

L-3 Fibre to Fabric

In this chapter we will understand the following points. (For reading)

1. We wear clothes to protect our bodies from heat, cold, insects and dust particles.
2. Earlier people covered their bodies with large size of leaves or animal skins.
3. After the development of agricultural communities, they learnt to weave twigs and grass into mats, baskets. After that, very thin stems of climbing plants and animal's hair such as sheep's wool were twisted to form long strands. These strands were then woven into fabrics. After the invention of the sewing needle, people started stitching fabrics to make clothes.

Fabrics are made up of yarns and yarns are further made up of fibres

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5. Fibres are either natural or synthetic

6. Cotton, wool, silk and jute are some natural fibres while nylon, polyester are some examples of synthetic fibres

7. Fibres like cotton, flax and jute are obtained from plants, so they are called plant fibres.

8. The process of making yarn from fibres is called spinning.

9. Fabric from yarns is made by weaving and knitting.

Text-book questions (Write in science copies)

Q-1 From which parts of the plant cotton and jute are obtained?

Ans-1 Cotton is obtained from fruit (cotton bolls) of the cotton plant and jute is obtained from the stem of jute plant

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Q-2 Name two items that are made from coconut fibre.

Ans-2 Two items that are made from coconut fibres are ropes and mats.

Q-3 Explain the process of making yarn from fibre.

Ans-3 The process of making yarn from fibres is called spinning. In this process, fibres from a mass of cotton wool are drawn out and twisted. This brings the fibre together to form a yarn. Spinning can be done with the help of simple devices like hand spindle (takli) or charkha.

Extra Questions

Q-1. The method which is used to harvest cotton from the plants, write the name.

Ans-1 Handpicking method, and cotton picking
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machine are used to harvest cotton from the plants.

Q2 In which states of India jute is grown?

Ans-2 The states of India where jute is grown are West Bengal, Bihar, Assam.

Q3 Name the famous person who made the charkha popular during Independence movement

Ans-3 The famous person who made the charkha popular during Independence movement is Mohandas Karam Chand Gandhi

Q4 Write the process which is used to separate cotton fibres from the seeds

Ans-4 The process which is used to separate cotton fibres from the seeds is called ginning.

Q5 Write the name of the season in which jute crop is cultivated.

Ans-5 Jute crop is cultivated in the rainy season.

Q-6 In which method, a single yarn is used to make a piece of fabric

Ans-6 In knitting, a single yarn is used to make a piece of fabric

Q-7 Which fibre is used for making gunny bags?

Ans-7 Jute is used for making gunny bags

Q-8 Why jute is not used for making fabrics (dresses)?

Ans-8 Jute is a rough fibre so, it is not used for making the fabrics (dresses)

Q-9 We need clothes. Write some points to specify this statement.

Ans-9 We need clothes for the following reasons

(i) they protect our body from heat, cold and rain

(ii) they make us presentable

(iii) they help us to maintain body heat

Q-10 Write two steps for making fabrics from fibres.

Ans-10 The fabrics are made from fibres in the following two steps

(i) fibres are first converted into yarn by the process of spinning

(ii) fabric is made from yarn by the process of weaving or knitting.

Q-11 Differentiate between natural and synthetic fibres.

Ans-11 Natural fibres are obtained from plants and animals. Eg cotton, wool

Synthetic fibres are made from chemical

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substances, which are not obtained from plant or animal sources. eg nylon, polyester.

Q-12 The coat worn by warriors is made up of metal. What would happen if these coats are made up of fibre?

Ans-12 Metal coat consists of small metal rings linked together in a pattern to form a mesh. If this metal coat is made up of any kind of fibre, then during the war, sword can easily cut this fibre jacket and cause harm to warriors easily.

Q-13 Describe the main features of fabric which is made up of coconut fibre.

Ans-13 The main features are

(i) the fibre in the coconut shell is also known as coir. It is the latest eco-friendly fabric.

(ii) Fabrics made from coconut fibre provide accelerated moisture management and

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protection from harmful Ultraviolet rays.
Coconut fabrics are light weighted
machine washable and naturally fit
for comfort, quality and performance
eg: doormats, brushes.

Q-14. A cotton shirt, before it reaches you
completes a long journey. Elaborate
this journey starting from cotton bolls

Ans-14. Cotton shirt can be prepared by the
following steps:

Cotton bolls
↓ → GINNING

Cotton fibre
↓ → SPINNING

Cotton yarn
↓ → WEAVING

Cotton fabric
↓ → SEWING

Cotton shirt

The making of cotton shirt is a long
process. From cotton bolls, cotton is usually
picked by hand. Fibres are then separated
from the seeds by combing. This process

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is called ginning.

In spinning process, the fibres from a mass of cotton wool are drawn out and twisted. This brings the fibres together to form a yarn.

Weaving is binding of two sets of yarns at right angles to make a fabric. Weaving is done on loom.

Now on sewing this cotton fabric by needle, we get the cotton shirt.

Q-15 Write the features of synthetic fibres. How are they more advantageous than natural fibres?

Ans-15 The features of synthetic fibres are

- (i) they are light weight and strong.
- (ii) less expensive and readily available.
- (iii) they dry up soon.

Advantages of synthetic fibres are -

- (i) are cheaper
- (ii) stronger and more durable than natural fibres
- (iii) easy to maintain and wash.

Q-16 Explain the process of spinning and weaving.

Ans-16 The process of making yarn from fibres is called spinning. In this process, fibres from a mass of cotton wool are drawn out and twisted. By this fibres come together to form a yarn.

The process of arranging two sets of yarns together to make a fabric is called weaving. The two sets of yarns arranged at right angles to one another are woven to make a fabric.

Q-17 Explain the process of the formation of yarn from cotton wool.

Ans-17 Pick some cotton wool in one hand and pinch some cotton between the thumb and forefinger in other hand. Now, slowly start pulling out the cotton while continuously twisting the fibres. Twisted fibres form a string.

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thread or yarn. It is concluded that the spinning converts fibres into thread / yarn.

Q-18 Explain the process of knitting.

Ans-18 The process of making a fabric by interlocking loops of single yarn with knitting needles or machines is called knitting. A single yarn gets pulled out continuously as the fabric gets unravelled. Knitting is done by hand and also on machines.

Q-19 Describe how jute is obtained from the jute plant.

Ans-19 Jute is obtained from the stem of jute plant. It is cultivated during rainy season. The jute plant is normally harvested when it is at flowering stage. The stems of the harvested plants are immersed in water for 20-25 days. The stems rot and fibres are separated.

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by hands. The process of stem rot for the separation of fibres from stems is known as retting.

Q-20 How are fabrics prepared?

Ans-20 Fabrics are prepared from the thread / yarn by weaving (with the help of handlooms or powerlooms) or knitting.