

Exam. Code : 107401

Subject Code : 1817

B.Sc. Biotechnology Ist Semester

BOTANY—A

Paper—BT-2

Time Allowed—3 Hours] [Maximum Marks—40

Note :— Attempt **five** questions in all selecting at least **one** question from each section. **Fifth** question can be attempted from any section of your choice. Support your answer with suitable diagram wherever necessary. Be brief and to the point in your answers. All questions carry equal marks.

SECTION—A

1. (a) Define secondary growth. Give an illustrated account of secondary growth in the extrastellar region of stem of *Helianthus annuus*.
(b) Write short explanatory note on Tunica-Corpus theory so as to explain the structure of shoot apex.
4+4=8
2. What do you understand by anomalous secondary growth? Discuss it on comparative basis in the light of details you have studied in case of *Boerhaavia* and *Dracaena*.
2+6=8

SECTION—B

3. Give an illustrated account of microsporogenesis and development of Male gametophyte in Angiosperm. 8

4. Discuss in detail the structure and development of Monosporic Embryo Sac. How does it differ from Bisporic and Tetrasporic Embryo sac ? 5+3=8

SECTION—C

5. What is triple fusion ? Give an account of the development, structure, morphological nature and function of the tissue formed after this process. 2+6=8
6. Write short explanatory notes on the following :
- (a) Self incompatibility
- (b) Cross pollination. 4+4=8

SECTION—D

7. (a) Give the important diagnostic characters of family Solanaceae. Write down the major differences in the non-essential and essential whorls of flowers of this family with the flowers of family Liliaceae.
- (b) Write short explanatory note on aestivation. 5+3=8
8. (a) Give an illustrated account of relative position of floral leaves on the thalamus.
- (b) Write short explanatory notes on the following :
- (i) Floral symmetry
- (ii) Isomery. 4+4=8