

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

**Subject: Botany**

**Paper Code: BOC 105**

**Paper Title: Classical Taxonomy and Phylogeny**

**Unit: 1. Morphology of Angiosperms**

**Module Name: Flower Part- II (Androecium)**

**Module No: 22**

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**Glossary of terms/words:**

**Accessory whorls of flower:** Calyx and Corolla, the outer two vegetative whorls

**Essential whorls of flower:** Androecium and Gynoecium, the inner two whorls

**Androecium:** is the third member and the first essential whorl; its individual members are known as **stamens**

**Filament:** Slender stalk of stamen

**Sessile stamen:** Stamen with no filament

Each anther has two lobes known as **anther lobes**, which are connected by a tissue known as **connective**

**Microspores:** Pollen grains

**Stamens are attached (Cohesion) to one another:**

- ☛ by union of their filaments into one group – **Monadelphous**.
- ☛ Forming two groups- **Diadelphous**.
- ☛ Forming more than two groups – **Polyadelphous**
- ☛ Attached by union of their anthers into a ring – **Syngenesious**
- ☛ Attached by fusion of both filaments as well as anthers – **Synandrous**

### **Stamens vary in length:**

- ☂ When the stamens are of unequal lengths, two long and two shorter - **didynamous**
- ☂ When there are four long and two shorter stamens – **tetradynamous**
- ☂ In a whorl when stamens are of many different length – **heterodynamous**

### **Attachment of anthers to filaments:**

- ☂ **Basifixed:** When the filament is firmly attached to the base of the anther
- ☂ **Dorsifixed:** When the filament is firmly attached to the back of the anther
- ☂ **Adnate:** When the filament is attached to the back of anther, running throughout the whole length
- ☂ **Versatile:** When filament is attached at a point near the middle of the back of the connective in such a way that the anther can swing free in air.

**Isostemony:** is the term applied when stamens are in one whorl and the number of stamens is equal to the number of sepals and petals (perianth divisions).

**Haplostemenous:** Having a single series of stamens, equal in number to the proper number of petals and alternating with them

**Diplostemonous:** When stamens occur in two whorls

- ☂ those of outer one alternate with petals – **antisepalous**
- ☂ the inner whorl alternate with sepals – **antipetalous**

**Obdiplostemonous:** where there are two whorls of stamens of which outer stamens alternate with petals

**Epipetalous:** Stamens are sometimes inserted on the corolla

**Gynandrous:** Sometimes attached to pistil.

**Gynostegium:** Connation product of stamens and stigma.

**Possible misconceptions/clarification**

**Case Studies and Additional Examples/Illustrations**