AESTIVATION

Aestivation is the mode of arrangement of the petals or the sepals, especially the petals, in a floral bud with respect to the members of the same whorl (calyx or corolla)

TYPES OF AESTINATION

There was four types of aestivation

1. Valvate aestivation:- When the members of a whorl are in contact with each other by their margin, or when they lie close to each other without any overlapping e.g. calotropis and Annona (madar).
   Drawing
2. Twisted or contorted aestivation:- This occurs when one margin of the sepal or the petal overlaps that of the next one, and the other margin is overlapped by the 3rd one as in cotton, chinia rose. The twisting may be in clockwise or anticlockwise direction.
   Drawing
3. **Imbricate aestivation** is said to occur when one of the sepals or petals is internal being overlapped on both the margins, and one of them is external, and each of the remaining ones is overlapped on one margin and it overlaps the next one on the other margin. Imbricate aestivation is xteristic of the family caesalpiniaceae.
   Drawing
4. VExillary aestivation:- This occurs when there are 5 petals, of which the posterior one is the largest and it almost covers the 2 lateral petals, and the latter in their turn nearly overlap the 2 auterior or smallest petals. Vexillary aestivation universally found in all butterfly like/papilionaceous corolla e.g. crotalaria.

THE ANDROECIUM

This is the male part of a flower and it consists of a number of STAMENS. Each stamen also consists of filament, anther and connective. There are difference types of another, but the commest one is as shown below.

Drawing

There are four pollen sacs in an anther, each containing the pollen grains. In some flowers, there are sterile anthers (authors without pollen grains). Such anthers are called STAMINODES.

Stamens may be of the following types.

1. **Monadelphous stamens**:- When all the filaments are muted into a single bundle, but the anthers are free, the stamens are said to be monadelphous, As in Malvaceae family, hibiscus, cotton (Gossypium). In them, the filaments are united in tubular structure called the stamina tube, ending in free anthers.

Drawing

2. **Diadelphous Stamens**:- When the filaments are united into 2 bundles, the anthers remaining free, the stamens are said to be diadelphous as in papilionaceae e.g. Crotalaria, butterfly pea etc. In them there may be altogether 10 stamens of which nine are united into 1 bundle and the 10^{th} one is free but this is not a rule.

   Drawing

3. **Polyadelphous stamens**:- When the filaments are united into a number of bundles more than two, but the anthers are free, the stamens are said to be polyadelphous as in Bombax citrus etc.

4. **Syngenesious stamens:-** When the anthers are united together into a bundle or tube, but the filaments are free, the stamens are said to be syngenesious, as in compositae e.g. sunflower, marigold etc.

   Synandrous

4. **THE GYNOECIUM (PISTIL)**

   Gynoecium is the female part of a flower; just as androecium is the male part. The gynoecium consists of the stigma, style and ovary. The pistil may be composed of one or more carpels. When it is one, it is said to be simple, and when there are many pistils, they are known to be compound. In the compound pistil, the carpels may be free, in such a case it is referred to as Apocarpous, but when the carpels are minted they are called syncarpous.

The ovules are attached to the inner wall of the ovary by a thin membrane called placenta. The arrangement of the ovules within the ovary is placentation. There are difference types of placentation.