

Class - 7th

Science

Chapter – 3

Fibre to fabric

3-Fiber To Fabric

Exercises

Section I

A. Select and tick the correct option :

1. c
2. a
3. d
4. a

B. Fill in the blanks :

1. Fibres are thin threads, either **natural or synthetic**.
2. **Woollen** fabrics are good insulators of heat.
3. Silk is an **animal** fibre.
4. The caterpillars are fed on **mulberry** leaves.
5. **Sericulture** is the rearing of silkworms for silk production.

C. Write true or false :-

1. true
2. true
3. false
4. False
5. True

Section II

A. Very short answer questions :-

1. Name two fibres obtained from animals.

1. Wool and silk.

2. What are natural fibres?

2. Those fibres that are obtained from natural means are called natural fibres.

3. Give a property of wool.

3. Wool has a high tensile strength and elasticity.

4. What type of different process involved in wool production?

4. Different process involved in wool production are: - (a) Rearing and breeding of sheep (b) Shearing (c) Washing or scouring (d) Sorting (e) Carding (f) Dyeing

5. How many stages are in the life cycle of a silk moth?

5. There are four stages in the life-cycle of a silk Moth- egg, caterpillar (larva), pupa and adult.

B. Short answer questions:-

1. State the differences between a fibre and yarn.

1. A fibre can be defined as a long, fine, continuous thread or filament obtained from plants and animals.

Yarn is long, continuous, thread-like structure obtained by joining fibres and twisting them.

2. What are the chief sources of wool?

2. Wool comes from sheep, llama, alpaca, guanaco and vicuna. Cashmere from Kashmiri goats is another well-known clothing fibre.

3. Give an account of shearing.

3. The fleece along with a thin layer of skin is shaved off. This process is called shearing. Shearing is done annually in the spring of summer months. Shearing is done with a manual razor or blade, just as those used by a barber to shave off hair. Shearing is done in the hot weather so that the animals can survive without their protective coat.

4. What type of health hazards are associated with wool industry?

4. Following types of health hazards are associated with wool industry:-

In earlier days, the workers who sorted wool were often infected by bacteria that cause a fatal disease called anthrax, also known as sorter's disease. The bacteria are found in the wool of contaminated sheep and can enter the human's body through inhaled air. Nowadays, this disease occurs rarely because of the use of vaccines for prevention.

5. State the properties of silk.

5. The properties of silk are as follow:-

(i) It versatile and very comfortable.

(ii) It absorbs moisture.

(iii) It can be easily dyed

(iv) It retains its shape and is relatively smooth.

(v) It is the strongest natural fibre and is also lustrous.

6. Give some uses of silk.

6. Some uses of silk are :

(i) Silk is used to make sarees, blouses, scarves, pants and ties.

(ii) It can also be made into curtains, draperies cushion covers and sofa covers.

(iii) It is also used in the medical field for sutures and prosthetic arteries.

C. Long answer questions:

1. Discuss the properties of wool in details.

1. - Wool is generally creamy white in colour. Some breeds of sheep produce natural colours, such as black, brown and grey.

- It has a high tensile strength and elasticity.

- It can be easily dyed.

- Furthermore, it is light weight and has properties such as heat insulation and water absorption.

2. Explain the wool production in your words.

2. The production of wool involves the following steps:

Shearing : The fleece of the sheep is removed from its body. This process is called shearing. The fleece is removed by using special clippers called blade shears.

Souring : The sheared skin along with the hair is thoroughly washed in tanks to remove dust, dirt and grease.

Sorting : After scouring the hair are sorted out and graded. This is done in factories where hair of different textures are separated .

Carding : The dried wool is disentangled. These disentangled fibres are then passed through the rollers which are covered with fine sheet of thin wire teeth. This process arranges the wool into a flat sheet called a web.

Dying :- The natural fleece of sheep and goat is white, brown or black in colour. The fibres are now dyed in desired colours.

Spinning : The web is drawn into narrow strands and then passed through spinning machines. The spinning machines twisted the strands into yarn. The yarn is wound to form balls of wool. This yarn is either weaved into fabric or retained for knit.

3. Define woollen system and worsted system.

3. **(a) Woolen System** : In this system, the woolen fibres of mixed lengths are carded and then spun to form woolen yarn. The fabrics made from such a yarn do not have smooth finished surface.

(b)Worsted System : In this system initially the woolen fibres are combed, which separates the long fibres from short fibres. The long fibres are then formed into smooth compact stands, which are then spun to form woolen yarn. The fabrics made from such a yarn have smooth finished surface.

4. Summarised the process of sericulture.

4.Rearing of silkworms for silk production is called sericulture.

The first step involves washing the silkworm eggs that had been stored; the eggs hatch only once a year in spring.

-After the eggs hatch, the larve are spread out on trays to grow. They are fed chopped mulberry leaves for 20-35 days.

-Racks or twigs are placed on

the trays where the worms spin the cocoons.

-Spinning may take about 3-7 days, after which the cocoons are put in hot water, this kills the worms and loosen the filaments.

-The filaments are taken out from the cocoons by a process called reeling or filature.

-Filaments from several cocoons are twisted together to make a strong thread, which is wound on a reel.

- The threads are dyed and woven into silk fabric.