

## LIVING SCIENCE CLASS6 SOLUTION CHAPTER 3. FIBRE TO FABRIC

### P. 28 Oral Questions For Formative Assessment

1. Yarns are made up of fibres.
2. Cotton, silk
3. natural fibre
4. No. In knitting, a single yarn is used to make a fabric but in weaving two sets of yarns are used.

### P. 30 Oral Questions For Formative Assessment

1. Silk is smoother than cotton and shiny in appearance
2. boiling silkworms in their cocoons
3. Jute is not normally used to make cloth because it is a coarse and heavy fibre in comparison to cotton, silk and wool.
4. nylon, polyester; synthetic fibres

### P. 30 For Formative and Summative Assessment

A. 1. a      2.a      3.b      4.b      5. c      6. c      7. C      8. c

B. 1. a. cotton      b. silk      c. wool d. nylon

2. black, alluvial      3. moderate      4. Sericulture      5. true      6. heavy      7. retting

8. true      9. spinneret

C. 1. We wear clothes mainly to protect our bodies against the weather, i.e. strong sunlight, extreme cold or heat, and rain. Clothes also protect us from insects.

2. People covered their bodies with animal skins in cold regions, and with bark, leaves and grass in warmer regions.

3. Fibre: A natural or synthetic thread that may be spun into yarn.

Yarn: Yarns are made up of fibres.

4. Wool, cotton, silk and nylon are the four fibres that are used to make clothes.

Leather and fur are not fibres, but are used to make clothes.

5. Jute is used chiefly to make cloth for wrapping bales of raw cotton, and to make sacks and coarse cloth.

6. Clothes made from synthetic fibres are strong and do not wrinkle easily. They also dry up easily.

They are often mixed with natural fibres to make cloth which has strength and can also breathe and absorb sweat.

7. Because in India, a tropical wet and dry climate is more common. Nylon or polyester clothes cannot absorb sweat and does not breathe like cotton. These properties make them unsuitable for hot and humid weather.

8. Jute grows best in warm, humid climates, with plenty of rainfall. It grows best in alluvial soil. The Sunderbans perfectly matches all these criterias.

D. 1. Cotton is a warm season crop requiring moderate rainfall. It needs a fertile clayey soil with good moisture holding capacity. Black soils found in western India and southern India, and alluvial soils of northern India are suitable for growing cotton.

2. The steps involved in converting cotton growing on plants to cotton cloth are

(i) Ginning: Fibres are separated from the seeds by combing. This process is known as ginning.

(ii) Spinning: Fibres are then spun into yarn, by drawing out and twisting the fibres together. This process is known as spinning.

(iii) Weaving: The yarn is then used to make cloth by weaving.

3. Cotton cloth is soft and lets air in. It also absorbs sweat. This results in the cooling down of the body.

Cotton clothes are, therefore, comfortable to wear, especially in hot, humid weather.

On the other hand, clothes made from synthetic fibres have less air spaces in them than natural fibres and do not 'breathe' so well. They also cannot absorb sweat. These properties make them unsuitable for hot and humid weather.

4. Wool is derived from the hair on the body of sheep and some other animals.

First of all wool is removed from the sheep using special clippers and the process is called shearing.

After shearing the wool is packed in bales and transported to the mills. Here it is cleaned and then combed by a machine, separated and spun into fibre. This fibre is then woven or knitted to make woollen clothes.

5. Silk is obtained from the cocoon of the silkworm. The cocoon is boiled in water to kill the silkworm and then unwound to get silk fibre.

6. After harvesting the stalks of the plants are tied into bundles and retted (soaked) in water for about 20 days. This process softens the tissues and permits the fibres to be separated.

The fibres are then stripped from the stalks in long strands and washed in clear, running water. Then they are hung up or spread out to dry.

#### HOTS Questions

1. Because air gets trapped in between the layers of cotton clothes and acts as an insulator. It does not allow heat to escape.

2. Silk has come under fire from animal rights activists because the process of harvesting the silk from the cocoon kills the larvae in a very cruel way by boiling them alive.

3. Cotton or wool naturally has a fibre shape. Nylon has to be moulded into the shape of a fibre by melting and then forcing it through a spinneret.