



II. SHORT ANSWER TYPE QUESTIONS

1. What are weeds?

Ans: The unwanted plants that grow in the fields with the main crops or in their surroundings are called weeds. Weeds are the plants which are not grown by the farmers. For example, grass.

2. Classify plants and give an example of each.

Ans: On the basis of various characteristics most of the plants can be classified into three categories:

(i) Herbs, e.g. tomato

(ii) Shrubs, e.g. lemon

(iii) Trees, e.g. mango

3. What are herbs? Give two examples.

Ans: The plants with green and tender stems are called herbs. They are usually short and may have no or less branches. For example, tomato, potato.

4. What are shrubs? Give two examples.

Ans: The plants which have a hard but not a very thick stem are called shrubs. Such plants have the stem branching out near the base. For example, lemon, rose plants.

5. What are trees? Give two examples.

Ans: The plants which are very tall and have hard and thick brown stem are called trees. The stems have branches in upper part and much above the ground. For example, mango, neem.

6. What are creepers? Write an example.

Ans: The plants with weak stem that cannot stand upright and spread on the ground are called creepers. Various types of grasses are the examples of creepers.

7. What are climbers?

Ans: The plants that take support of neighbouring structures and climb up are called climbers. They have weak stem. For example, grapes, money plant, beans.

8. Explain an activity to show that stem conducts water and other substances.

Ans: Take some water in a glass. Add few drops of red ink to the water. Cut the stem of a herb plant from its base. Put it in the glass as shown in figure. We will see that some parts of the stem become red. This activity shows that stem conducts water.



Fig. 7.10 What does the stem do?

9. Explain the structure of a leaf with the help of a labelled diagram.

Ans: There are two main parts of leaf:

(i) Petiole: The part of the leaf by which it is attached to the stem is called petiole.

(ii) Lamina: The broad, green part of the leaf is called lamina.

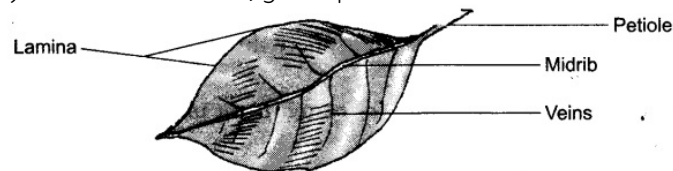


Fig. 7.11 A leaf

The lamina contains following parts:

(i) Veins: There are various types of lines on the leaf. These lines are called veins

(ii) Midrib: There is a thick vein in the middle of the leaf. This vein is called midrib.

10. Explain the main functions of leaf.

Ans: There are following two main functions of leaf:

(i) Transpiration: The extra water comes out of the leaves in the form of vapour. This process is called transpiration.

(ii) Photosynthesis: The process by which leaves prepare their food from water and carbon dioxide, in the presence of sunlight and a green-coloured substance, is called photosynthesis.

11. What are unisexual and bisexual flowers?

Ans: Unisexual flower has either male (stamen) or female (pistil) parts.

Bisexual flowers have both male and female whorl in the flowers, i.e., they have both stamen and pistil.

12. Name a plant that eats insect.

Ans: Pitcher plant.

13. Pitcher plant has green leaves which can prepare food by photosynthesis then why does it eat insects?

Ans: To get nitrogenous compounds which it cannot absorb from the soil.

14. Name a plant that has underground as well as aerial (above the ground) root system.

Ans: Banyan tree.

15. Why do we see dew drops on leaves in the early morning?

Ans: At night the water lost by leaves does not get evaporated and gets collected on the leaves in the form of dew drops.

16. Why are petals colourful?

Ans: The colourful petals attract insects for pollination.

17. Why does white flowers bloom at night?

Ans: White colour attracts night insects for pollination.

18. What do you mean by a complete and incomplete flower?

Ans: The flower with all whorls, i.e., sepals, petals, stamen and carpel in it is a complete flower. If any one of this is absent in a flower it is called an incomplete flower.

19. Leaves need oxygen and carbon-dioxide (for photosynthesis).

How do they get these gases?

Ans: Leaves take in these gases from atmosphere through small pores present on them called stomata.

20. How can one destarch the leaves of potted plant without plucking, them?

Ans: By keeping it in dark for 2-3 days.

21. What is the relation between leaf venation and the type of roots?

Ans: The plants having tap root have reticulate venation. The plants having fibrous roots have parallel venation.

22. Name the male part of a flower. Write names of its parts and draw a diagram.

Ans: The male part of a flower is called stamen. It has two parts: (i) Filament and (ii) Anther.

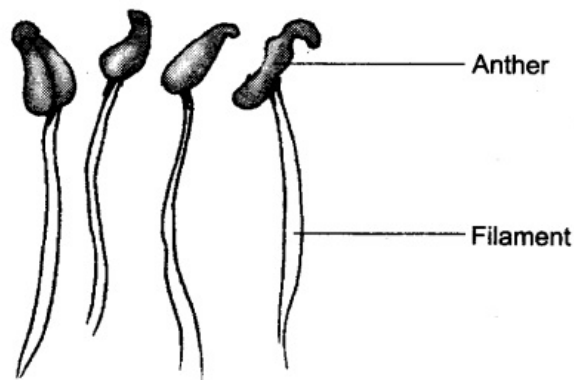


Fig. 7.12 Parts of a stamen

23. Name the female part of a flower. Write names of its parts and draw a diagram.

Ans: The female part of a flower is called pistil. It has three parts: (i) Stigma, (ii) Style, and (iii) Ovary.

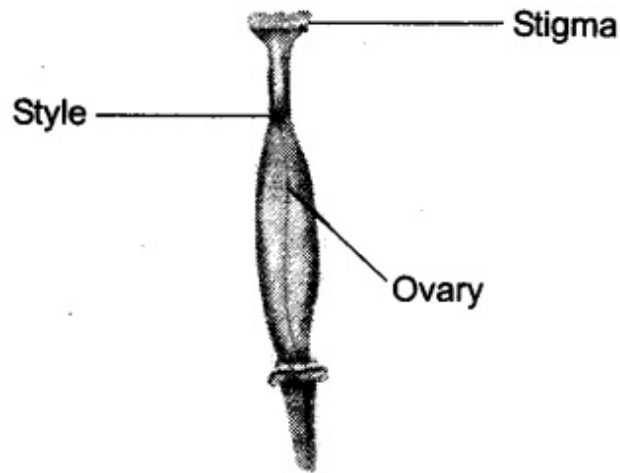


Fig. 7.13 Parts of a pistil

24. Differentiate between tap root and fibrous root.

Ans:

<i>Tap root</i>	<i>Fibrous root</i>
1. Tap root has only one main and long root. The smaller roots that grow from the main root are called <i>lateral roots</i> . 2. Tap root goes deep into the soil. 3. Tap roots are found in plants which have <i>reticulate venation</i> in their leaves.	Fibrous roots do not have a main root. All roots seem similar. They do not go deep into the soil. These are found in plants which have <i>parallel venation</i> in their leaves.

LONG ANSWER TYPE QUESTIONS

1. What do you mean by leaf venation? Explain various types of leaf venation with example.

Ans: Leaf venation: The design made by veins in a leaf is called leaf venation. There are the following two types of leaf venation:

(i) Reticulate venation: If the design of veins makes a net-like structure on both the sides of midrib then it is called reticulate venation. For example, mango leaf, gram leaf.

(ii) Parallel venation: If the veins are parallel to each other or to midrib then such type of venation is called parallel venation. For example, wheat leaf, barley leaf.

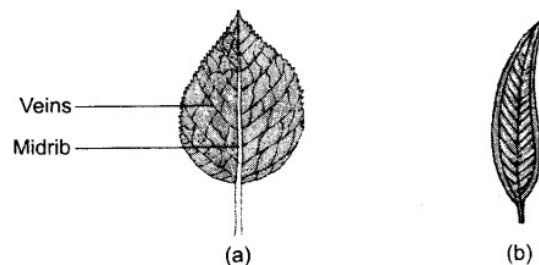


Fig. 7.14 Leaf venation—(a) Reticulate and (b) Parallel

2.Explain the structure of a typical flower with the help of a diagram.

Ans: A typical flower contains the following parts:

(i) Stalk: The part by which a flower is attached to the branch is called stalk.

(ii) Sepals: The small green leaf-like structures of the flower are

called sepals,

(iii) Petals: The big coloured leaf-like structures are called petals. Different flowers have petals of different colours.

(iv) Stamen: It is the male part of the flower. It has two parts: (a) Filament and (b) Anther.

(v) Pistil: The innermost part of a flower is called pistil. It has three parts: (a) Stigma, (b) Style and (c) Ovary. It is the female part of the flower.

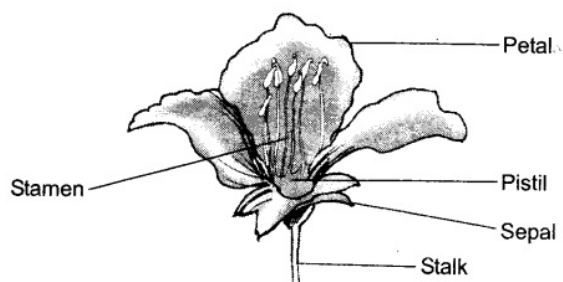


Fig. 7.15 Parts of a flower

3. Explain an activity to test the presence of starch in a leaf.

Ans: Take a leaf in a test tube and pour spirit till it completely covers the leaf. Now put the test tube in a beaker having water. Heat the beaker till all the green colour from the leaf comes out into the spirit in the test tube. Take out the leaf and wash it with water. Put it on a plate and pour some iodine solution over it. The iodine solution is brown in colour but when it comes in contact with starch it turns blue-black. The iodine solution will turn blue-black when dropped on the leaf, this confirms the presence of starch in the leaf.

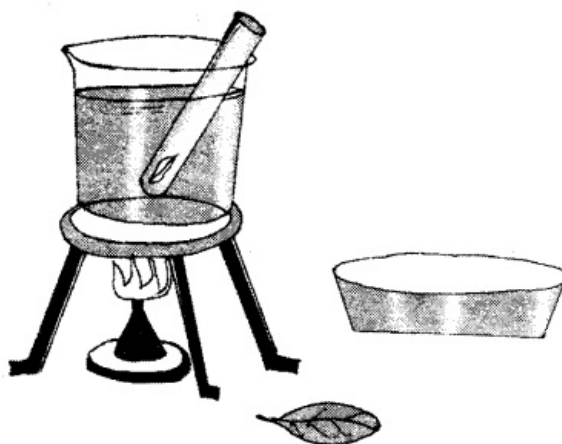


Fig. 7.16 Starch test

4. Explain that sunlight is essential for photosynthesis.

Ans: Take a potted plant having green leaves. Place it in a dark room for a day or two so that all the starch present in leaves is used by the plant. Now cover a portion of leaf with black paper and keep the plant in the sun for a day. Pluck the leaf, remove the black paper and test it for the starch. We see that only that part of the leaf becomes blue-black which was open to sun. The covered part does not become blue-black. This shows that no starch is formed because it gets no sunlight.

5. Explain the important functions of root.

Ans: The following are the functions of root:

- (i) They help to absorb water from the soil.
- (ii) The roots help in holding the plants firmly in the soil.
- (iii) They are said to anchor the plant to the soil.

6. Explain various kinds of roots with the help of an example.

Ans: There are following two types of roots:

(i) Tap roots: The roots which have one main root and other smaller lateral roots are called tap roots. For example, mustard plant, gram.
(ii) Fibrous roots: The roots which have no main root but all the roots appear similar are called fibrous roots. For example, maize, wheat.

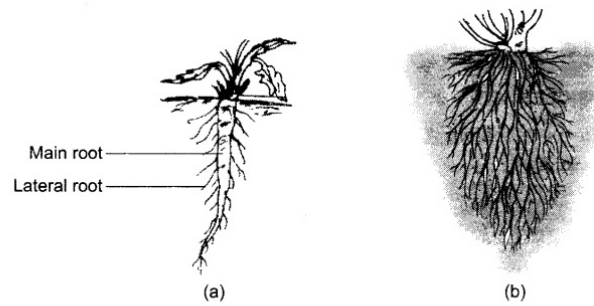


Fig. 7.17 (a) Tap root and (b) Fibrous root

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