

1) Define secondary growth.

⇒ Secondary growth is the increase in girth (width) of a plant initiated by cell divisions in lateral meristem. It adds to the width of older areas of stems and roots that are no longer growing in length.

2) Name the meristematic tissue responsible for secondary growth in stems.

→ The lateral meristematic tissues are responsible for the secondary growth in stems.

3) What are the 2 types of cambium? Write one difference between them.

⇒ The two types of cambium are:-

- Vascular cambium.
- Cork cambium.

→ A difference is that cork cambium provides protection

against physical damage and prevents water loss, whereas the vascular cambium provides vascular tissues (xylem and phloem) to help the conduction inside the plant and provides structural support to the plant.

- 4) Explain how bark of a tree is formed. How does it act as a protective tissue?
- 1) The cork/bark of a tree is formed when the older roots and stem tissues, the peripheral ones turn to phellum and dead cells. It has thick dead cell wall with no intercellular spaces and protoplasm. They are impermeable due to waxy deposit of suberin.
- 2) It acts as a protective tissue as it is thick coated and protects the cell from



desiccation (water loss), infection
and any kind of mechanic
-al (physical) injury.