

**M.Sc 2nd Semester Examination.2021**

**SUBJECT: BOTANY**

**Course Code: BOT/203-C(T).**

**Course ID:21353.**

**Course Title: Morphology, Palynology  
and Reproductive Biology.**

**Time : 2 Hours**

**Full Marks: 30**

*The figures in the margin indicate the full marks Candidates are required to give their answer in their own words as far as practicable.*

**Group - A**

**(Morphology and Reproductive Biology)**

**1. Answer any two questions of the following.  $1 \times 2 = 2$**

- (a). What is cladode ?
- (b). What is wet stigma?
- (c). What do you mean by double fertilisation ?
- (d). Differentiate marginal and basal Placentation.

**2. Answer any one of the following questions:  $5 \times 1 = 5$**

- (a)What do you mean by homology of an organ? Describe the homology of climbing organs of plants with examples which are all analogous to tendrils.  $1+4 = 5$

(b). Write a brief note on evolution of inflorescence with diagram. 5

**3. Answer any one of the following 8x1=8**

(a). Define self-incompatibility. Differentiate Homomorphic and Heteromorphic self- incompatibility. Describe in brief Genic control of self-incompatibility. Mention the methods to remove sexual incompatibility. 1+1+4+2=8.

(b). Describe the different types of endosperm development with proper diagram. 8

**Group -B  
(Palynology)**

**4. Answer any two questions of the following: 1x2=2**

- a. What do you mean by ‘ omniaperturate’ pollen grain ?
- b. What is ‘viscin - threads’?
- c. What do you mean by ‘ anthesis ‘ of a flower ?
- d. Define pantoporate apertures of a pollen grain .

**5. Answer any one questions of the following: 5x1=5.**

- a. Write a note on Melissopalynology
- b. Describe NPC system of pollen grains.

**6. Answer any one of the following 8x1=8**

- (a). What is perine? Describe the chemical structure and function of sporopollenin.
- (b). Describe the role of palynology in taxonomic and phylogenetic deduction.

