

## Chapter 7

### Getting to Know Plants

#### DIFFERENT TYPES OF PLANTS :

- **Herbs** : Plants with green and tender stems are called **herbs**. They are smaller in height as compared to others and have less braches.
- **Shrubs** : Some plants have stem branching out near the base there stem is hard but not too thick these are called **shrubs**. These are shorter in height and have multiple stems.
- **Trees** : Some plants are very tall and have hard and thick brown stem. The stem has branches in the upper part, much above the ground. Such plants are called **trees**.
- **Creepers** : Plants with weak stems that cannot stand upright and spread on the ground are called creepers.
- **Climbers** : Those that take support on neighboring structures and climb up are called climbers.

**STEMS** : Stem is the part of plant that support leaves, flowers and fruits. Stems helps in transport of fluid from roots to other parts of plant. This movement of water and minerals is done through the narrow tube inside the stem called **xylem**.

**LEAF** : Leaves of a plants helps the plant to make their food through. The part of leaf by which it is attached to the stem is called **petiole**. The broad green part of leaf is called **lamina**. Small lines present on a leaf are called its **vein**. These gives support and transport water and mineral through the leaf. A thick vein in the middle of the leaf is called **midrib**.

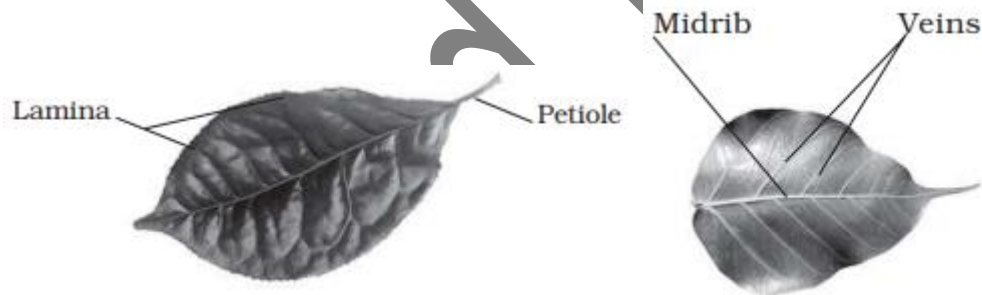


Diagram of a Leaf

**LEAF VENATION** : The design made by veins in a leaf is called the **leaf venation**.

#### TYPES OF LEAF VENATION :

- **Reticulate venation** : If the design is net like on both sides of midrib is called **reticulate venation**. For example: coriander, rose etc.
- **Parallel venation** : If the design made by veins is parallel to one another in a leaf is called **parallel venation**. For example: grass, wheat etc.

**TRANSPIRATION** : Water vapors are released into the atmosphere through stomata present on leaf this process is called **transpiration**.

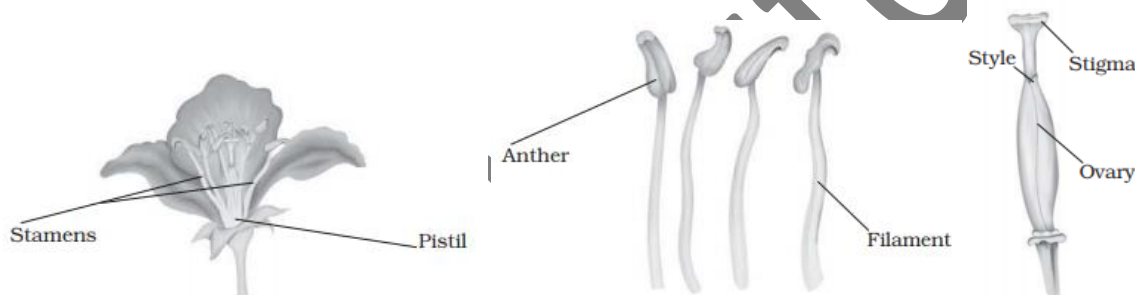
**ROOT** : Plant organ which lies below the soil surface is called **root**. Roots helps in holding the plant firmly in the soil. They are said to anchor the plant to the soil. Root absorbs minerals and nutrients from the soil necessary for plant. There are two types of roots.

#### TYPES OF ROOT :

- I. **Tap root:** Tap root has a one main root called tap root, and other roots and content to this root called lateral root. In this type of root **Reticulate venation** is found in leaf.
- II. **Fibrous root:** This type of root does not have any main root. All the roots are of same size. In this type of root **Parallel venation** is found in leaf of these type of roots plants.

**FLOWERS AND ITS PARTS :** Flowers are mainly the reproductive part of plants. Different parts of flower: Petals, Sepals, Pistil, Stamen.

- **Petals:** The colored part of flower that covers the reproductive part of flower are petals.
- **Sepals:** Sepals are the outmost green color part of flower that covers the bud.
- **Stamen:** The pollen producing part of flower is Stamen. It has two parts, first is **anther** which contains pollen grains and second is **filament**, the tube like structure supporting anther.
- **Pistil:** The innermost part which produces ovules. It has 3 parts, first is stigma, the upper part receives pollen grain for fertilization. Second is style a long hollow tube like structure join stigma and ovary. Third is ovary in which ovules are produced. The mature ovary develops into fruit and the mature ovules develop into seeds.



### NCERT QUESTION-ANSWERS

**1. Correct the following statements and rewrite them in your notebook.**

- (a) Stem absorbs water and minerals from the soil.
- (b) Leaves hold the plant upright.
- (c) Roots conduct water to the leaves.
- (d) The number of sepals and petals in a flower is always equal.
- (e) If the sepals of a flower are joined together, its petals are also joined together,
- (f) If the petals of a flower are joined together, then the pistil is joined to the petal.

**Answer.**

Correct statements are written below:

- (a) Roots absorb water and minerals from the soil.
- (b) Stem holds the plant upright.
- (c) Stem conducts water to the leaves.
- (d) The number of petals and sepals in a flower may be equal or different in different plants.
- (e) If the sepals of a flower are joined together, then its petals may or may not be joined together.
- (f) If the petals of a flower are joined together, then the pistil is not necessarily joined to the petal.

**3. Can you find a plant in your house or in your neighbourhood which has a long but a weak stem? Write its name. In which category would you classify it?**

**Answer.**

Yes, there is a plant in our house which has a long but a weak stem. Its name is money plant. It is a climber.

**4. What is the function of a stem in a plant?**

**Answer.**

A stem performs following functions in a plant:

- (i) It supports branches, leaves, flowers and fruits.
- (ii) It transports water and minerals from the roots to the leaves and other parts of plants.
- (iii) It transports food from leaves to different parts of the plant.
- (iv) It holds the plant upright.

**5. Which of the following leaves have reticulate venation?**

**Wheat, tulsi, maize, grass, coriander (dhania), china rose.**

**Answer.**

Leaves of tulsi, coriander and china rose have reticulate venation.

**6. If a plant has fibrous root, what type of venation are its leaves likely to have?**

**Answer.**

Plants with fibrous roots have parallel venation in their leaves.

**7. If a plant has leaves with reticulate venation, what kind of roots will it have?**

**Answer.**

Plants which have leaves with reticulate venation are likely to have tap roots.

**8. Is it possible for you to find out whether a plant has taproot or fibrous roots by looking at the impression of its leaf on a sheet of paper?**

**Answer.**

Yes, we can find out whether a plant has tap root or fibrous roots by looking at the impression of its leaves on a sheet of paper. If the leaf has parallel venation, then it is likely to have fibrous root but if the leaf has reticulate venation then the plant will have tap root.

**9. What are the parts of a flower?**

**Answer.**

There are four main parts of a flower. They are:

- (i) Sepals: Green coloured part that covers the flower in its initial stage.
- (ii) Petals: These form the coloured part of the plant.
- (iii) Stamen: It bears anther and filament.
- (iv) Pistil: This is the innermost part of flower. It bears stigma, style and ovary

**10. From the following plants, which of them have flowers?**

**Grass, maize, wheat, chilli, tomato, tulsi, pipal, shisham, banyan, mango, jamun, guava, pomegranate, papaya, banana, lemon, sugarcane, potato, groundnut**

**Answer.**

All of the plants given above have flowers.

**11. Name the part of the plant which produces its food. Name this process.**

**Answer.**

Leaves produce food for the plant. This process is called photosynthesis.

**12. In which part of a flower you are likely to find the ovary?**

**Answer.**

We can find ovary in the lowermost, swollen part of pistil.

**13. Name two plants in which one has joined sepals and the other has separate sepals.**

**Answer.**

Plants with joined sepals are: Datura, tomato, Loki, cotton

Plants with separate sepals: Rose, mustard, lotus, lily