- Roots absorb water and minerals from the soil.
- Roots also anchor the plant firmly to the soil.
- Roots are of two types tap roots and fibrous roots.

## **Root Modifications**

- Prop roots Example: banyan tree
- Stilt roots Example: maize and sugarcane
- Roots which helps in respiration Example: Rhizophora

## • Types of plants

- Plants are usually grouped into herbs, shrubs, and trees.
- Herbs are plants with green and tender stems. They are usually short. E.g. Wheat, rice.
- Shrubs are plants with hard but not very thick stems. Their stem branches near the base. E.g. Rose plant
- Trees are very tall plants with hard and thick brown stem. E.g. Mango, Apple.
- Classification of plants depending upon the time required to complete their life cycle
- Annuals They complete their life cycle in one growing season. e.g., paddy, wheat, maize, etc.
- $\circ$   $\;$  Biennials They complete their life cycle in two years e.g., cabbage, turnip, etc.
- Perennials They complete their life cycle in several years. e.g., mango
- Plants that spread on ground are known as creepers.
- E.g. of creepers are Pumpkin, watermelon.
- Plants that take support of neighbouring structures to climb up are known as climbers.
- E.g. of climbers are Pea, Money plant.

## Leaf

 $\neg$  A leaf has a petiole and a lamina.

 $\neg$  Leaves prepare their food in the presence of sunlight and chlorophyll by a process known as photosynthesis.

- $\neg$  The leaves lose water by the process of transpiration.
- $\neg$  The design made by leaf veins is known as leaf venation.
- $\neg$  Leaf venation is of two types reticulate venation and parallel venation.

## **Leaf Modifications**

- ¬ Tendrils- Example: peas
- ¬ Spines- Example: cactus
- ¬ Fleshy leaves for storage- Example: onion and garlic
- A leaf has a petiole and a lamina.
- Leaves prepare their food by using carbon dioxide and water in the presence of sunlight and chlorophyll. This process is known as photosynthesis.
- The leaves lose water by the process of transpiration.
- Transpiration helps in keeping the plant cool and in absorption of water through roots.
- Rate of transpiration depends on sunlight, temperature, wind and humidity.
- Those plants that have flowers are called **flowering plants** while those that do not contain flower, seeds are called **non-flowering plants**.
- Parts of flower
- o Calyx, Corolla, Androecium and Gynoecium are the parts of a flower.
- Sepals, petals, stamens, and pistil are their subparts.
- Collection of sepals is known as calyx
- Collection of petals is known as corolla.
- Ovary contains one to numerous ovules.
- Anther and filament are the parts of a stamen and collection of stamen is known as androecium
- Stigma, style, and ovary are the parts of a pistil and collection of pistils are known as gynoecium.
- Types of flower
- o Bisexual flowers: Contain both male and female parts
- o Unisexual flowers: Contain either male or female part