

Plant Tissue

Tissue : The group of cells of similar origin, structure and functions is called tissue.

Types of Plant Tissue

(A) Meristematic tissue : Growing regions of the plants are called Meristem. Meristematic tissue have capability of cell division. Daughter cells formed out. It grow and constitute the different parts of the plant. This process continue till the life-span of the plant.

Specific features of the Meristematic tissues are as follows

- (i) It is round, oval or multi-sided.
- (ii) Its wall is thin and cytoplasm is homogeneous.
- (iii) Cell contains dense cytoplasm and a single large nucleus.
- (iv) There is lack of inter-cellular spaces between the cells.

1. **Apical Meristems** : These tissues are found in the root and stem apex and the initial growth (specially length) of the plants take place due to these tissue.
2. **Lateral Meristems** : Due to the division in these tissue growth in the girth of roots and stems takes place. Hence, it increases the width of the root and stem.
3. **Intercalary Meristems** : They are located at the base of internode. In fact, this is the remains of the Apical Meristems, which is divided by the incoming of permanent tissues in the centre. Plants increase its length by the activity of this. Its importance is for those plants whose apex parts are eaten by vegetarian animals. After being eaten the apex part the plants grow with the help of intercalary meristems only. Like – grass.

(B) Permanent tissue : Permanent tissues are made of those mature tissues that have lost their capacity of division and attain a definite forms for various works. These cells can be alive or dead.

4. **Simple tissue** : If permanent tissue is made up of similar types of cells, it is called simple tissue.

5. Complex tissue : If permanent tissue is made up of one or more types of cells, it is called Complex tissue.

6. Xylem : This is usually called wood. This is conducting tissue. Its two main functions are —

(i) Conduction of water and minerals and

(ii) To provide mechanical consistency.

The determination of age of the plant is done by counting annual rings of the xylem tissue. The method of determining the age of plant is called Dendrochronology.

7. Phloem : This is a conducting tissue. Its main function is to conduct foods prepared by the leaves to different parts of the plant