

## SUBJECT – SCIENCE

### CLASS – VII

#### CHAPTER – 1, NUTRITION IN PLANTS

##### 1 MARK QUESTIONS

1. What are the different components of food?

Different components of food are:

- Carbohydrates
- Proteins
- Fats
- Vitamins
- Minerals

2. What is the fundamental unit of life?

Cell is the fundamental unit of life.

3. What is meant by nutrition?

Nutrition is the process of taking in food by an organism and its utilisation by the body.

4. What are the two main types of nutrition prevalent in living organisms?

Two main types of nutrition prevalent in living organisms are

- Autotrophic nutrition
- Heterotrophic nutrition

5. Define photosynthesis.

Photosynthesis is the process by which green plants prepare their own food.

6. What is the ultimate source of energy for all living organisms?

Sun is the ultimate source of energy for all living organisms.

7. What indicates the occurrence of photosynthesis?

The presence of starch in leaves indicates the occurrence of photosynthesis.

8. How do water and minerals present in the soil get absorbed?

Water and minerals present in the soil are absorbed by the roots.

##### 2 MARKS QUESTIONS

9. Write the raw materials required for photosynthesis.

Raw materials required for photosynthesis are:

- a) CO<sub>2</sub> from atmosphere
- b) Water from soil
- c) Chlorophyll
- d) Sunlight

10. How do autotrophs differ from heterotrophs?

Autotrophs – Organisms which can prepare their own food from simple substances like carbon dioxide and water by the process of photosynthesis are called autotrophs. For example: green plants

Heterotrophs – Organisms which depend directly or indirectly on plants for food are called heterotrophs. They cannot manufacture their own food. For example: Cuscuta

11. What is the role of stomata in plants?

Stomata help in

- Exchange of gases
- Transpiration

12. How are green patches in ponds formed?

Green patches in ponds are generally formed by the growth of organisms called algae.

13. Why all the raw materials of photosynthesis must reach to leaves?

The synthesis of food in plants occur in leaves, therefore, all the raw materials must reach to leaves.

14. What happens when pickles, leather and clothes are left in hot and humid weather for long time?

When pickles, leather and clothes are left in hot and humid weather for long time then fungi starts growing on them and they gets spoil.

15. Pitcher plant is green and carries out photosynthesis, then why does it feed on insects?

Pitcher plant feed on insects to fulfill its nitrogen requirements.

16. Do coloured leaves make their own food?

Yes, coloured leaves make their own food because they contain chlorophyll.

17. Why are manures and fertilisers added to the soil by farmers?

Manures and fertilisers are added by farmers to enrich the soil as they contain plant nutrients such as nitrogen, potassium, phosphorous.

18. What is so special about the leaves that they can synthesise food?

The leaves have a green pigment called chlorophyll. It helps the leaves to capture the energy of the sun and synthesise food.

19. Cuscuta is without chlorophyll. How does it obtain food?

Cuscuta takes readymade food from the plant on which it climbs.

### 3 MARKS QUESTIONS

20. Define

- a. Cell membrane
- b. Nucleus
- c. Cytoplasm

- a. Cell membrane – The cell is enclosed by a thin outer boundary, called the cell membrane.
- b. Nucleus – Most cells have a distinct, centrally located spherical structure called the nucleus.
- c. Cytoplasm – The nucleus is surrounded by a jelly like structure called cytoplasm.

21. How are water and minerals transported to the leaves?

Water and minerals are transported to the leaves by the vessels which run like pipes throughout the roots, the stem, the branches and the leaves.

22. How the process of photosynthesis is carried out in desert plants?

The desert plants have spine like leaves to reduce loss of water by transpiration. These plants have green stem which carry out photosynthesis.

23. How does a pitcher plant trap insects?

The leaf of pitcher plant is modified into pitcher like structure. The apex of the leaf forms a lid. Inside the pitcher, there is hair. When an insect lands on the pitcher, the lid closes and the trapped insect gets entangled into the hair. The insect is then digested by the digestive juices secreted in the pitcher.

24. What type of relationship is shown by lichen? Explain.

Lichen shows symbiotic relationship.

- In lichen, an alga and a fungus live together. The fungus provides shelter, water and minerals to the alga and the alga provides food to the fungus.

25. Explain how rhizobium bacterium and roots of leguminous plants share a symbiotic relationship?

- Rhizobium bacterium can take atmospheric nitrogen and convert it into soluble form that the plant can take.
- In return, the plant provides food and shelter to the bacterium.

This is how rhizobium bacterium and roots of leguminous plants share a symbiotic relationship.

## SUBJECT – SCIENCE

### CLASS – VII

#### CHAPTER – 3, FIBRE TO FABRIC

##### 1 MARK QUESTIONS

1. From which animal, angora wool is obtained?  
Angora wool is obtained from angora goats.
2. Which type of wool is common in Tibet and Ladakh?  
Yak wool is common in Tibet and Ladakh.
3. Shearing does not hurt sheep. Give reason for it.  
Shearing does not hurt sheep because the uppermost layer of the skin is dead.
4. Why is scouring essential?  
Scouring is essential to remove grease, dust and dirt from sheared skin.
5. What is meant by reeling the silk?  
The process of taking out the threads from the cocoon for use as silk is called reeling the silk.
6. To which class of organic substance does silk fibre belong to?  
Silk fibre is a natural protein.

##### 2 MARKS QUESTIONS

7. Name two animal fibres and their sources.

S. No.	Animal fibre	Source
1.	Silk	Cocoons of silk moth
2.	Wool	Fleece of sheep, yak, goat or camel

8. Why wool on burning gives smell similar to smell produced on burning natural silk?  
Wool on burning gives smell similar to smell produced on burning natural silk because they both are animal products and contain proteins.
9. Why do animals like sheep, goat and yak have a thick coat of hair on their body?  
Animals like sheep, goat and yak have a thick fur of hair to keep them warm as hair trap a lot of air and air is a bad conductor of heat. So it does not allow their body heat to escape.
10. What is meant by selective breeding?  
The process of selecting parents for obtaining desirable characters in their offspring is called selective breeding.

11. Name four breeds of sheep in India and the quality of wool they yield.

S.No.	Name of breed	Quality of wool
1.	Lohi	Good quality wool
2.	Rampur bushair	Brown fleece
3.	Nali	Carpet wool
4.	Marwari	Coarse wool

12. Why is shearing done in hot weather?

Shearing is done in hot weather because sheep can survive without their protective coat of hair in summer season. If shearing is done in winter season then the sheep would die due to severe cold.

13. What is sorter's disease?

Sorter's disease is a fatal blood disease caused by bacterium anthrax. People working in sorting department of wool industry generally develop this disease.

14. What does caterpillar secrete?

Caterpillar secretes fibre made up of a protein which hardens on exposure to air and becomes silk fibre.

15. Name four varieties of silk.

Four varieties of silk are:

- Tassar silk
- Moonga silk
- Kosa silk
- Mulberry silk

16. List any three characteristic properties of silk fibre.

The silk fibres are:

- Soft
- Lustrous
- Elastic

### 3 MARKS QUESTIONS

17. Why a cotton garment cannot keep us as warm in winter as a woollen sweater does?

Woollen fibres trap air and air is a bad conductor of heat, so it does not allow our body heat to escape and keep us warm during winter while cotton fibres do not trap air, so they cannot keep us warm during winter.

18. Explain the life history of silk moth.

- The female silk moth lays eggs
- From the eggs, larvae hatch out. The larvae of silk moth are called caterpillars or silkworms.
- Caterpillar first weaves a net to hold itself then it swings its head from side to side in the form of figure eight.

- During these movements of the head, the caterpillar secretes silk fibre
- As the caterpillar completely covers itself by silk fibres, it turns into pupa. This covering is called cocoon.
- The further development of pupa into moth continues inside the cocoon.

19. Differentiate between artificial and natural silk.

S. No.	Artificial silk	Natural silk
1.	Artificial silk is made by man.	Natural silk is obtained naturally from cocoons of silk moth
2.	Artificial silk on burning smells like burning paper	Natural silk on burning smells like burning hair