

MERISTEMATIC TISSUES

- ▶ Meristematic tissue is the only plant tissue that produces new cells by cell division.
- ▶ These cells are thin walled with conspicuous nucleus and divide rapidly.
- ▶ Depending upon the position where they are situated meristematic tissues are classified as : Let us study them one by one

1. Apical meristem

2. Lateral meristem

3. Intercalary meristem

It is located at the growing tip of stem and roots. It is also called as cambium. It enables the root or stem to grow in length. It is present at the base of the leaves, at the nodal region of the twigs.

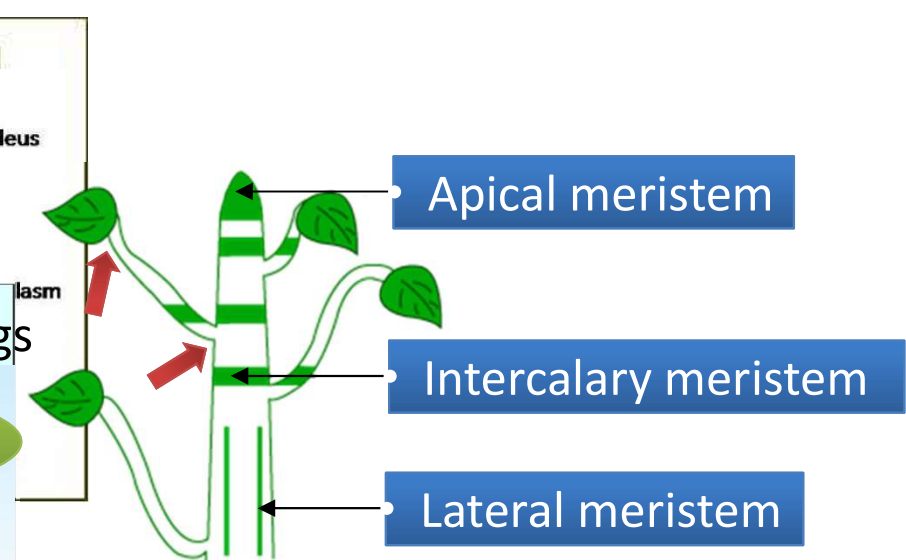
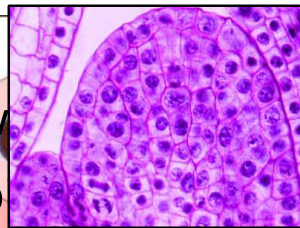
The meristem of this tissue have the ability to produce branches.

The region where branches arise

carbohydrate

Branches
Thick

very visible



PERMANENT TISSUES

- ▶ The cells formed by the division of meristematic tissue take up a specific role and lose the ability to divide. As a result, they form permanent tissue.
 - ▶ This process of taking up permanent shape, size and a function is called differentiation.
- Simple permanent tissues are of 6 types :
Made up of more than one type of cells
- Complex permanent tissues are of 2 types :
Made up of one type of cells

Chlorenchyma

Phloem

Aerenchyma

Collenchyma

Sclerenchyma

Surface tissue
(Epidermis)



Let us study them one by one