



Class: VI	Department: SCIENCE-2022-2023	Date: 23-05-2022
Worksheet No.: 3 with answers	Topic: Fibre to fabric	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

I. VERY SHORT ANSWER (1M)

1. What is meant by spinning?

[The process of twisting fibres by hand or using a machine, to obtain thread or yarn.]

2. What are looms?

[The machines which are used for weaving fabric are called looms. They are either hand (handlooms) or power operated – (power looms).]

3. Classify the given fibres as natural and synthetic:

Fibres	Natural / Synthetic Fibres
Wool	Natural-animal
Cotton	Natural- plant
Jute	Natural- plant
Polyester	Synthetic
Silk	Natural-animal
Nylon	Synthetic

4. Name two modern fabrics formed by an unstitched piece of fabric. [Saree, Turban,]

5. In which states of India, jute is cultivated? [West Bengal, Bihar, Assam]

6. On what factors does our type of clothing depend?

[Type of clothing we wear depends on climate, occupation, culture and daily needs]

7. Name two hand-operated devices used for spinning. [Takli, charkha]

8. In which states of India, cotton is mainly grown?

[Maharashtra, Gujarat, Punjab and Andhra Pradesh]

9. Write the two methods of knitting. [i. by hands ii. by machines.]

10. Name some clothes made by knitting. [sweaters, t-shirts, gloves, caps, socks]

For questions 11,12 and 13, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

i) Both A and R are true and R is the correct explanation of assertion.

ii) Both A and R are true but R is not the correct explanation of assertion.

iii) A is true but R is false.

iv) A is false but R is true

11. **Assertion (A):** The process of arranging two sets of yarns together to make a fabric is called weaving.

Reason (R): A hand spindle is a device used for weaving.

[iv) A is true but R is false]

12. **Assertion (A):** We twist fibres together to make thick and long yarn.

Reason (R): Fibres are obtained only from plant sources.

[iii) A is true but R is false.]

13. **Assertion (A):** Seeds are removed from cotton bolls.

Reason (R): Cotton seeds are removed from cotton bolls to make an even and uniform fabric.

[i) Both A and R are true and R is the correct explanation of assertion.]

II. PASSAGE BASED QUESTIONS:

Read the following passage and answer the given questions.

The fibres of some fabrics such as cotton, jute, silk and wool are obtained from plants and animals. These are called natural fibres. Cotton, jute and coir are examples of fibres obtained from plants. Wool and silk fibres are obtained from animals. Wool is obtained from the fleece of sheep or goats. It is also obtained from the hair of rabbits, yak and camels. The silk fibre is drawn from the cocoon of the silkworm. For thousands of years, natural fibres were the only ones available for making fabrics. In the last hundred years or so, fibres are also made from chemical substances, which are not obtained from plant or animal sources. These are called synthetic fibres. Some examples of synthetic fibres are polyester, nylon and acrylic.

i. Fibres can be either natural or man-made. Based on the source of the fibres, which of the following sets of fibres have a different origin?

a) Jute and Cotton b) Nylon and Polyester c) Jute and coir d) Wool and Silk

ii. Identify the set of wool-yielding animals-

a) Camel and yak b) Sheep and rabbit c) yak and rabbit d) All of these

iii. Which of the following is a fabric that is obtained from a purely natural source?

a) Silk b) Nylon c) Rayon d) Acrylic

iv. Identify the incorrect statement:

- a) Acrylic is a synthetic fibre.
- b) Synthetic fibres are made from chemical substances.
- c) Silk is obtained from the fleece of other animals.
- d) Natural fibres are obtained from both plants and animals.

III. CASE STUDY-BASED QUESTIONS:

1. Jute fibres are to be handpicked from the stem of flowering jute plants after they have rot. These stems must be immersed in water for a few days to obtain fibres and such plants the flower only during rains and require high soil moisture. Consider the following data:

PLACE	RAINFALL RECEIVED IN A YEAR (in mm)
New Delhi	800 mm
Assam	2800 mm
Rajasthan	500 mm
Gujarat	1000 mm

- i. In which season Jute is cultivated? [Hint- Rainy season]
- ii. Based on the given data which is a region where jute is more likely to be grown? [Hint- Assam]
- iii. Why are the stalks of the Jute plant soaked in water for a few days? [Hint- It causes the stems to rot so that the fibres can be easily separated from the stem]
- iv. Why are jute plants cut at the flowering stage and not on complete maturation? [Hint- Jute plants are cut at the time of the flowering stage because a good quality of fibre is obtained at this stage. On complete maturation of plant, fibres of its stem become very hard.]

IV. a) SHORT ANSWER TYPE QUESTIONS (2M):

- 1. Distinguish between natural and synthetic fibres. Give two examples for each. [The fibres obtained from natural sources are called natural fibres. They can be obtained from plants like cotton, and jute or animals like wool, and silk. The fibres made in factories from chemicals are called synthetic or man-made fibres. E.g. nylon, polyester]

2. Differentiate between weaving and knitting.

[The process of making fabric by crisscrossing two sets of yarn is called weaving.

The process of making fabric by interlocking loops of a single yarn is called knitting.]

3. What is ginning of cotton? How is it done?

[The process of separating cotton fibres from their seeds is called ginning. It can be done by combing the fibres using hand or by machines.]

4. Mention some uses of jute fibre.

[Jute is used for making sacks, curtains, handbags, carpets, table mats, etc.]

5. What is coir? Name any two items that are made from it.

[Coir is obtained from the outer covering of the coconut. Its husk is separated from the nut and beaten to get fibre. It is used to make ropes, floor mats and stuffing for mattresses.]

IV. b) SHORT ANSWER TYPE QUESTIONS (3 M):

1. Explain how jute is obtained from the jute plant.

[Jute is cultivated during the rainy season. It is harvested at the flowering stage of the plant.

Bundles of the stem are left in the fields so that leaves can dry and fall off. The stems are made to sink in stagnant water for a few days. The skin rots out and jute fibres are removed by hand.]

2. Define the following terms:

a. Fibre – [A single hair-like strand, resembling a thin thread is called fibre.]

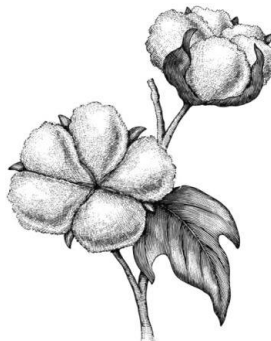
b. Yarn- [A long continuous length of interlocked fibres is called yarn.]

c. Fabric- [The cloth obtained by weaving or knitting from fibres or yarn is called fabric.]

3. Explain the process of making yarn from fibre.

[The process of making yarn from the fibre is called spinning. The fibres are first drawn out from their source and then twisted into yarn. It can be done by using hand devices like hand spindle and spinning wheel. on a large scale, spinning of yarn is done with the help of spinning machines.]

4. Observe the picture and answer the following questions-



- i) Name the given plant. [Cotton plant]
- ii) Which part of the plant gives us fibre? [Fruit]
- iii) Mention the type of soil and climate which is suitable for growing this plant. [Black soil and warm climate]
- iv) Write any two uses of this fibre.

Cotton fibre is used for making fabrics, making wicks for oil lamps, and filling mattresses or pillows or quilts.

5. A and B are two natural fibres. Fibre A is very soft and smooth and is separated from the seeds by process C. Fibre A is used for making wicks of oil lamps lit on Diwali. Fibre B is very rough and is present as an outer covering on the ripened fruit D which is found mainly in coastal areas. This fibre is used for making ropes and mats.

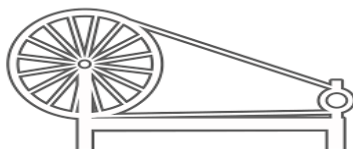
- a) Name the fibre A. [cotton]
 - b) What is the process C known as? How is it performed? [ginning- Performed by using hands or machines]
 - c) Name the process by which fibre A is twisted to form a yarn. [Spinning]
 - d) Name the fibre B. [coir]
 - e) What is the name of fruit D? [coconut]
6. a. What will happen if we pull the yarn from a torn pair of socks? State the reason.
[A single yarn from a torn sock gets pulled out continuously as the fabric gets unravelled. This happens because they are made of knitted fabric.]
- b. Observe the figures given below, identify the device and the process that can be carried out using these devices.

A-



[Handloom- Weaving]

B-



Harkha-Spinning of fibres to produce yarn]

V. LONG ANSWER TYPE QUESTIONS (5 M):

1. a. Why do we wear cotton clothes in summer?

[We sweat a lot in summer. Cotton clothes allow air to pass through them. Cotton clothes absorb sweat and let it evaporate. Thus, they help to keep our body cool.]

b. Why cotton fabrics are preferred for mopping in household cleaning?

[Cotton fabrics can absorb water. They are coarse and rough. Thus, they can clean the floor very well.]

c. Which material is used for making gunny bags and why?

[Jute fibres are used for making gunny bags because they are strong and can hold heavy loads.]

d. Beera is a farmer. His field has black soil and the climate is warm. Which fibre-yielding plant should he grow in his field and why?

[Beera should grow cotton plants in his fields because a cotton plant is usually grown in areas having black soil and a warm climate.]

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