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Practical 222 Bot decision

The basics of plant classification

**Plant taxonomy**

**Is the science that finds, describes, classifies, identifies, and names** [**plants**](http://en.wikipedia.org/wiki/Plant)

**The basis of classification of plants**

**This is the most abundant and widespread group of plants on Earth. Flowering plants are found in most habitats, from deserts to polar regions, and include species of trees, shrubs, and herbs. The flowers are the reproductive structures that produce new plants**

**Flower**



**Flower Parts**

**Receptacle = Place on Stem where Floral Parts originate & attach**

**Sepals = Lowest order of floral organs, first to develop, can be green & leaf-like, Collectively = Calyx**

**Petals = Inserted on the Receptacle just above the Sepals, usually brightly colored, Collectively = Corolla**

**Perianth = Collective term for Sepals + Petals**

### Stamens = Inserted above Petals, consists of Anther & Filament, Collectively = Androecium

### K:\مقرراتي\222 نبت\نتيجة بحث Google عن الصور حول http   www.life.uiuc.edu plantbio 260 Flowers Fusion.jpg_files\stamen.jpgAnther - Part of Stamen that Produces Pollen

### ****Filament - Stalk that bears the Anther****

### K:\مقرراتي\222 نبت\نتيجة بحث Google عن الصور حول http   www.life.uiuc.edu plantbio 260 Flowers Fusion.jpg_files\gyno.jpgCarpel = Inserted above Stamens, uppermost floral organ, Consists of Stigma, Style & Ovary, Collectively = Gynoecium

### Stigma - Tip of the Carpel, Receptive to Pollen

### Ovary - Base of the Carpel, contains Ovules

### Style - Connects the Stigma to the Ovary

### Stigma – the pollen receptive portion of the gynoecium Style – the elongated portion between stigma and ovary specialized for pollen tube growth Ovary – the basal portion that surrounds and protects the ovules (meiosis occurs within the ovule).

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### Apocarpous Gynoecium has Free Carpels

### Asyncarpous  Gynoecium has Fused Carpels

### K:\222 نبت\تصنيف_files\FloralTerms_files\gynoecium.jpg

### A Synandrous Androecium has Fused Stamens(Either the Filaments or the Anthers may be Fused)

### A Sympetalous Corolla has Fused Petals.

### A Synsepalous Calyx has Fused Sepals.

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**Inflorescence**

**An inflorescence is a group or cluster of** [**flowers**](http://en.wikipedia.org/wiki/Flower) **arranged on a** [**stem**](http://en.wikipedia.org/wiki/Plant_stem) **that is composed of a main** [**branch**](http://en.wikipedia.org/wiki/Branch) **or a complicated arrangement of branches.**

**Divided into two main groups**

**& Racemose Cymose**

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**Types of cymose inflorescence Types of racemose inflorescence**

### Aestivation

**the arrangement of sepals and petals or their lobes in an unexpanded flower bud .**

**The following types are commonly met with:**

1. **Valvate**
2. **Imbricate**
3. **Convolute**
4. **Quincuncial**





**3**

**4**

**2**

**1**

**Symmetry**

**1- Actinomorphic (radial, regular)** – divisible into equal halves by two or more planes

**2- Zygomorphic (bilateral, irregular)** – divisible into equal halves in one plane only A few flowers have no plane of symmetry and are called asymmetrical

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**Placentation**

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**floral diagram**

**Floral formula**

Is a code written for the expression of the floral parts in the form of the equation to make clear the classification and description of the flower

|  |  |  |  |
| --- | --- | --- | --- |
| **+** | Actinomorphic | **Ca** | Calyx |
| **%** | Zygomorphic | **Co** | Corolla |
|  | Androgynous | **Pe** | Perianth |
| **♂** | male -rep | **A** | Androecium |
| **♀** | female -rep | **G** | Gynoecium |



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