

Chapter - 3

Fibre to fabric

Multiple Choice Questions

1. The rearing of silkworms for obtaining silk is called

- (a) cocoon
- (b) silk
- (c) sericulture
- (d) silviculture

Soln:

Answer is (c) sericulture

Explanation:

Breeding and management of silkworms for obtaining silk is called as sericulture.

2. Which of the following is not a type of silk?

- (a) Mulberry silk
- (b) Tassar silk
- (c) Mooga silk
- (d) Moth silk

Soln:

Answer is (d) Moth silk

Explanation:

Mulberry silk, Tassar Silk and Mooga silk are the varieties of silk produced by different silk worms whereas Moth silk is not a variety of silk.

3. Paheli wanted to buy a gift made of animal fibre obtained without killing the animal. Which of the following would be the right gift for her to buy?

- (a) Woollen shawl
- (b) Silk scarf
- (c) Animal fur cap
- (d) Leather jacket

Soln:

Answer is (a) Woollen shawl

Explanation:

Obtained from wool which does not required killing of animals. Wool is obtained from hairs of sheep, yak, camel, goat etc. Silk is obtained after killing silkworm, Animal fur cap is obtained from fur which requires killing of animal. Leather jacket is obtained from skin of animals which needs killing of animals.

4. Silk fibre is obtained from

- (a) fleece of sheep
- (b) cotton ball
- (c) cocoon
- (d) shiny jute stalk

Soln:

Answer is (c) cocoon

Explanation:

Silk is a fibre obtained from the cocoons of silkworms.

5. Wool fibre cannot be obtained from which of the following?

- (a) Goat
- (b) Llama
- (c) Alpaca
- (d) Moth

Soln:

Answer is (d) Moth

Explanation:

Wool can be obtained from animals like sheep, goat, camel, yak, rabbit etc. Moth is a type of insect.

6. Selective breeding is a process of

- (a) selecting the offsprings with desired properties.
- (b) selecting the parents with desired properties.
- (c) selecting an area for breeding.
- (d) selecting fine hair for good quality wool.

Soln:

Answer is (b) selecting the parents with desired properties.

Explanation:

Selective breeding is the process of crossing of two selected varieties having different traits to produce a hybrid having good traits of both, e.g., some breeds of sheep possess only soft under-hair.

7. The general process that takes place at a sheep shearing shed is

- (a) removal of fleece.**
- (b) separating hair of different textures.**
- (c) washing of sheep fibre to remove grease.**
- (d) rolling of sheep fibre into yarn.**

Soln:

Answer is (a) removal of fleece.

Explanation:

Removal of fleece from sheep is known as shearing. Shearing will be done manually by razors or by shearing machines.

8. The term sericulture is used for

- (a) culture of bacteria.**
- (b) rearing of silkworm.**
- (c) making silk fabric from silk yarn.**
- (d) production of sarees.**

Soln:

Answer is (b) rearing of silkworm.

Explanation:

Breeding and management of silkworms for obtaining silk is called as sericulture.

9. Reeling of silk is

- (a) a process of making silk reels.**
- (b) spinning of silk fibres.**
- (c) weaving of silk cloth.**
- (d) the process of taking silk threads from cocoon.**

Soln:

Answer is (d) the process of taking silk threads from cocoon.

10. Silkworms secrete fibre made of

- (a) fat**
- (b) cellulose**
- (c) protein**
- (d) nylon**

Soln:

Answer is (c) protein

Explanation:

Salivary gland of silkworm releases a protein which is used as silk.

Very Short Answer Questions

11. Fill in the blanks in the following statements.

- (a) _____ and _____ fibres are obtained from animals.
- (b) Silk fibres come from _____ of silk _____.
- (c) Wool yielding animals bear _____ on their body.
- (d) Hair trap a lot of _____, which is a poor _____ of heat.

Soln:

- (a) Silk and Wool fibres are obtained from animals.
- (b) Silk fibres come from cocoons of silk moth.
- (c) Wool yielding animals bear hair on their body.
- (d) Hair trap a lot of air, which is a poor conductor of heat.

12. State whether the following statements are True or False. If false, correct them.

- (a) Silkworms are caterpillars of silk moth.
- (b) In India, camels and goats are generally reared for obtaining wool.
- (c) The rearing of silkworms for obtaining silk is called silviculture.
- (d) In the process of obtaining wool from fleece, sorting is done after scouring.
- (e) Yak hair are not used to make woollen fabric.

Soln:

- a) True
- b) **False**- In India, sheep are reared for obtaining wool.
- c) **False**- The rearing of silkworms for obtaining silk is called sericulture
- d) True
- e) **False**- Yak hair are used to make woollen fabric.

13. How do the hair of certain animals help in keeping their bodies warm?

Soln:

Hairs are bad conductor of heat hence they will not allow escape of heat from body which ensures their body kept warm.

Short Answer Questions

14. Match the items of Column I with the items given in Column II.

Column-I	Column-II
a) Yak Wool	i) Sheared hair
b) Angora Goat	ii) Silkworm
c) Mulberry Leaves	iii) Tibet and Ladakh
d) Scouring	iv) Jammu and Kashmir

Soln:

Column-I	Column-II
e) Yak Wool	iii) Tibet and Ladakh
f) Angora Goat	iv) Tibet and Ladakh
g) Mulberry Leaves	ii) Silkworm
h) Scouring	i) Sheared hair

15. Various steps involved to obtain wool from fleece are given here.

(i) Picking out the burrs

(ii) Dyeing in various colours

(iii) Shearing

(iv) Scouring

(v) Sorting Write the above steps in the correct sequence in which they are carried out.

Soln:

(iii) Shearing

(iv) Scouring

(v) Sorting Write the above steps in the correct sequence in which they are carried out.

(i) Picking out the burrs

(ii) Dyeing in various colours

16. Some words related with silk are jumbled up. Write them in their correct form.

(a) TURECULRISE

(b) WILSMORK

(c) BELMURRY

(d) RINGLEE

Soln:

(a) sericulture

(b) silkworm

(c) mulberry

(d) reeling

17. Figure 3.1 shows three rings of circles with letters in them. Some of these letters in each ring can form the name of one wool yielding animal. Find the names of these animals.

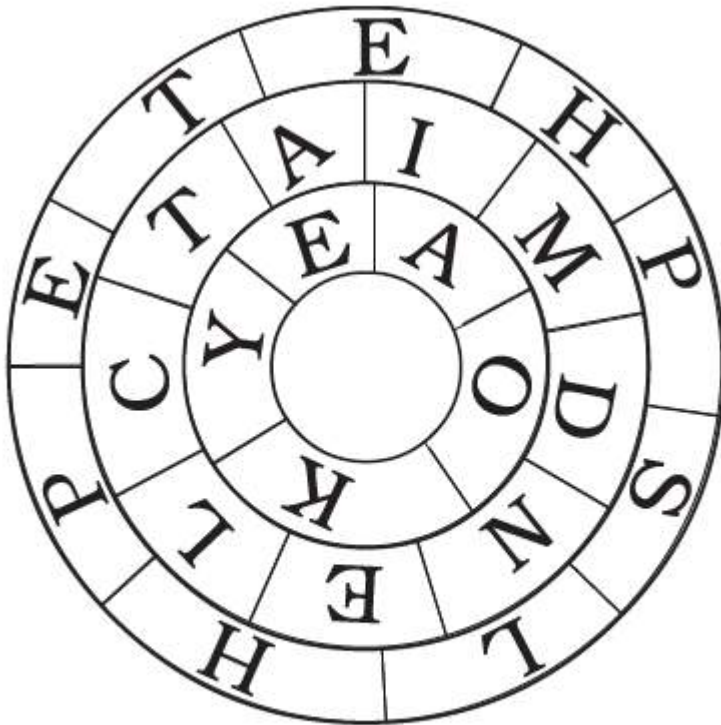


Fig. 3.1

Soln:

Yak, Camel, Sheep

18. Write a caption for each of the figures given as Figure 3.2 (a–d).

(a)



(b)



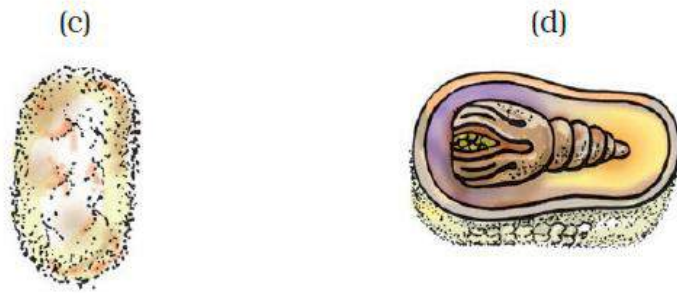


Fig. 3.2

Soln:

- a) Eggs of silk moth on mulberry leaves
- b) Silkworm
- c) Cocoon
- d) Cocoon with developing moth

19. Steps for the production of silk are given below in a jumbled order. Arrange them in their proper sequence.

- (a) Eggs are warmed to a suitable temperature for the larvae to hatch from eggs.
- (b) Fibers are taken out from the cocoon.
- (c) After 25 to 30 days, the caterpillars stop eating and start spinning cocoons.
- (d) The larvae/caterpillars or silkworms are kept in clean trays along with freshly chopped mulberry leaves.
- (e) Female silk moths lay eggs.
- (f) Cocoons are kept under the sun or boiled in water.

Soln:

- (e) Female silk moths lay eggs.
- (a) Eggs are warmed to a suitable temperature for the larvae to hatch from eggs.
- (d) The larvae/caterpillars or silkworms are kept in clean trays along with freshly chopped mulberry leaves.
- (c) After 25 to 30 days, the caterpillars stop eating and start spinning cocoons.
- (f) Cocoons are kept under the sun or boiled in water.
- (b) Fibers are taken out from the cocoon.

20. A wholesale woollen fibre dealer gets the woollen fibre of different textures sorted for various purposes. Match the items in Column I with the woollen fibre in Column II.

Column I	Column II
a) Pashmina Shawl	i) Camel Wool
b) Woolen carpet	ii) Angora wool
c) Baby blanket	iii) Kashmir Goat
d) Woolen Sweater	iv) Sheep wool

Soln:

Column I	Column II
a) Pashmina Shawl	iii) Kashmir Goat
b) Woolen carpet	i) Camel Wool
c) Baby blanket	ii) Angora wool
d) Woolen Sweater	iv) Sheep wool

Long Answer Questions

21. Complete the paragraph related to the life history of silk moth by filling in the blanks. The ____ (a) ____ silk moth lays ____ (b) ____, from which hatch ____ (c) ____ called ____ (d) ____ or ____ (e) ____ . They grow in size and when the caterpillar is ready to enter the next stage of its life history called ____ (f) ____, it first weaves a covering to hold itself, which is known as ____ (g) ____ .

Soln:

The a) **female** silk moth lays b) **eggs**, from which hatch c) **larvae** called d) **caterpillars** or e) **silkworms**. They grow in size and when the caterpillar is ready to enter the next stage of its life history called f) **pupa**, it first weaves a covering to hold itself, which is known as g) **cocoon**.

22. Paheli went to the market to buy sarees for her mother. She took out a thread from the edge of the two sarees shown by the shopkeeper and burnt them. One thread burnt with a smell of burning hair and the other burnt with the smell of burning paper. Which thread is from a pure cotton saree and which one from a pure silk saree? Give reason for your answer.

Soln:

Thread which burns with the smell of burning paper is of cotton because both paper and cotton are cellulose which are carbohydrates hence they burn with similar odor. Similarly the thread which is burnt with smell of burning hair is silk, because silk as well as hair are proteins hence they burn with similar characteristic smell.

23. Explain the phrase – “Unity is Strength” on the basis of the making of fabric from fibre.

Soln:

Fabric is made of thin hair like strand called as fibres. It is easy to break a fibre thread as it is fragile easy to break as well. On the other hand fabric is the accumulation of many fibre thread which are hard to break and needs enormous amount of energy to break fabric. Hence based on making of fabric from fibre it is said that unity is strength.

24. Write various steps for processing fibres into wool.

Soln:

Step I: The fleece of the sheep along with a thin layer of skin is removed from its body [Fig. 3.8 (a)]. This process is called shearing. Machines similar to those used by barbers are used to shave off hair. Usually, hair are removed during the hot weather. This enables sheep to survive without their protective coat of hair. The hair provide woollen fibres. Woollen fibres are then processed to obtain woollen yarn. Shearing does not hurt the sheep just as it does not hurt when you get a hair cut or your father shaves his beard. Do you know why? The uppermost layer of the skin is dead. Also, the hair of sheep grow again just as your hair does.

Step II: The sheared skin with hair is thoroughly washed in tanks to remove grease, dust and dirt. This is called scouring. Nowadays scouring is done by machines [Fig. 3.8 (b) and (c)].

Step III: After scouring, sorting is done. The hairy skin is sent to a factory where hair of different textures are separated or sorted.

Step IV: The small fluffy fibres, called burrs, are picked out from the hair. These are the same burrs which sometimes appear on your sweaters. The fibres are scoured again and dried. This is the wool ready to be drawn into fibres.

Step V: The fibres can be dyed in various colours, as the natural fleece of sheep and goats is black, brown or white.

Step VI: The fibres are straightened, combed and rolled into yarn. The longer fibres are made into wool for sweaters and the shorter fibres are spun and woven into woollen cloth.

25. Describe the life history of silk moth with the help of figures of various stages.

Soln:



(a) Male



(b) Female

Adult silk moths



(c) Eggs on mulberry leaves



(d) Silkworm



(e) Cocoon



(f) Cocoon with developing moth

Fig. 3.9 (a to f) Life history of silk moth