

L24- Fabric Construction

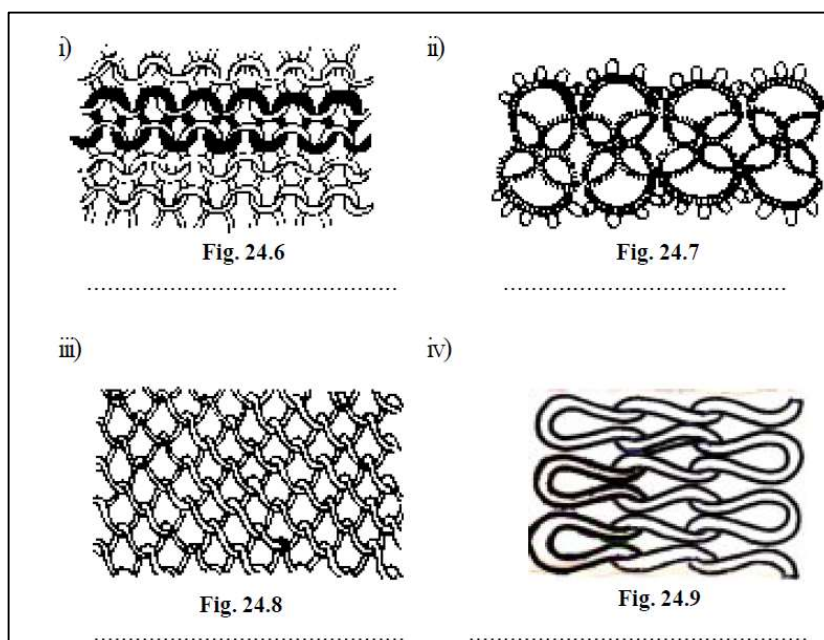
Keywords

Apparel	Namada	Thread count	Handloom	Booti design
Household textiles	Trimmings	Loom	Power looms	Wrinkle
Braided	Selvedge	Shuttle	Organdy	Hosiery articles like vests, socks, Underwears, etc.
Laces	Warp	Interlacement	Chiffon	Interlooped
Hosiery	Weft	Reed	Mattee fabric	Interlaced

In-text Questions

In-text Questions 24.1

1. Identify the following methods of fabric construction:



i. Knitting

ii. Lace

iii. Net

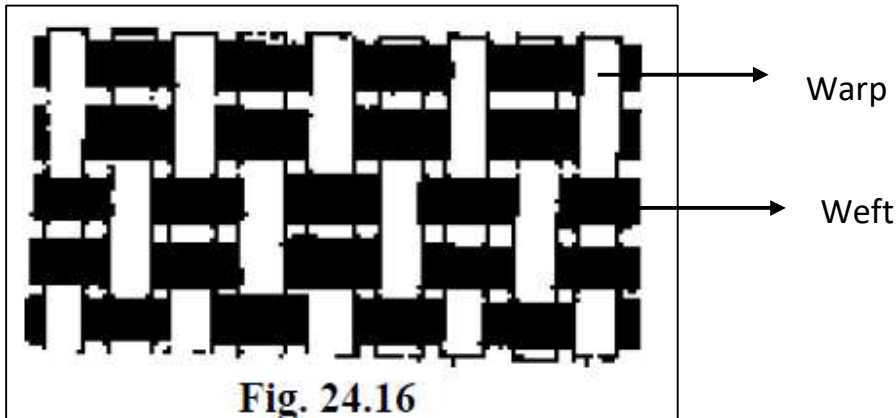
iv. Knitting

In-text Questions 24.2

1. Give one word for the following sets of words:-

- i. Interlacing of two sets of yarns at right angle - Weaving.
- ii. Only one set of yarns is interlooped to get a fabric - Knitting.
- iii. Total number of yarn per square inch of fabric – Thread Count.
- iv. Weave that has long floats on the surface which give it a shine - Satin Weave.

2. Label the diagram given below:



3. Give single word for the sentence in bold. Read the lesson carefully to find these words.

- a. Open mesh fabrics with large geometrical shapes was used to make Munni's frock.

Answer: Net

- b. We bought a fabric which was made using two sets of yarn in green colour.

Answer: Woven Fabric

- c. Why don't you attach criss cross yarn making intricate design on your shirt?

Answer: Lace

- d. He bought trousers having **dominant diagonal lines** in it.

Answer: Twill weave

- e. She made a cross stitch wall hanging on a fabric with two or more weft yarns interlaced as a unit with corresponding number of warp yarns.

Answer: Basket weave.

Terminal Questions

1. Enumerate the various methods of fabric making.

Answer: The various methods of fabric making are:

SI No.	Fabric Making Method	Description
1.	Weaving	<ul style="list-style-type: none"> Two sets of yarns are interlaced with one another at right angles. Weaving gives a firm fabric. Examples: Poplin, Denim and Cambric
2.	Knitting	<ul style="list-style-type: none"> One set of yarn is interloped with itself to get a fabric. It gives a lot of stretch and easy-care properties to fabric Knits are mainly used for hosiery, underwear, T-shirts, socks etc.
3.	Non-woven	<ul style="list-style-type: none"> Made directly from fibers without weaving or knitting. Fibers are held together by mechanical forces, gum or heat. Namada is a traditional Kashmiri piece of a non-woven type of fabric.
4.	Braided	<ul style="list-style-type: none"> Created in a fashion similar to braiding of hair. These fabrics are mainly used to make trimmings and shoe laces
5.	Nets	<ul style="list-style-type: none"> They are open-mesh fabrics with geometrical shapes. These yarns may be knotted at the point of intersection. Used for mosquito nets.
6.	Laces	<ul style="list-style-type: none"> Yarns are criss-crossed to create intricate designs. Yarns may be interlooped, interlaced or knotted to give open-mesh structure. Beautiful decorative designs can be created through lace making.

SI No.	Fabric Making Method	Description
		<ul style="list-style-type: none"> Laces are very important trimmings that are used to decorate a garment.

2. Discuss how designs can be created by weaving.

Answer: Designs can be created by weaving due to:

- Use of different types of yarns like simple, ply, complex and textured.
- Use of different ways of interlacement of warp and weft yarns.

3. Compare and contrast weaving and knitting.

Answer: Weaving and knitting comparison:

SI No.	Property	Weaving	Knitting
1.	Number of yarns	Two sets of yarns interlaced at right angles.	One set of yarn interlooped with itself
2.	Equipment Required	Handloom or powerloom	Needles, hand knitting or machine knitting
3.	Appearance and Texture	Firm, smooth, stable, and maintains stiffness	Wrinkle resistant, stretchable, limp and fits the body
4.	Care and Maintenance	Proper washing and ironing required.	<ul style="list-style-type: none"> Ironing not required. Should be dried flat on a surface.
5.	Designs	Can be created using different: <ul style="list-style-type: none"> types of yarns colors of yarns types of weaves. 	Can be created: <ul style="list-style-type: none"> Using different Knitting yarns Changing stitches Changing colors
6.	Uses	Apparels, upholstery, curtains, draperies, table	For undergarments, hosiery, sweaters, T-shirts

SI No.	Property	Weaving	Knitting
		linen, bed linen, etc.	socks, stockings etc.

4. Why are knitted garments considered appropriate for winter wear?

Answer: Knitted wool keeps us warm, since it has many air spaces which trap the body heat and provide warmth.

5. Why is satin weave not as strong as plain or twill weave?

Answer: In the satin weave, warp yarns float over several weft yarns before interlacing with a weft yarn and so on. Hence, the long floats snag easily.

Due to this satin weave is not as strong as plain or twill weave.

6. Why is twill weave used for your jeans?

Answer: The twill weave is used for jeans because it:

- Is a very strong and durable weave.
- Soils less quickly than plain weave.

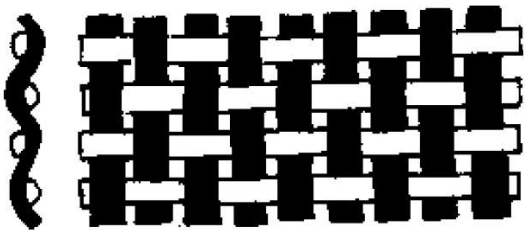

Previous Year Questions

1. Some fabrics look dense and compact while some look open. Why? What does this refer to? 2

Answer: Some woven fabrics look dense and compact whereas others look open. This difference is due to the **thread count** which refers to the total number of warps and wefts per square inch of a woven fabric.

2. Draw a diagram of plain and basket weave. Mention one difference between them. [2]

Answer: Plain weave and Basket weave:

Plain Weave	Basket Weave
<ul style="list-style-type: none"> • In plain weave, each and every weft yarn goes alternately under and over the warp yarns across the width of the fabric. • Plain weave is of two types: Rib weave and Basket weave 	<ul style="list-style-type: none"> • Two or more weft yarns are interlaced as a unit with corresponding number of warp yarns to give a basket like effect. • Mattee fabric commonly used for cross stitch embroidery is an example
 <p>Fig. 24.12 Plain Weave</p>	 <p>Fig. 24.13 Basket Weave</p>

3. Briefly describe any *four* techniques of fabric construction. Give *one* example for each technique. 4

Answer: The various methods of fabric making are:

SI No.	Fabric Making Method	Description
1.	Weaving	<ul style="list-style-type: none"> Two sets of yarns are interlaced with one another at right angles. Weaving gives a firm fabric. Examples: Poplin, Denim and Cambric
2.	Knitting	<ul style="list-style-type: none"> One set of yarn is interloped with itself to get a fabric. It gives a lot of stretch and easy-care properties to fabric Knits are mainly used for hosiery, underwear, T-shirts, socks etc.
3.	Non-woven	<ul style="list-style-type: none"> Made directly from fibers without weaving or knitting. Fibers are held together by mechanical forces, gum or heat. Namada is a traditional Kashmiri piece of a non-woven type of fabric.
4.	Braided	<ul style="list-style-type: none"> Created in a fashion similar to braiding of hair. These fabrics are mainly used to make trimmings and shoe laces

4. Which weave gives a shiny surface to the fabric and why? Write *one* disadvantage of such a weave. 4

Answer: **Satin Weave** has a beautiful shiny surface because of long floats on the surface of the fabric.

In the satin weave, warp yarns float over several weft yarns before interlacing with a weft yarn and so on.

However, the long floats snag easily therefore satin weave is not as strong as plain or twill weave.

5. Answer the following:

- a. What do you understand by thread count? What does it indicate?
- b. Write two differences between twill and rib weave. [2 + 2 = 4]

Answer:

- a. Thread count refers to the total number of warps and wefts per square inch of a woven fabric. Thread count tells us about the fabric quality and durability. Fabric with a higher thread count is better than fabric with lower thread count.
- b. differences between twill and rib weave

Twill Weave	Rib Weave
This weave has a clear diagonal line on the face of the fabric.	Rib or line effect is created by using thin yarns with thick yarns or single yarns with doubled yarns in any one direction of the fabric
It is a very strong and durable weave.	If the rib weave has a high thread count the fabric will be firm.

6. Describe plain and satin weave. 4

Answer: Plain and Satin Weave:

Plain Weave	Satin Weave
<ul style="list-style-type: none"> In plain weave, each and every weft yarn goes alternately under 	In the satin weave, warp yarns float over several weft yarns before interlacing with a weft

Plain Weave	Satin Weave
<p>and over the warp yarns across the width of the fabric.</p> <ul style="list-style-type: none"> • Plain weave is of two types: Rib weave and Basket weave 	<p>yarn and so on.</p>
<p>If the plain weave has a high thread count, the fabric will be firm.</p>	<p>The long floats snag easily therefore satin weave is not as strong as plain or twill weave.</p>

7. What is plain weave ? Name any two fabrics made of plain weave. 4

Answer: In plain weave, each and every weft yarn goes alternately under and over the warp yarns across the width of the fabric.

- Plain weave is of two types: Rib weave and Basket weave.
- Mulmul, Organdy, Chiffon etc are examples plain weave fabrics.
- If the plain weave has a high thread count, the fabric will be firm.

8. How is plain weave different from twill weave ? Name two fabrics each in which these weaves can be seen. 4

Answer: Plain weave and Basket weave:

Plain Weave	Twill Weave
<ul style="list-style-type: none"> • In plain weave, each and every weft yarn goes alternately under and over the warp yarns across the width of the fabric. 	<p>This weave has a clear diagonal line on the face of the fabric.</p>

Plain Weave	Twill Weave
<ul style="list-style-type: none"> Plain weave is of two types: Rib weave and Basket weave 	
If the plain weave has a high thread count, the fabric will be firm.	It is a very strong and durable weave.
Mulmul, Organdy, Chiffon etc are examples plain weave fabrics.	The denim or jean fabric is the example of twill weave.

9. Explain any *three* techniques of fabric construction in your own words. 6

Answer: The various methods of fabric making are:

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1.	Weaving	<ul style="list-style-type: none"> Two sets of yarns are interlaced with one another at right angles. Weaving gives a firm fabric. Examples: Poplin, Denim and Cambric
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