

**Programme: Bachelor of Science (Third Year)**

**Subject: Botany**

**Paper Code: BOC 105**

**Paper Title: Classical Taxonomy and Phylogeny**

**Unit: 1**

**Module Name: Bud**

**Module No: 15**

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## **Notes**

### **Bud**

A bud is an undeveloped small embryonic shoot covered with bud scales and developing leaves normally occurs in the axil of a leaf or at the tip of a stem.

A bud is specialized to develop into flowers or shoot. Once formed, a bud may remain for some time in a dormant condition, or it may form a shoot immediately.

### **Classification of bud**

Based on the position on the stem and its function the buds are classified as follows:

**Terminal bud:** Located at the apex of the stem.

**Axillary Bud:** A bud located in the axil of the leaf.

The axillary bud mostly remains in a dormant state due to the inhibitory influence of the apical bud e.g., *Morus alba*.

**Accessory Bud:** A bud growing near and in addition to a normal axillary bud.

Accessory buds are further classified as:

- i. Collateral bud
- ii. Superposed bud or Serial bud

**Collateral bud:** A bud found on either side of axillary bud e.g., *Acer negundo*.

**Superposed bud or Serial bud:** A bud found above the axillary bud e.g., *Juglans ailantifolia*.

**Adventitious Bud:** A bud developing from any place other than the node. These buds are found borne on internodes, leaf, roots etc., e.g., vegetative bud borne along the crenate leaf margin of *Bryophyllum* species, tubers bearing buds e.g., Potato (*Solanum tuberosum*).

### Flower Bud

Buds that give rise to flower are termed flower buds.

In most of the plants buds are covered with modified protective leaves in the form of scales. The scaly leaves help in protecting the dormant bud.

### Functions of Buds:

- Apical or terminal buds allow the shoot to grow in length and axillary bud help in branching of shoot system.
- In most of the flowering plant axillary bud is essential for the branching and renewal of plants. In some seed bearing plants the axillary buds open when there is injury to the terminal bud.
- The role of the axillary and accessory bud is significant in vegetative propagation.
- Accessory buds when fall from the mother plant, develops into new individual.