

# Topic: Meristem

## B.Sc. Botany Sub. II

### Group: B

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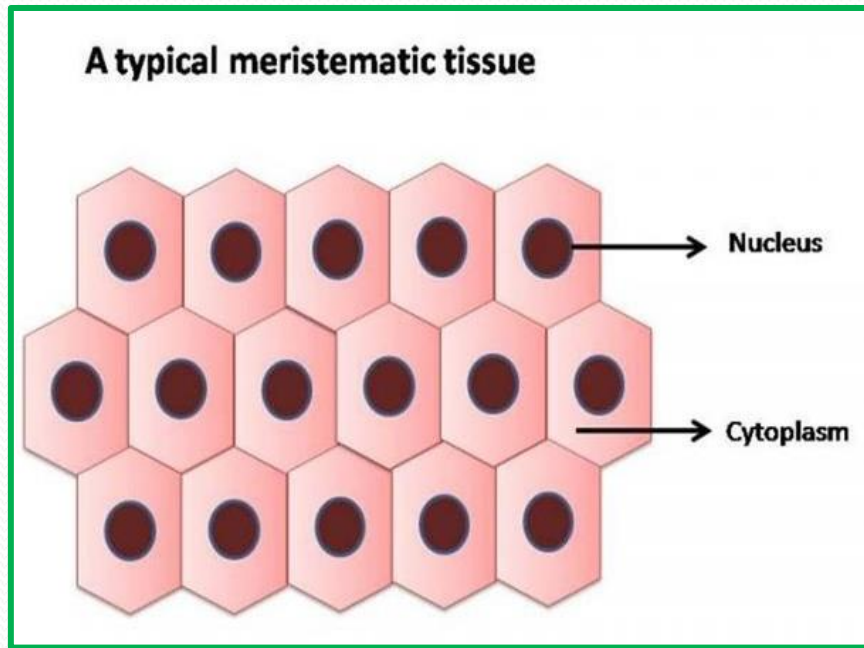
L.N. Mithila University, Darbhanga

## Meristem

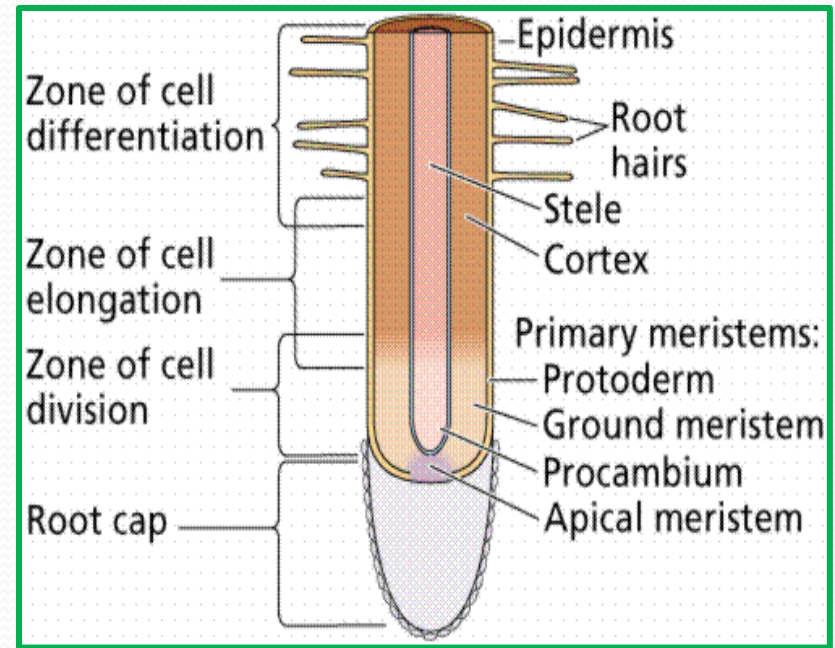
- The term meristem was proposed by Karl Nageli (1858) from a Greek word 'merizein' which means 'to divide'.
- Meristem consists of a group of cells which remain in a continuous state of division or they retain their power of division.
- The meristem composed of rapidly dividing undifferentiated mass of cells.
- Meristems are usually found in the growing region of plant organs such as shoot apex and root apex.
- Usually meristem originates from the embryonic cells.

The following characteristics features of meristem are –

- They are composed of immature cells.
- The cells are usually isodiametric in shape i.e., rounded, oval or polygonal.
- They are always living and thin-walled.
- They are compactly set without evident intercellular spaces.
- Each cell of meristematic tissue possesses abundant cytoplasm and one or more nuclei in it.
- The vacuoles in the cells may be small or altogether absent.
- The meristematic cells of vascular cambium are fusiform in shape.
- The protoderm develops into epidermis.
- The procambium into primary vascular tissues and ground meristem into fundamental or ground tissues.



**Fig 1. A typical meristematic cells**



**Fig 2. Meristem diagrammatic representation of meristem in a stem**