UNIT: III BASIC EMBELLISHMENT TERMS

Printing - it is the process of applying color 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.

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 - An ancient variety of decorative needlework. Designs and images are created by stitching strands of one material onto another.

Applique -This comes from the French word "appliquer," which means to apply or put on. In sewing, applique is used to describe the process of applying one kind of fabric on top of another layer of fabric. This is fixed into place by sewing or by another fusing means. It can also refer to a surface embellishment.

Quilting - It is a technique where two or more layers of fabric, usually with light padding in between, are sewn together with lines of stitching. The stitches are often worked in parallel lines, forming squares or diamonds in a geometric pattern.

Patchwork - A form of needlework that involves sewing together small pieces of fabric to create a patchwork like effect. This is very popular for quilting. Can be done by hand or machine**.**

Smocking – it is a traditional embroidery technique that gathers fabric together into tight pleats so that it can stretch and return to its gathered shape. It is often used as a form of decoration on a garment, as the gathering of the material and stitches can be formulated to create patterns.

Trims- These are the Material which are used in the sewing room other than the fabric to make a garment, are trims. They are directly attached to the fabric to make garments. Trims

can be threads, buttons, lining, beads, zippers, motifs, patches etc. They add a style quotient to the overall look of the wearer

Fringe- it is an ornamental border consisting of short straight or twisted threads or strips hanging from cut or raveled edges or from a separate band a lampshade with a fringe.

Painting - It is defined as the process of applying paint, or another medium, to a solid surface – usually a canvas. Paints or other forms of color are commonly applied to using a paintbrush. ... In the art world, the term "painting" is used to describe both the act of painting and the resulting artwork created by the action.

Printing - In printing, one or more colors are applied to the fabric in certain parts only, and in sharply defined patterns. Printing is therefore called as localized dyeing. The dyes and pigments are applied locally or discontinuously. In this article I will concentrate of the types of printing methods in terms of the machinery used to deliver the print paste and the mode by which paste is delivered to the substrate, be it flat screen, rotary screen, copper roller, ink jet printing or another mechanism.

Different Types of Textile Printing Methods:

There are five main methods of printing a fabric, these being the block, roller, screen, heat transfer and ink-jet methods. The heat transfer method differs from the others in that it involves the transfer of color from the design printed on paper through the vapor phase into the fibers of the fabric. With the other methods the dye or pigment is applied to the fabric surface through a print paste medium. The ink jet printing process however is a comparatively recent innovation and is referred to as a 'non-impact' method, because the print paste is fired on to the textile from a jet which is not actually in contact with the fabric.

Printing is carried out with different instruments. Different methods are used to produce an impression on fabrics. Method of printing depends on the demand of the user and the quantity to be printed. It also depends on the type of material and the end use of the printed product.

Following methods can be used for printing of a fabric:

1. Block Printing
2. Roller Printing
3. Screen Printing
4. Flat Screen Printing
5. Rotary Screen Printing
6. Transfer Printing
7. Ink-Jet Printing
8. Carpet Printing
9. Jet spray printing
10. Warp Printing
11. Resist Printing

12. Electrostatic Printing
13. Photographic Printing
14. Photo Printing
15. Pigment Printing
16. Blotch Printing
17. Non-fabric printing
18. Burn-Out Printing
19. Flock printing
20. Direct Printing
21. Discharge Printing
22. Duplex Printing
23. Stencil printing
24. Two-phase printing
25. All over printing
26. Special printing methods:
    - Space dyeing
    - Kalamkari

1. Block Printing:

Block printing is a method where the pattern was cut into wooden blocks, or was built through an assembly of metal stripes, nails and so on. The print paste is applied to the design surface on the block and the block then pressed against the fabric. The process is repeated with different designs and colors until the pattern is complete. The block printing is used from time immemorial and is still being practiced in all Asian countries as it can be done even at homes by the people in their free time. **Block printing** is a slow and laborious process and is not suitable for high volume commercial use. This printing method is used only at small scale or in cottage industry and is not used at industrial scale because of less flexibility and productivity.

2. Roller Printing:

In this method, engraved copper cylinders or rollers are used in place of handcarved blocks.

When the rollers move, a repeat of the design is printed on the fabric. **Roller printing** has traditionally been preferred for long production runs because of the very high speeds possible. It is also a versatile technique since up to a dozen different colors can be printed simultaneously. The basic roller printing equipment consists of a number of copper faced rollers in which the design is etched. There is a separate printing roller for each color being printed. Each of the rollers rotates over the fabric under pressure against an iron pressure roller. A blanket and backing cloth rotate over the pressure roller under the fabric and provide a flexible support for the fabric being printed. A color doctor blade removes paste or fibers adhering to the roller after contact with the fabric. After the impression stage the fabric passes to the drying and steaming stages.

3. Screen Printing:

This type of printing has increased enormously in its use in recent years because of its versatility and the development of rotary screen printing machines which are capable of very high rates of production. An additional significant advantage is that heavy depths of shade can be produced by screen printing, a feature which has always been a limitation of roller printing because of the restriction to the amount of print paste which can be held in the shallow depth of the engraving on the print roller.

There are two basic types of screen printing process, the flat screen and the rotary screen methods.

4. Flat Screen Printing:

As the name suggests, the screens for this printing method are flat as opposed to circular as in rotary screen printing. The screen is a woven mesh, made from either polyester or polyamide. The mesh is stretched over a rectangular frame, originally made from wood, but now made from metal alloy to reduce weight and increase durability. Worldwide, about 23% of all printed textile fabric is produced by by flat screen printing.

5. Rotary Screen Printing:

Rotary screen printing uses cylindrical screens as opposed to flat screens. Again, a separate screen is required for each color of the design being printed. More complex designs require the application of many different colors, and typical rotary screen printing machines have the

capacity for up to 20 screens. The screens rotate in contact with the substrate and the print paste is fed from inside the screens. The paste is forced from out of the inside of the screen by means of a metal squeegee blade. Worldwide, about 61% of all printed textile fabric is produced by the **rotary screen** method.

5. Heat Transfer Printing:

Transfer printing techniques involve the transfer of a design from one medium to another. The most common form used is heat transfer printing in which the design is printed initially on to a special paper, using conventional printing machinery. The paper is then placed in close contact with the fabric and heated, when the dyes sublime and transfer to the fabric through the vapor phase.

6. Ink-Jet Printing:

Digital ink-jet printing is one of the most modern ways of printing textile fabrics. This method can be used for most of the commercially available fabrics. There has been considerable interest in the technology surrounding non-impact printing, mainly for the graphic market, but the potential benefits of reductions in the time scale from original design to final production has led to much activity in developing this technology for textile and carpet printing processes. The types of machines developed fall into two classes, drop-on-demand (DOD) and continuous stream (CS).

7. Carpet Printing:

The printing of carpets only really achieved importance after the introduction of tufted carpets in the late 1950s. Until then the market was dominated by the woven Wilton carpets and Axminster designs were well established, but by the 1980s tufted carpet production accounted for some 80% (by area) of UK production. Much of this carpet production was printed because the range of patterns possible to produce using tufting machines was limited and there was a desire to produce a greater flexibility of design for these types of carpet.

8. Jet Spray Printing:

Jet printing is a non-contact application system originally developed for printing carpets, but now increasingly used in the textile sector. Designs are imparted to fabrics by spraying colors in a controlled manner through nozzles.

9. Warp Printing:

The printing of a design on the sheet of warp yarns before weaving. The filling is either white or a neutral color, and a grayed effect is produced in the areas of the design.

10. Resist Printing:

A printing method in which the design can be produced: (1) by applying a resist agent in the desired design, then dyeing the fabric, in which case, the design remains white although the rest of the fabric is dyed; or (2) by including a resist agent and a dye in the paste which is applied for the design, in which case, the color of the design is not affected by subsequent dyeing of the fabric background.

11. Electrostatic Printing:
In electrostatic printing, a plate with electrostatic charge (to attract powdered dyes or ink into the fabric) is positioned behind the fabric and a stencil of the design to be printed is positioned between the fabric and the powder supply so the design is applied in the correct area. A dye–resin mixture is spread on a screen bearing the design and the fabric is passed into an electrostatic field under the screen. The dye–resin mixture is pulled by the electrostatic field through the pattern area onto the fabric.

12. Photographic Printing:
A method of printing from photoengraved rollers. The resultant design looks like a photograph. The designs may also be photographed on a silk screen which is used in screen printing.

13. Photo Printing:
In the photo printing, the fabric is coated with a chemical that is sensitive to light and then any photograph may be printed on it. The controlled light passes to the fabric through negative or a photo film, which allows the light to fall on the fabric as per the details in the photo.

14. Pigment Printing:
Printing by the use of pigments instead of dyes. The pigments do not penetrate the fiber but are affixed to the surface of the fabric by means of synthetic resins which are cured after application to make them insoluble. The pigments are insoluble, and application is in the form of water-in-oil or oil-in-water emulsions of pigment pastes and resins. The colors produced are bright and generally fat except to crocking.

15. Blotch Printing:
Blotch printing is a process wherein the background color of a design is printed rather than dyed. The result is that the reverse side of the fabric is typically white. This is a direct printing technique where both the background color and the design are printed onto a white fabric, usually in one operation. Any methods such as block, roller or screen may be used. The ground color is transferred from the cylinder and the motif retains the original hue of the cloth.

16. Non-fabric Printing:
Printing techniques can be applied also on pre-stages in textile production, e.g. sliver yarn, warp beams, thus leading to special irregular patterns.

17. Burn-Out Printing:
A method of printing to obtain a raised design on a sheer ground. The design is applied with a special chemical onto a fabric woven of pairs of threads of different fibers. One of the fibers is then destroyed locally by chemical action. Burn-out printing is often used on velvet. The product of this operation is known as a **burn out print**.

18. Flock Printing:
Flocking is the technique of depositing many small fiber particles, called 'flock', onto a surface of a fabric to produce the design. Flock printing is a representative for techniques where an adhesive is printed in the first stage. In the second step, an effect material is fixed to the adhesive.

In case of flock print, short staple fibers (flocks, 0.3–3 mm) are fixed on the adhesive layer by means of an electrostatic field (20–60 kV) which also orients the fibers in direction perpendicular to the fabric surface, thereby a velvet-like surface structure is obtained.

Many other effect materials can be fixed on the adhesive layer:

- Finely chopped thin plastic particles lead to a glitter effect
- Metal film can be fixed as conductive surface layer or to achieve a metal effect

19. Direct Printing:
A process wherein the colors for the desired designs are applied directly to the white or dyed cloth, as distinguished from discharge printing and resist printing.

20. Discharge Printing:
In "white" **discharge printing**, the fabric is piece dyed, then printed with a paste containing a chemical that reduces the dye and hence removes the color where the white designs are desired. In "colored" discharge printing, a color is added to the discharge paste in order to replace the discharged color with another shade.

21. Duplex Printing:
Duplex printing is a method of printing a pattern on the face and the back of a fabric with equal clarity. Printing is done on both sides of the fabric either through roller printing machine in two operations or a duplex printing machine in a single operation.

22. Stencil Printing:
In stencil printing, the design is first cut in cardboard, wood or metal. The stencils may have fine delicate designs or large spaces through which color is applied on the fabric. The pattern is cut out of a sheet of stout paper or thin metal with a sharp-pointed knife, the uncut portions representing the part that is to be reserved or left uncolored. The sheet is now laid on the material to be decorated and the color is brushed through its interstices.

23. Two-phase Printing:
In two-phase printing, the pattern printing and dyestuff fixation processes are separated into two stages. As an example after printing of a **reactive dye** and intermediate drying, the print is fixed in a continuous process through padding in rather concentrated alkali solution. Similarly, vat dyes can be printed and fixed in the reducing agent.

24. All Over Printing:

All over printing is a special type of printing technology that allows a particular design to be repeated continuously throughout the fabric. As a result, the fabric becomes more attractive. Fabrics made with AOP technology are also being used in denim products including woven shirts, T-shirts, Ladies gowns, Tops, Punjabi, Woven pants, Home textiles etc.

25. Space Dyeing:

Space dyeing is a method of printing yarns using jet spray of colors. In space dyeing machines, 64 jet sprays are provided and 8 colors can be accommodated. There cannot be any uniformity or repetition of designs when these yarns are woven or knitted. It gives a special effect that is unique.

26. Kalamkari:

Fabric is painted using a pen with dyes and mordants. Printing the outline of the design and filling inside with a pen (kalam) combine the printing and art with pen, that is, kalamkari. Kalamkari is an exquisite ancient craft of painted and printed fabrics practiced in Indian temples.

Concept Of Dyeing

We know that textile dyes is organic substance and inorganic substance. the tendency of textile dyes is to absorb light and reflect light to show colour. and dye have also tendency to properly soluble in water. this are the best tendency of dyes. that is reson dyes are used for colouration of textile materials.

the basic concepts of textile dyeing is, the interaction between a dye and a fibre (textile materials/textile goods). and it consist several steps. and in textile dyeing process, involved follow terms, such as,

1. Disorganisation of the dye
2. Exhaustion – dye uptake
3. Adsorption – transfer of dye from aqueous solution onto fibre surface.
4. Diffusion – Textile dye is diffused into the fibre.
5. Fixation – dye is fixed on to the fibre

Different Types of Dyes:

Now, we will discuss about different types of dyes with their properties;

1. Vat dyes

2. Basic dyes

3. Direct dyes

4. Reactive dyes

5. Azo dyes

6. Acid dyes

7. Azoic dyes

8. Sulphur dyes

9. Pigment dyes

10. Mordant dyes

11. Synthatic dyes

12. Disperse dyes

13. Develop dyes

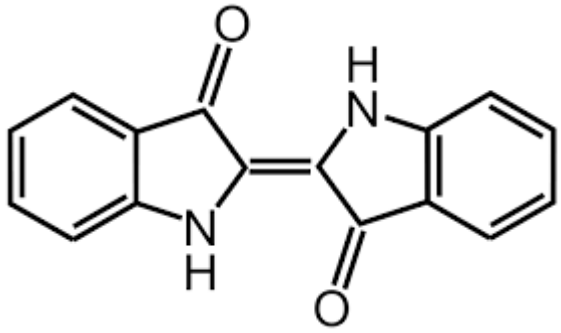
14. Aniline dyes

15. Nitro dyes

16. Anthraquinone dyes

17. Turmeric dyes (Natural dyes)

1. Vat dye



Vat dye is made from natural plants. So, Vat dye is also called indigo dyes. Vat dye is insoluble in water but soluble by vatting process. Vat dyes is windly used in cellulose materials for dyeing purpose. Vat dye have good overall fastness properties.

Vat dye is not directly use for dyeing process. Vatting is must be required before dyeing. Because vat dye is insoluble in water but it Solubilized by vatting process and then dyeing is done.

Properties;

1. Vat dye are insoluble in water.

2. The particle size of vat dye is very small.

3. Vat dye are Applied in alkaline condition PH 12-14

4. vat dye mostly belong to indigoid, and Anthraquinone class.

5. vat dyes can't be directly applied on cotton material for dyeing.

6. In vat dyeing process, first need vatting process.

7. First vatting process is done then it can apply on textile materials for dyeing purpose.

8. After dyeing it gives different shade.

9. wet fastness is very good but rubbing fastness is not good.

10. wet fastness is very good around 4-5.

2. Basic dyes

Basic dye are insoluble in water but Solubility of this dye in water with the presence of glacial acetic acid. basic dyes are synthatic type class dyes. this dyes are windly used in dyeing of synthatic materials. because this dyes have more affinity for synthetic materials. It's produced bright shade and high tinctorial values. basic dyes are powerful colouring agent. these dyes are also be called Cationic dye.

Properties;

1. Basic dyes are insoluble in water.

2. Basic dyes have good affinity for synthetic materials.

3. Basic dye is synthetic class type dyes.

4. basic dye is produced bright shade.

5. basic dye is a powerful colouring agent.

6. basic dye is also called cationic dyes.

7. basic dyes is produced excellent shade.

8. basic dyeing is comparatively cheap process. and it is a cheap in price.

3.Direct dye

Direct dye are highly soluble in water. direct dye are easily dissolve in water. this dyes are windly used in cellulose materials because direct dye have good affinity for cellulosic materials such as Cotton materials. Dyeing is done Alkaline condition. direct dye is easy and cheap process. But in this process after treatment is required after dyeing for improving shade

of dyed materials. direct dye are also be dyed wool, silk, Nylon materials. this dyes gives good fastness property.

Properties;

1. direct dye have good solubility in water.

2. This dye is more useful for cellulosic materials such as cotton as well as proteins fibres such as wool, silk, and nylon.

3. direct dyeing process is not produce proper fastness properties so generally after treatment is required for shade development.

4. direct dyeing process is comparatively cheap compared with reactive dye and also vat dye.

5. Uses Nature of direct dye is anionic.

6. Direct dyeing process is done at low temp.

7. direct dyeing process is not more expensive compared with reactive dyeing process.

4. Reactive dyes

Reactive dye are soluble in water. Reactive dyes are also more stable for cellulosic materials. this dyes have also be high affinity for cellulosic materials as well as for proteins fibres and also be polyamide fibres. this dyes is easy to make a Covalent linkage with the fibres and work as a integral part of fibre. this dye also be use for dyeing of Cotton,wool, and silk materials.

Properties;

1. Reactive dyes are soluble in water.

2. Reactive dyes are comparatively cheap and best.

3. Easy dyeing methods and it require less time for dyeing

4. It require low temperature for dyeing

5. Reactive dye having good perspiration fastness with rating 4-5.

6. Reactive dyes have very good wash fastness but has moderate rubbing fastness.

7. Reactive dyes have very good light fastness with rating 6.

8. reactive dyes are found in power, liquid and print past form.

9. Reactive dyes are anionic dyes, which are used for dyeing cellulose, protein, and polyamide fibers

10. Dyes have stable electron arrangement and can protect the degrading effect of ultra-violet ray.

5. Azo dyes

Azo dyes are Soluble in water. azo dyes are chemically class of dyes and this dyes are organic compound. Azo dyes are contain functional group (N=N) . this dyes are bound to Aromatic ring. these ring are break down with high temp. these dyes are also be use for dyeing of cellulose materials as well as proteins fibres. azo dyes are produced strong colour with good depth of shade on to the materials. Azo dyes are produced Different strong colour such as acid orange 7, direct blue 15, methyl yellow and acid red.

Some azo dyes are harmful for skin but not all azo dyes. this dyes is easy to absorbed on skin during dyeing so doing work with very carefully. Because if azo dyes are contact on skin then it may chances of skin cancer.

Properties;

1. Azo dye is soluble in water.

2. It is a chemical class of dyes.

3. **this dyes are chemical class of dyes**.

4. this dye are highly organic compound.

5. **this dyes are contain azo function group (N=N).**

6. It is **properly bound to aromatic ring.**

7. azo dye are used for the dyeing of cellulose materials as well as polyester materials.

8. this dyes are produced strong colour with good depth of shade on to the materials.

9. this dyes have some important colouring Function property. this is the reason it gives good colour (shade) on materials.

10. this dye gives good effect on cellulosic materials

6. Acid dyes

Acid dye are highly soluble in water compare to the basic dyes. Acid dyes are windly used for proteins fibres such as wool, silk, acrylic, nylon. Proteins fibres contain Sulphonic acid groups. The function of Sulphonic acid groups is to improve or increase the Solubility in water.

And it’s gives proper dye molecules and this molecules make negative charge and proteins fibres are make positive charge. This both make more interacts to dye property. In this

process, some special force is applied during dyeing such as Vander walls force and hydrogen bond. This force is help during dyeing. and get even dyeing.

Properties;

1. Acid dyes are highly soluble in water compare with basic dyes.

2. Acid dyes is properly work on proteins fibres such as wool, silk, nylon.

3. Acid dye have no affinity for cellulosic materials. Hence, acid dye is not suitable for cellulosic materials.

4. Acid dyes is more suitable and profitable for proteins fibres such as silk, wool, nylon and acrylic.

5. Acid dyes are properly ionic in nature.

6. Acid dyes is more react on to the proteins fibres with the help of Vander Waals and hydrogen bonds because it's formed between fibre and dyes.

7. Light fastness is good in case of acid dye but in case of basic dye light fastness is poor.

8. In case of acid dyes, uses strong acidic to netural pH.

9. Acid dyes is more effective for proteins.

7. Azoic dyes

Azoic dyes are Contain azo group (N=N). Azoic dyes are synthatic types dyes. Its made in the form of readymade. azo dyes are produced coloured substance by the reaction of two components such as,

(1) Coupling compound (napthol)

(2) Di – azo Component (salt diazo)

Azoic dyes are Colour Component but it is insoluble in water. and azoic dyes are gives exllent washing fastness property.

Properties

1. Azoic dyes are insoluble in water.

2. Azoic dyes give bright colour.

3. This dyes gives excellent washing fastness.

4. Dyes also give good light fastness.

5. This process is not expensive.

6. Easy to handle.

7. This process is not long process.

8. This dyes are Mostly use for synthetic materials for colouration.

8. Sulphur dyes

Sulphur dyes are in soluble in water. Sulphur dye are more suitable for cellulosic materials and denim fabric. Sulphur dyes are produced strong deep shade. and this dyes are also produced Different colours such as red, yellow, orange. Sulphur dyes are converted to leco form with the help of dilute aqueous (Na2S) before dyeing. Also be use for production of heavy materials such as rubber materials.it also be used for textile printing process. but it is costly process.

Properties;

1. Sulphur dyes are insoluble in water.

2. Sulphur dyes have no afinity for textile cellulose fibres.

3. Sulphur dyes are converted to leuco form before dyeing with the help of dilute aqueous (na2s).

4. This leuco form is used for dyeing of cellulose materials.

5. Sulphur dyes develop s-s linkage in chemical structure.

6. Sulphur dyes are produced black and brown shade.

7. Sulphur dyes are used and it's give great results in case of different types of textile printing.

8. Sulphur dyes are insoluble in water.

9. Sulphur dyeing is favourable cost structure.

10. Alkaline condition is required for dyeing.

11. Sulphur dyeing is one of the most popular for black, brown and blue shade production.

9. Pigment dyes

Pigment is not a dye, pigment is a Chemical substance which is windly use after the pigment dyeing for improving the fastness properties. Pigment easily panetrate on to the materials with the help of binders. So, binder is must be required in pigment dyeing. now a days pigment dyeing is also carried out in lots of industry.

Properties

• pigment dyes have good covering power.

• size particle of this dyes is ranging 0.2 – 0.4.

• Powerful chemical resistance.

• Good dispersion.

• better resistance to tight.

• stability is very good on dyed materials.

10.Mordant dyes

Mordant dyes are acid dyes in which contains metal atom it can be insert in dye bath during dyeing. Mordant dyes have good affinity for proteins fibres such as silk, and wool.

Mordanting is must be required for synthatic dyestuff, some synthatic dyes are generally in use that required mordanting for proper exhaustion and proper pantration.

this is the reason it produces better shade on to the materials. But if dyes are made from natural plants then mordanting is not required. Mordant dyes required a mordant in their uses, it is easy to deposition in the form of colour.

Properties

• low affinity for textile materials.

• Mordant dyes may be natural or synthetic.

• this dyes are mostly apply on proteins fibre. Such as nylon and acrylic fibre.

• this dye are soluble in cold water.

• Dyeing of textile materials is carry out with the help of mordants.

11. Disperse dye

Disperse dye are insoluble in water. This dyes are easy to diffuse in to the fibres Because disperse dye have very small dye particals. Disperse dye are windly used in synthatic materials such as polyester, nylon, and blend materials such as polyester/cotton. disperse dye is given good shade for synthetic materials. Some Chemical substance is used in disperse dye such dispersing agent it's help to improve the depth of shade on the materials. this dyes have very small dye particals compare to the other dyes, this is the reason to easy to diffuse and easy to panatrate on to the materials. and it gives good shade or good colour on to the synthatic materials. this dyes are also be dyed hydrophobic materials such as nylon, acrylic.

Properties;

1. this dye are insoluble in water.

2. invironment behaviour of this dye is not good.

3. this dye is easy to diffuse in to fibre or materials because disperse dye having very small dye particals.

4. disperse dyeing process is not expansive it is very cheap process.

5. disperse dye colour produce bright and lighter shade.

6. light fastness properties is good rating 4.5-5.

7. some important chemicals is required during dyeing Such as dispersing agent.

8. disperse dyeing is done of synthetic materials with the help of three methods such as high temperature dyeing methods, thrmsole methods and carrier methods.

9. some important chemicals is required during dyeing Such as dispersing agent.

10. it also increase the rate of dye exhaustion power during dyeing. this reason it easily diffuse on to the materials and gives proper shade.

12. Developed dyes

Developed dyes are made from developer with the help of some after treatment process. The main role of develop dyes are to develop depth of shade on to the materials. For example, develop dyes are “direct dyes.” this dyes is also called developed dyes.

13. Aniline dyes

Aniline dyes are derived chemically from aniline. Coal – tar distillation product. For example…. inks, dyes and other uses.

14. Nitro dyes

Nitro dye are Aromatic Compound types dyes. Nitro dyes are produced strong colour with the help of nitro group and hydroxy group. nitro dyes also be contain chlorine and nitro dyes are more stable with the presence of nitro and hydroxy group.

15. Anthraquione dyes

Anthraquinone dyes are synthatic class types dyes. This dyes are found mostly synthetically. This dyes have carbonyl group (>C=O). anthraquinone dyes are Colourless but red to blue is found from uses hydroxy or amino group. Anthraquinone dyes can be found in natural dyes as well as synthatic dyes. Some dyes are also be know as anthraquinone types dyes such as Mordant, vat and also disperse dye.

16. Turmeric (natural dyes)

Dyes are made from naturally turmeric dyeing is windly carried out for dyeing of cellulosic materials. these dyes are used in most of the ancient civilization, such as India, Egypt or more.

dyes are mostly used in dyeing, Printing and painting in India. turmeric dyes are extensively used as a Cosmetic for women. Such as Heena, mahandi, and more. dyes are mostly used in food and confectionery. all indian people are used turmeric in food. Because it is very important for indian life.

Turmeric is also be used in textile industry for dyeing purpose. Turmeric powder has ability to dyed cellulose materials. In case of turmeric dyeing first mordanting of turmeric is required then dyeing is done. Its produce pale yellow shade. this dyes is produced good fastness property. and this process is low moderate cost.

Properties;

the use of natural dyes for dyeing, painting and printing.

2. mostly natural dyes are used for dyeing, printing and painting in India.

3. they are extensively used as cosmetics for woman. some examples are heena/ mehadi for decorating the palms and soles young maidens. ‘surma’ to enhance the effect of eye lashes.

4. Natural dye is also used in food and confectionary. ex; saffron, turmeric, kashmiri chilli, and ratanjyot. Because of the wide use, these dyes have become a part and parcel of Indian life.

5. the use of natural dyes for textile dyeing almost disappeared, due to wide range of synthetic colours available, with good fastness properties.

BASIC EMBROIDERY STITCHES

Backstitch- is so easy to learn that you'll have it down within the first few stitches. This basic stitch is likely to be the stitch you'll use the most. Backstitch is useful for any kind of outlining, but it's also a stitch that pairs well with other stitches, making it a key stitch to learn.It's also easy to embellish with weaving or wrapping, and quickly transforms into the more decorative Pekinese stitch.

Running stitch- a simple embroidery stitch that is good for making dashed outlines and adding details to your embroidery. It's also the basis for Japanese sashiko embroidery. Although basic, it's adaptable and can become complex. For example, you can change the look by adjusting the length and spacing or adding a second row of stitches between the first. It's also another stitch that works well with weaving and wrapping.

The straight stitch hardly requires an explanation, because it is as simple as bringing the needle up through the fabric and then going back down. But it's worth exploring the many uses for this building block embroidery stitch.

French Knot- This stitch involves wrapping the needle to form a knot on the surface of the fabric. The trick to making French knots is to hold the working thread taut, but not too tight. Give it some practice.

Stem stitch- is another basic stitch that's perfect for creating smooth outlines. It works well for both straight lines and curves, and despite its name, it isn't only for embroidering stems. Use a stem stitch on just about any lines in your stitching. Like so many stitches, you can adjust the width of stem stitching or use it for fill stitching. Just try to keep your stitch length consistent to create a beautiful result.

Chain stitch – it forms a row of linked stitches that really stands out.There are several ways to work the chain stitch and it's a good idea to at least learn how to work it forward and in reverse.

Satin stitch - One of the most classic embroidery stitches for filling an area is the basic satin stitch. There are a few variations, but at its essence, satin stitch is a series of straight stitches worked next to each other. The secret to making those straight stitches turn into something special is in practicing the length and proximity of the stitches. The result is a filled shape that is simply stunning.

Feather stitch – it is a linked stitch that creates open lines that almost look like they're moving. It's perfect for making frames and borders, and it works well layered or embellished with other stitches too. The look of feather stitch makes it good for stitching seaweed, foliage, feathers, or scales, and the variations make it possible to embroider a multitude of natural designs.

split stitch - as another option for making outlines. The process for working split stitch is similar to working backstitch, but upside down. In fact, the back of your work will end up looking like the front of the backstitch.

Detached chain stitch – it is sometimes referred to as a single chain, is a common stitch for making flowers, leaves and more. This stitch is worked as a standard chain stitch, but with just one "link."Detached chain stitch is what makes lazy daisy flowers, which are typically formed with five of six of these stitches.

Fly stitch- it is worked similar to a detached chain stitch, but rather than making a petal or teardrop shape, fly stitch forms a V shape or sometimes a soft curve.Try fly stitch in a row, scattered as fill, stitched in a radius, or plenty of other variations.

Woven wheel stitch- it looks like a more advanced embroidery stitch, but it's actually quite simple. Start with a star of straight stitches and then weave the working thread to form a flower. Soon you have a stitch that will fill your hoop with amazing florals.

Couching stitch- it is an embroidery method that everyone should know. This stitch uses two lengths of thread at one time. One remains on the surface of the fabric, while the other holds it in place with tacking stitches.Use this stitch for making outlines, creating texture, or filling an area. It even works with ribbon, yarn, and other materials.

Blanket stitch- it is usually the trickiest part, but once you start, it's so easy to do. Use this stitch to make borders and decorative lines or as an edge for applique within your embroidery. Add variation to the stitch by adjusting the spacing and height of the stitches.

Bullion knots- these are not for the faint of heart. But they are a stitch you should learn. Think of them as a really long french knot that can make gorgeous roses. Practice making them small and then start making them bigger. You'll be glad to know this one.