

Dr. UMESH KUMAR

DEPARTMENT OF BOTANY

**U.R. COLLEGE ROSERA
(SAMASTIPUR)**

B.Sc. PART- II
(BIOLOGY SUBSIDIARY).
[GROUP- A]

(i) FABACEAE OR
PAPILIONACEAE.

Group - A'

Fabaceae or Papilionaceae

Systematic Position

- Division → Angiospermae
- Class → Dicotyledonae
- Sub-class → Polypetalae
- Series → Calyciflorae
- Order → Rosales
- Family → Leguminosae
- Sub-family → Fabaceae
or
Papilionaceae

1) Habit → An annual herb

Vegetative characteristics

- 2) Root → Nodulated tap root, nodules containing nitrogen fixing bacteria, such as Rhizobia.
- 3) Stem → weak, climbers, cylindrical, fistular.
- 4) Leaf → Petiolate, imparipinnately compound, stipulate, stipule large, known as foliaceous, ovate, semi-cordate and irregularly toothed at the base, pinna ovate, 4-6 in number, rachis and upper leaflets ending into branch tendrils.

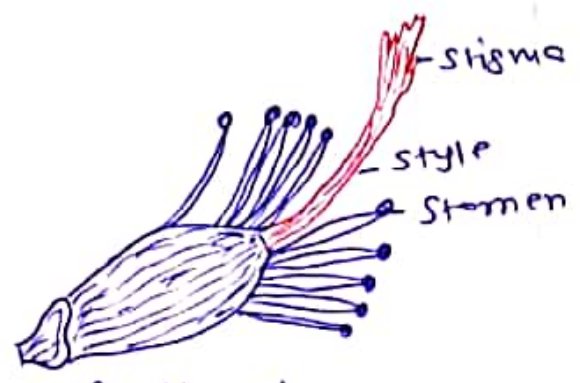
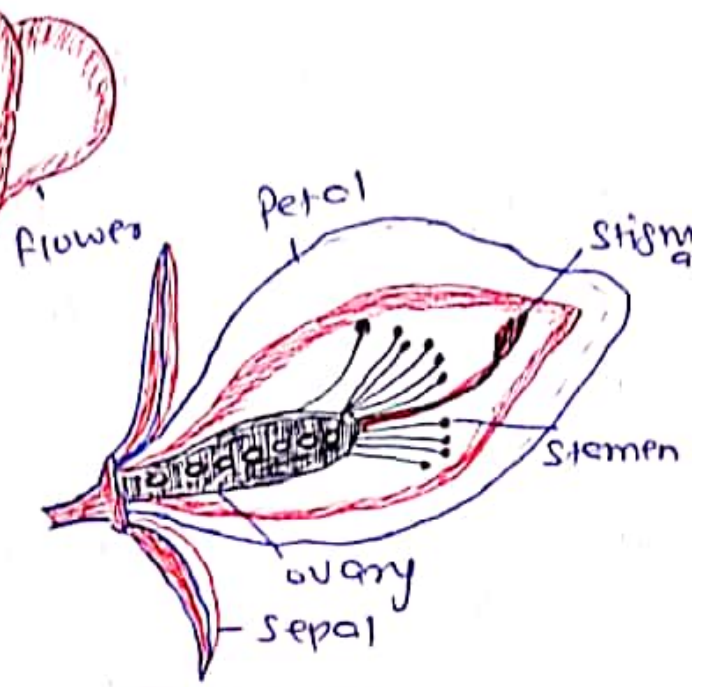
Floral characteristics

(2)

- 5) Inflorescence → Typical raceme
- 6) Flower → pedicellate, bracteate, zygomorphic, hermaphrodite, complete, irregular, hypogynous, white or pink.
- i) Calyx → Sepals - (5), gamosepalous, green, valvate aestivation.
- ii) Corolla → Petals 1+2+2. Polypetalous. Papilionaceous. The posterior petal is largest known as standard or vexillum, two laterals are wing and inner two anterior are fused to form a boat shaped known as keel or corina. Thus the flower becomes zygomorphic, descending imbricate aestivation or vexillary aestivation.
- iii) Androecium → Stamens 10, diadelphous [1+(9)], 9 fused anteriorly placed and 1 free is placed posteriorly, filaments long, coheres - dorsi or basifixad, dithecous, intrax.
- iv) Gynoecium → monocarpellary, unilocular, ovary superior, marginal placentation.
- 7) Fruit → Legume or Pod
- 8) Floral formula → $B_7 \frac{9}{5} \text{♀} K(5) C_{1+2+2} A_{1+9} \underline{G}_1$



Habit sketch



Pistil and Stamens

