Chapter Sixteen

Flowering Plant, Photosynthesis, Dispersal Of Seeds And Transpiration

Flowering plants:



- A plant is made up of two parts and these are:
 - (i) The root system.
 - (ii) The shoot system.

The roots:

- These are the parts of the plant which grows underground and away from sunlight.

Functions of the root:

- It absorbs water and mineral salt from the soil, for the plant to use.
- It holds or fixes the plant firmly to the ground.
- In certain plants such as the cassava, food is stored in the roots.

Functions of the stem:

- It holds the leaf in such a position in order to get sunlight.
- Some stems can be used for vegetative propagation, i.e. used to reproduce the plant.
- Water and mineral salts from the soil is carried through the stem to the leaf.

Functions of the leaf:

- Photosynthesis occurs in the leaf.
- Transpiration occurs in the leaf.

Photosynthesis:

- This is the process in which green plants prepare their food.
- The food prepared by the plant is called carbohydrate or starch.

Conditions necessary for photosynthesis:

- Before photosynthesis can occur, there are certain conditions which must be present and these are:
 - (1) Carbon dioxide. (2) Water.
 - (3) Chlorophyll. (4) Sunlight.

Carbon dioxide:

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Water:

- The water needed for photosynthesis is absorbed or removed from the soil by the roots. - It

then passes through the stem into the leaf, where photosynthesis occurs.

Chlorophyll:

- Chlorophyll is needed for photosynthesis.

- Chlorophyll is a substance and when it is present in a plant, the leaf of the plant becomes green in colour.

Any leaf which is not green in colour does not contain chlorophyll.

Sunlight:

- Photosynthesis occurs only in sunlight but not in darkness. - The energy needed by plants for photosynthesis is sunlight.

-Therefore if there is no sunlight, photosynthesis cannot occur.

How photosynthesis occurs:

The chlorophyll is always present in the leaf.
The carbon dioxide absorbed from the air gets into the leaf.
The water absorbed from the soil also gets into the leaf.
When the sun appears, energy is absorbed or taken from it by the leaf.
The chlorophyll, water and the carbon dioxide are then changed into carbohydrate or starch.
The carbohydrate serves as food for the plant.

Dispersal of seeds:

-The seed is used to reproduce a plant.

Dispersal of seeds refers to the scattering of the seeds, from the parent plant to other places. - Seeds are

dispersed with the help of certain agents.

Agents of dispersal:

- The agents of dispersal of seeds are:
 - (1) Wind. (2) Animals.
 - (3) Water. (4) Man.

Wind dispersal of seeds:

- There are three methods or ways by which the wind can disperse seeds.

In the first method, the ripe seed moves in the wind and it is carried to new places.

- The second method occurs in seeds which have wings.
- Because they have wings, these seeds are easily blown away to other places by the wind.
- The third method of dispersal occurs in seeds which have hair.
- Because of the hair they have, these seeds can easily float in the air.

They are therefore carried to other places.