine, which makes it uitable for use as garments as well as home furnishing. Because of its gentle shine and draping qualities, satin is ostly used for evening wear, bridal wear and party wear. Even though most embroidery stitches ca be easily done on satin, special care needs to be taken while fixing the frame. Because of its delicate

and slippery nature, it's very easy to damage the cloth or the embroidery while putting the frame.

(v) Velvet It is a medium-weight, mostly silk or synthetic filament yarn fabric with a cotton backing. It has a short, soft, thick warp pile surface that stands up vertically. There are various varieties of velvet fabric differing in their weight. Velvet is a type of woven and tufted fabric. In velvet, the cut thread fibres are evenly distributed over the surface, with a short and very dense pile weave which gives it a unique and lustrous feel. Velvet can be made from synthetic or natural fibres. Velvet's nap (the layer of fibre ends raised from the ground weave of the fabric) gets damaged when pressure is applied on it. An embroidery frame can damage its delicate surface, so velvet is not framed. Embroidery designs with complete filled areas and a filling stitch work show the best on velvet. Running stitches and narrow satin columns will sink into the velvet's pile, so they should be avoided Velvet is used for making evening wear. It is also used for home furnishing.

(vi) Silk The strength, lustre and softness of silk makes it the most attractive textile. Silk fibre is considered to be the perfect natural substance in all respects for yarn making. Silk is the longest of all natural fibres and is very smooth. It is said to be the most lavish, lustrous and rich fabric. Silk is one of the most popular fabrics for designer party wear because of its rich look. It is soft and comfortable, hence suitable for draping. It is also lustrous and luxurious. The embroidery on silk is mostly done with silk threads.

(**vii) Gabardine** It is a twill-weave fabric made of a variety of natural and synthetic fibres. It is a medium-weight fabric made of fine yarns. Gabardine is commonly used for making garments, such as coats, jackets, skirts and trousers, due to its nature of holding a steady crease. Even though it is thick and stiffer than materials described earlier, it is comfortable and soft to wear.

(viii) Georgette This fabric is a thin, transparent, lightweight fabric and is mainly made of highly twisted silk yarns. The twisted yarns are used in both warp and weft directions. Like silk and satin, this also has a soft feel and drape well.

(ix) Jean It is a durable cotton fabric. It is made of fine cotton yarn in twill weave. It is mainly used for making trousers, skirts, jackets and shirts, etc. ***Note:*** The term jean

here refers to the fabric while popularly ‘jeans’ refer to the trouser-like garment made of denim fabric.

(x) Organdy It is a thin, light and transparent cotton fabric in plain weave with a stiff finish. It is made from good quality combed spun yarns. The yarn is made from long staple cotton and is spun with many twists. This, along with the finishing process, produces its characteristics of transparency and crispness. Its sheerness and crispness are the result of an acid finish given to lawn fabric in gray state. It is used for making saree, kurtis, tops, and other children’s garments. This fabric is mostly used for summer and evening wear.

(xi) Poplin It is a fine and tightly woven cotton fabric of plain weave. t is the fabric with fine cross-ribs created by finer warp yarns and heavy weft yarns. Poplin is mainly used for making shirts, kurtis and children’s garments. Many times, it is used for home furnishing items also. ‘

(xii) Rubia It is a thin muslin, slightly thicker than the voile fabric. It is always made of ply yarns in a yarn count of 150–200s constructed with plain-weave. It is used for making blouses, kurtis and other dress material.

(xiii) Chiffon It is a lightweight, sheer, shiny, and plain-weave fabric. It is made from highly twisted yarns. It has good drape and is used for making evening wear and party weargarments.

(xiv) Cambric It is a closely woven plain-weave cotton fabric which is finished with a little gloss on one side. It is a medium weight fabric. It is used mainly for making children’s and adult garments. It is thicker than rubia.

(xv) Voile It is a sheer, transparent, soft, lightweight, plain-weave fabric. It is made of highly twisted spun yarns. It is used for making children’s wear, blouses and dupattas, turbans and sarees.

4. Different types of needle The most essential tool without which hand embroideryis not possible is the needle. It has three parts, namely the eye, shaft and point. Needles are avilable in different thickness, length, size of eye, sharpness and shape of point.The number indicates the size of the needle— the higher the number, the finer would be the needle. Different brands of needles some time offer different numbers to

the needles. Mostly, embroidery needles are available in assortment packages. For example, an

embroiderer can purchase different types of needles in packages of assorted sizes 1–5, 3–9 and 5–10, etc., to have a variety of sizes available while embroidering. The selection of the size of the needle is done based on the weight or thickness of the material, the required fineness of the embroidery and the kind of thread to be used, e.g., if silk thread is being usedon chiffon or silk-like soft material,

(i) ***Crewel needle***-It is the basic embroidery needle most often used for hand embroidery. They are sometimes also known as embroidery needles. Except for its long slender eye, it does not differ materially from the sewing needle in shape, and it comes in the same size numbers. For embroidery, crewels should be used unless some other kind of needle is specified. The long eye helps inserting and accommodating embroidery threads easily. The sharp tip of the needle helps the needle pierce the tightly woven fabrics more easily. Crewel needles come in different sizes but most popular sizes to embroider are size 7 and 9. (ii) ***Tapestry needle*** - It is very useful for wools, matty and open weavefabrics. It enables the embroiderer to avoid the splitting of threads. This needle's rounded point allows it to slip between the threads of the materials rather than through them. Tapestry needle point is blunt and it has a large eye; it is inserted between the threads of the fabric without piercing them. These needles are commonly used in counted thread work such as cross stitch, pulled and drawn thread work, and lacing on composite stitches. Tapestry needle has a shorter shaft than a crewel needle but it has a much longer eye, which is slightly larger than the shaft. Due to the open holes in the weave of the fabric, even the blunt tip can pierce through it easily. Tapestry needles are the most appropriate tool for any type of stitch that involves lacing for surface embroidery. The blunt tip of the needle prevents it from snagging other stitches on the fabric. Tapestry needles are available in the local market in different sizes mainly from 13 to 28, with 13 being the largest and 28 being very fine.
(iii) **Milliner needle** This is also called a straw needle. The milliner needle has a shorter, almost round eye. It has very long shaft and a sharp tip. The eye and the shaft on a milliner needle are the same size, which makes these needles appropriate for working any wrapped stitches such as bullion knot, French knots, etc. They are also used for

pleating and creating fancy stitches. In bullion knots and French knots, the shaft and the eye of the needle are of the same size, making it easy to pull the milliner needle through the wraps and make the knots on the fabric. It makes these wrap stitches so easy to work and the stitch comes out looking neat.

(iv) **Chenille needle** This is a big needle with a long thin eye and a sharp point used for thick threads. This needle is appropriate for stem stitches, lazy-daisy stitches, straight stitches, mirror work, etc. It is also useful for tacking couched threads to the back of the fabric.

Punch Needle Another type of embroidery is needle punching, which involves looping ribbon, floss, or yarn through the fabric to create a pattern. While not the typical embroidery that many people picture when they think of this handicraft, needle punching is growing in popularity.

There are arguments that needle punching began either in Russia or ancient Egypt. These needles have a hollow shaft, as well as a depth gauge. The pointed side of the needle has the eye and is inserted into the fabric to put some of the thread into the pattern. (v) **Sharp needle** It is mainly used as a sewing needle and has a small eye. It may also be used for embroidery.

(vi**) Between needle** It is same as the sharp needle, but shorter.

(vii) **Beading needle** It is a long, very fine needle with a tiny eye for small beads.

- **Embroidery hoop or frame -** This tool is required to hold and stretch the fabric to desired firmness and tightness while doing embroidery. A frame is a set of two rings; each ring fits inside each other, so that the material placed between them is held firmly and the fabric surface becomes tight and smooth to embroider. The most common type of frame for hand embroidery is the ring frame. It is always advisable to use a frame or hoop while doing embroidery to give the embroidery pattern a beautiful, neat and finished look. These frames are made of wood, plastic or metal and are easily available in the market in different sizes. Their size is measured by diameter, mostly ranging fromc 7.5–30 cm (3–12 inches) they are suitable for doing embroidery on small designs. The hoop usually has a nut and a bolt for tightening of the fabric between the two rings of the frame. While stretching the fabric on the

frame, it should be kept in mind that unnecessary tightening by the nut bolt can damage the fabric. When embroidery is to be repeated on different parts of the fabric, the frame may be fixed on different parts of the fabric according to the placement of the embroidery design. When embroidery is to be done on a large design, an adda (a big adjustable frame using mostly wooden bars) may be used. Plastic frame is a good option for embroidery work, because it is durable and it doesn't stain the fabric. Many times, metallic frame stains the fabric because of the rusting. Wooden frames may draw the yarns of the fabric, hence damage the fabric or the embroidered pattern. Sometimes when the surface of the wooden frame is not smooth, fine wooden strands may be pricked in the fingers of the embroiderer.Other materials used for embroidery. 6.**Needle threader** It is a small handy tool with a wire loop to thread the needle. It is very helpful for those who have difficulty in threading needles. Fabric glue This kind of glue is used only for fabrics and does not damage it. It is used to attach beads, sequins, pearls or different decorative material on the fabric. 7.**Seam ripper-**It is a small tool to open or unsew the stitches in case of faulty stitches. 8.**Thimble-** It is used to protect the fingers from getting pierced or discoloured during embroidery. Metal, rubber and plastic thimbles may be available in the market. The embroiderer must take care of his/her hands and use thimble while doing hand embroidery. Thimbles can be worn in any of the fingers or the thumb of the hand. Mostly, it is worn in the index or middle finger which holds the needle. It must be comfortable and should be light in weight. It is used to push the needle to the fabric painlessly without harming the finger.

9.Ruler-A simple ruler of 6 or 12 inches may be used to measure the accuracy of embroidery as per the motif and design whenever it is required. Wooden, plastic and metallic rulers are available in the market. 10.**Trimming materials-**These are used to decorate the embroidered patterns made on any fabric, sample or garment. They may be selected according to the embroidery design, type of fabric, end use of the product or material, liking of the user, etc. Different variety of trimming materials such as stones, mirrors, gota patti, beads, dori, etc., are available in the market. The embroiderer can select them according to his/her requirement.

11.**Scissors for hand embroidery- Small scissors** of a 3–5 inch length, are mostly used by the hand embroiderer to cut the threads, edges of the fabric, etc. Mostly, scissors with metallic or plastic handles are available in the market. The embroiderer can use it according to his/her comfort or requirement. It is advisable to use sharp scissors of stainless steel. Handle the scissors carefully to avoid any accident. 13.**Micro-tip scissors -**It is a sharp tip pointed small scissor, mainly used to cut fine threads very near to the embroidery pattern.

14.**Pinking shears -**These have blades which give a zigzag edge to the fabric. It is used to cut the fabric to prevent fabric edges from unravelling.

15Applique scissors Also sometimes called “duckbill scissors” because of their shape and the way t that they look, these scissors have a very specific job of removing extra fabric. If you are going to be cutting around your work when you are finished, then you will want a pair of these scissors, as they push the fabric away from the cutting edge so that you do not accidentally clip your work and make a mistake. You will have a very clear cutting path when you use these scissors and you will be able to cut incredibly close to your stitches without having to worry about whether or not you are going to make a mistake. Embroidery designs The embroiderer can select the design according to his/her requirement. Designs may be taken from the catalogue, Internet, magazines, etc.

16.**NEEDLE THREADER -**A needle threader is a very useful gadget for threading difficult threads through the eye of a needle. These often come free in packs of assorted sharps needles so check your sewing supplies before you go out and purchase one. Needle threaders have silver round heads that look like a coin. These simple cheap ones work just as well as more expensive versions.If you have never used a needle threader before you are in for a treat! Read my article on how to use a needle HYPERLINK "https://blog.treasurie.com/how-to-use-a-needle-threader/"threader. 17. **TRACING**- There are many options to trace or transfer the pattern onto your fabric. Tracing paper, tracing wheels, transfers, lightboxes, water-soluble pens and iron-on transfers are different options to try out and find the one best suited to you. If you are looking for a free option, use a brightly

lit window. Hold the paper with the pattern up or tape it in place on the glass. Then hold the fabric over the paper and start tracing.

18 **PENS** - Water-soluble pencils, tailor's chalk, pens and fabric drawing inks are different options for the drawing of the pattern.

19.- Pressing your work regularly is an important part of keeping the stitching flat and not puckering. Many fabrics become wrinkled from the over handling during embroidery or from the edges of the embroidery hoop.Be careful with using steam in case any of the colors of the threads run on the fabric. Red always seems to be the one color most likely to run

20.**INTERFACING** - Softer delicate fabrics are easier to work with if they have a backing. Thin interfacing or special soluble interfacing is often used with embroidery.

21.PINS - Top-quality stainless steel pins with no rust are important and of course a pin cushion to store them.

22. **Light tablets** are my preferred method of transferring embroidery patterns. They allow for much more accurate drawing than you get from a sunny window or homemade light box.

23.**Pin Cushions** Chances are very good that you will have a number of different needles that you will be using when working on an embroidery project, and to keep them all safe and in one location you will want to have a pin cushion. Needles are rather small and if they fall on the floor or in between the couch cushions they can be very difficult to retrieve, so it's a good idea to take steps to ensure that you always know where your needles are.Pin cushions come with a number of different types of fillings, so you need to make sure that you do your research to find the material that is right for you. If you opt for wool or cotton, then your pin cushion will be a little heavier, and the lanolin in the wool may help to keep your needles shiny and smooth. polyester is another option, but the pin cushion will be very light and easy to knock off of your table. Some companies make pin cushions that are filled with sand or a powder, and while these are nice and heavy, if they are damaged they can make a real mess.

Important tips for good embroidery work-

- Before starting embroidery work, wash hands with soap so that the fabric or the material used remains as clean as new.
- Ensure that the embroidery hoop (ring or frame) is fitted properly before starting the embroidery work. For holding the fabric tight and stretched, wrap a ribbon around the inner ring, if the outer ring is loose.
- The thread should not be very long (i.e. not more than 17 inches). A very long thread pulled too often through the fabric tends to coil or fray towards the end.

  Avoid using a knot when starting or ending an embroidery thread. Bring the needle straight up and start the embroidery, holding the thread onthe wrong side of the fabric and hiding it under the working stitches. Remember that it should not be pulled so as to avoid damaging the stitches. The finished embroidery work should be neat and even, on the wrong as well as the right side. Students in the learning stage can make knots while doing embroidery.
- Make the embroidery in a way that the shape of the design is maintained properly. It should be done gently and the working thread should not be pulled too much. Use small scissors to cut the threads.
- Avoid putting pressure over the fabric, otherwise it may become loose.

The main principles that influence embroidery work

- Design of the embroidery
- Placement and purpose of the embroidered project
- Materials and equipment used for embroidery
- Fabric selection
- Colour scheme
- Finishes
- Neatness

All

Embroidery starts with a design. Either as a freehand drawing of a design or transferring a copy of the design you want from a sheet of paper to the fabric by a variety of means (learn more about the different methods used to transfer embroidery designs to fabric here). You can plan the design on paper and then develop on it on the fabric or start the design from the fabric itself. Find some inspirations to make your own embroidery design HYPERLINK "https://sewguide.com/design-embroidery/"here . You can copy designs from easily available embroidery design works but developing your own design is wonderful. Imagine having a work of art which no one else has conceived and conceptualised other than you. The most popular subjects for embroidery are from nature- plants and flowers, fruit, vegetables, sceneries of nature . Learn more details on designing embroidery- 10 sources of inspiration; how you can convert a favourite photo into an embroidery work here. Simple geometrical forms like circles squares can also form easy to do designs. Border designs are also very popular. They can be designed on their own or along with other motifs. You can draw inspiration from traditional embroidery patterns and adapt them to suit your style with simple changes and make it your own. This way, those long forgotten work stays alive

1. Design (as product)-

Design refers to any article of creative art; formed by the assembly of elements as per the guidelines given by different principles. The product may be two dimensional or three dimensional; creating impression, expression or symbolism. Thus the aims fulfilled through the creation of design (as product) are as follows:

- **order**; resulting in arrangement and creating a structure
- **beauty**; resulting in improved appearance and interpretation of idea characteristics Design as product is thus creation of man i.e., is manmade in nature. It can be classified into two types depending of the type of stimulation it produces. The stimulation produced by the design as product can be:
- **Behavioral**; include those that affect the perceived behavior of the person rather than the physical self. The garments as behavioral products are political,

economic, social, religious, communication and cultural in nature where instead of stimulation of the physical .

- **Sensory**; include those that are perceived or felt by the body senses like sight, sound, taste, touch and smell. The products, garments and accessories, create sensation by stimulation of senses during use and when it is observed . The garments are worn next to the skin so they experienced from inside by the wearer himself and from the exterior by both the wearer as well as the observer. The first and foremost stimulation in garments is visual created by the colour followed by line, shape and texture; touch sensation is perceived from the texture of almost all textiles; sound is also experienced in case of certain fabrics during movement (as soft swoop of satin, the rustle of taffeta, the rubbing of corduroy, the crackling of leather, or the clatter of beads) and the smell in few like the fragrance of sandalwood beads but the sense of taste is not inflicted by the garments at all.

- **senses,** the psychological components are affected. The garments serve as a media to communicate ones personality, to symbolize ones affiliation to an institution, to convey ones social and economic status and to convey religious thoughts and political inclination .

  Thus the garments and accessories worn by the individuals have the features of both, the sensory and behavioral designs i.e., are perceived through the senses and behavior of the person.

  The creation of clothing as design product is also affected by different factors as follows:

- **Purpose**; depends upon individuals' needs and preferences
- **Resources;** the materials that will compose the garment
- **Technology**; the methods or techniques that will be used to construct the garment
- **Approach;** the conformity of the garment to the conditions (social, cultural, and economic) and the individual (behavioral changes)

2. **Placement and purpose of the embroidered project -**First you embroider a design on a piece of fabric and then decide to use it for something – is that what you do?. That is a wrong way to go about it.. You should do the embroidery after

deciding on the purpose of the project and where the embroidery unit will be placed. The design should be appropriate for the scale of the project. Simple designs may work better in some projects than complicated intricate designs. The proportion of the design is very important and so are the placement of design units in relation to the other like the distance between units. For an upholstery fabric, you may want an elaborate intricate design but that may not look good on a garment. So this should be taken care of at the design stage. For sleeves you need 2 mirror image designs in exactly the same positions – this has to be planned after the pattern of the sleeve is marked but before the fabric is cut. Appropriate placement and distribution of the design is paramount in embroidery – imagine the embroidery in your tunic placed just over your bust level on both sides – I would not want that exactly placed there, however beautiful the design is. But I have seen it done and it can look really awkward

3.Materials and equipment used for embroidery-

The basic materials used for embroidery are the **fabric, a frame and thread** to do the work. But with more tools, you can do more. Embroidery hoop to hold the fabric, pencil and other marking tools different type of needles appropriate for the fabric and the embroidery concerned, cutting tools like scissors, rulers are all things you will need as you turn from a beginner to a seasoned embroider. Specialised equipment can make your job easier. To do complicated work like applique you can do a better job with the applique scissors; ari work needle can easily do chain stitch embroidery work far better and faster than the ordinary needle; you can make small holes with a stiletto for broderie anglaise work to make eyelets. Different kinds of threads are used to do embroidery stitches like the common embroidery thread with 6 strands or Perle cotton thread, or metallic thread or even wool thread. Ribbon embroidery work is a study on its own and requires ribbon in many colours. Each thread departs their own look and change the result of the work .

4..**Fabric selection -**The type of fabric used, it's surface texture, the prints on the fabric are all important aspects in the final look of the embroidery. For eg., A chequered fabric is used to do chicken scratch embroidery. That type of embroidery would not look as good on any other type of print. Cross stitch is done on more loosely woven

fabric. You need an even weave fabric for counted satin stitch and other counted stitches like that of pattern darning or black work. The printed fabric like gingham, striped fabrics or huckaback, are all popularly used in embroidery for their wonderful designs or weaves. Canvas work is done on plastic canvas with open holes – the thread fully covers the canvas in vibrant patterns. The shadow work is best when done on transparent sheer fabrics For some embroidery you need same thickness for the weft and warp threads so these may not be successful when done on some fabrics like polycotton or satin with different types of weft and warp thread . If you want embroidery on a garment which will be worn and washed at home it had better be a fabric with easy care instructions.Wearability and washability are important. Learn more about the best fabric used for embroidery here. Transparent fabrics or fabric with open weaves like net fabric call for a different treatment and embroidery technique than does fabric like linen. Looped, piled or flocked textured fabric all can be embroidered but they need special treatment and a careful analysis of what suits the fabric texture. 5.**Colour scheme -**Colour coordination is more important in embroidery than anywhere else. Contrasting colours, monotones, shades of the same colour, an ombre effect – all are popular. But colors are mostly personal. What appeals to you maynot appeal to me. What is popular in one society may not be used in another. A girl may want pink flowers but a boy may see it as childish. There are different theories on finding the right colour combinations – you can check out the popularly used colour combinations and how they are formulated according to the colour wheel here. You should know that colour value of a colour changes when they are placed with other colours – so keep the fabric and the colours you are going to use with the embroidery together and decide on the colour scheme you are going to choose for the embroidery project.

In my personal experience contrasting colours work best in embroidery – for eg a bright red flower amidst green leaves on a light colourd fabric can look striking when compared to the same work done on a black fabric. But then again, this depends on the effect you intend to create with the project. If you want a muted look, tone on tone embroidery can look very elegant (this is the same colour thread as that of the fabric used for embroidery). Another idea is to use three tones of a single colour—light, medium and dark on fabric with one of the shades of the colour.The number of colours

used can also be a personal choice but restricting the colours to three of four is more prudent for a unified look.

6.**Finishing -**Embroidery work involves materials and methods which can determine the quality of the final product. Base materials, different raw materials, various techniques to carry out stitches and many other finishing aspects in the end products are important from the point of view of quality. Finishing of the embroidered products is one of the very important aspects of the quality of embroidered finishing process.

Embroidery finishing process- After the embroiderer has completed the embroidery work, the finishing needs to be done to improve the quality of their work and give high quality services to the clients.. The finishing process is much more than just folding up the embroidered product or garment, and removing the backing. Following are the main issues which should be sorted and rectified during the finishing process:

(a) Thread tails Trim off the thread remains as near to the article as possible, and take care not to cut any locked knots

(b) Missing stitches When some stitches are skipped and are found missing, they should be modified. The simplest way for this is to thread a hand-sewing needle with a double strand of embroidery thread matching the base fabric and do a hand satin stitch to fill in the areas, in **which the stitches are missing.**

(c) Stray threads They are the threads that often get trapped during the processing of the stitches on the product or garments. Do not cut the locked knots; these threads should be trimmed as closely to the stitches as possible.

(d) Thread loops -If one observes thread loops in the same direction as of the stitches, they should not be trimmed. Instead, the embroiderer can use fingernails to pull the loops to the wrong side or backside of the garment. However, if thread loops are in an opposite direction of the stitches, it is safe to trim them. They should be trimmed as closely to the stitches as possible.

(e) Crooked logo or embroidered product Firstly, spread the garment evenly on the trimming table, then if the embroidery appears slightly twisted and wrinkled, steam iron

well on the embroidered area. When the embroidery is hot (because of the effect of ironing), twist and turn your hand and stretch the fabric a bit softly. Repeat this process a number of times. Finally, check the embroidery again.

(f) Stains on embroidered product While doing embroidery, the fabric might acquire some stains like oil, dust, etc. There are many ways of removing stains depending on the type of fabric and type of stains. Most of the stains can be removed with a drop of dish soap and water. If this does not work, once the product is dry, you can spray the area with acetone or bleaching agent in case of white fabrics depending upon the type of stains.

(g) Damaged embroidered product The damage caused to the product while doing embroidery or hooping should be removed properly. Onemust not finalise and deliver the product to the client with damages as it might will be unfair to both the client and the worker, besides damaging the reputation of the organisation or the business handling the project. The best way to deal with it would be to bring the situation to the attention of the customer and let them decide what they wish to do. They could ask for a replacement, the cost of which could be borne by the organisation or the business.

(h) Ironing and packaging After finishing the embroidered product and checking the above points, the product is finally ironed to remove all the creases and wrinkles and folded properly. At the end, the packing is done according to the packing methods followed in that organisation.

7. **NEATNESS**

a) Before you begin to stitch on a piece that has definite stitching paths, think about where you're going before you start stitching. Here, for example, we have an area with lots of stems and a few leaves. Once you know what colors and stitches you're using (in this case, different greens and stem stitch), look at the design carefully and decide a reasonable stitching path that will allow you to get the most out of the thread you're going to start stitching with. We have to stitch that element in the way that makes the most sense, wasting the least amount of thread on the back, and keeping things neat and tidy at the same time.Each time tackle an element, then, think before you start stitching! Work out a path that makes sense as you

stitch it, that allows you to use your piece of floss to its best advantage, with the least amount of waste on the back, and no big jumps to other unconnected areas.

b) Pay Attention to Beginnings and Ends the beginning and the end of the thread that end up causing the biggest mess on the back. there are a couple tricks that can help you keep the starts and stops a little neater.For the beginning of your threads, the most obvious trick is to avoid a knot on the back of the embroidery.

So, consider beginning your threads without a knot on the back. One way to do this is to use a waste knot on the front of the work, followed by a few tiny backstitches towards the beginning of your line.

5.EMBROIDERY PATTERN

Design transferring techniques

Transferring the design to the fabric is the primary task in embroidery. Other than in free machine embroidery, i.e., stitched without designs, it is necessary to transfer the design selected for your stitch onto the fabric. There is a wide range of technique for this; each technique differs with its application. Select a design suitable for your work with respect to the fabric used, design selected, materials available, etc. The basic design transferring technique are traced method, Dress maker's carbon paper method, pricking and pouncing method and tacking/basting method.

Tracing method is most suitable when a light coloured, light weight fabric such as cotton lawn or a fine calico is used. When the design is drawn or printed in dark thick colors, it easily helps to see through it with light colored fabrics. The main advantages of this method are it is less time consuming and requires no other materials except a sharp pencil or a disappearing ink pen and a light box. The light box is used for transferring the design onto the dark fabric. But care must be taken as we may ignore any detail of thse design, resulting in an incomplete imperfect design.

TRACING METHOD

Dress maker's carbon paper method is an important method widely used for transferring the designs. It works in the same way as the stationary carbon, but it tends to be on heavier paper, less likely to tear when pinned. It is available in different colors like blue, white, yellow, etc., hence it is used with both dark and light fabrics.An important precaution to be followed is not to lean or rub the paper while drawing the design, as it may cause smudges of the carbon marking on the fabric.

Pricking and pouncing method is an ancient method of transferring the design onto the fabric. It is one of the methods followed widely throughout the medieval period and before. While now mostly suspended by other more convenient methods, it still works and is very useful for transferring large designs, where the previous methods not suitable. Use fine pouncing powder or similar, though for pale fabrics where this doesn't show up sufficiently, blue powder is available. Special pricking wheels are used for transferring complex designs. Though, it is time consuming it gives, good output and also it is less expensive. It is suitable for all kind of fabrics other than the slippery synthetic fabrics.

Tracking (basting) method is another important transferring technique. Most of the transferring methods require the fabric to be, worked to be marked up directly, whether with a pencil, or disappearing ink pen, carbon paper or pounce powder etc. in all these methods, there are chances to get marks, which we didn't intend on the fabric, whether smudges or lines. But, in basting method, the design is tacked and can be unpicked carefully, if it is still visible, when the embroidery is completed. The main drawback in this method is that it results in a mirror-image on the fabric

Transferring design with stencils A stencil is a cut-out of a design pattern to help make an identical copy of it on another surface, accurately. Stencils are extremely useful for repeat designs, mixing and matching for a unique style. It works on light and medium weight fabrics, like cotton, rayon, linen, silk, and many synthetic blends or mixed fabrics. First of all, select the stencil for the transfer of design and place it on the right side of fabric. Then, use a transfer pencil or pen to trace the design in the cut out areas of the stencil. Stencils of different designs and sizes are available in the market. They are made of different materials like metal, plastic, thick paper, etc. Stencils may be selected according to the requirement of the embroiderer.

Transferring design with heat A common way to transfer images is with heat using design transfer sheet or paper, found in almost any craft or sewing store in the market. A sheet of design, an iron and a pressing cloth is required for tracing the design. Designs can be traced directly if the design is printable on a transfer paper or sheet. To print the design on the fabric, place the fabric face down and tracing sheet on it then heat it with an iron for an appropriate time to transfer the design on the fabric. A transfer paper or sheet of printable design is available in the market with detailed instructions, including time period for heating, on how to transfer the design. The design will transfer to the fabric or garment perhaps in a few seconds.

Transferring design using light or tracing table In this method, an embroidery pattern is transferred, by using light. It allows tracing each line of the design. Both daylight as well as a lightbox can be used. To use daylight, find a bright window that receives a good amount of sunlight. Now tape the design on to the glass of the window and tape the fabric over it as the sunlight shines through the fabric. Now the design can easily be copied by way of tracing on to the fabric. Or else, a lightbox can also be used. A lightbox is a box with a transparent glass on top and a light source (usually a bulb or small tubelight) attached under it. When using a lightbox, the design is put on the glass top of the lightbox and the fabric is taped over it. The light will expose the design and it can be traced and transferred to the fabric easily with the help of an appropriate light shaded pencil so the design is not smudged.