

[2] MERISTEMS - BASED ON ORIGIN → On the basis of their origin meristems belong to two classes.

A) Primary Meristems → It develops in the early stages of plant development or during the embryonic stage.

It forms the primary plant tissue such as P. cortex, P. xylem and P. phloem.

B) Secondary Meristems → It develops at the late or mature stages of plants development.

Secondary meristems are responsible for the formation of secondary tissue such as S. cortex, S. xylem and S. phloem.

[3] MERISTEMS BASED ON PLANE OF CELL DIVISION → There are 3 types of meristems on the basis of plane of cell division.

A) Mass Meristems → The meristematic cells of mass meristems divide in a plane increasing the volume of the plant organs and plant bodies.

Mass meristems form the cortex, endosperm, sporangia, Eustegia, gametangia and similar organs.

B) Plate Meristems → It has cell dividing only in two ^{plane} planes. It increases the area of the plant organ and plant bodies.

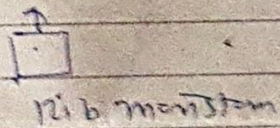
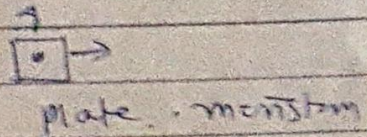
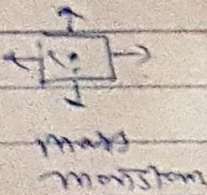
Plate organs such as leaves, bracts, sepals, petals etc. develop with the activity of plate meristems.

C) Rib Meristems → It consists of cells dividing

only in one plane

The cells divide to form row of cells, resulting in deformation of tissue structure.

Filaments of Algae, stem pith rays etc develop due to activity of Rib meristems.



[4] MERISTEMS BASED ON FUNCTION → On basis of function there are 3 types of meristems.

1) **Protoderm** → This meristem forms the primary tissue system such as epidermal and epidermal out growth.

2) **Corked Meristems** → It forms the secondary tissue system such as the cortex, endodermis and pith rays.

3) **Procambium** → It gives rise to the vascular tissue system such as the P. xylem and P. phloem.