A-0038

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MBOT–607

M.Sc. BOTANY (MSCBOT)

(Embryology of Angiosperms)

4th Semester Examination, Session December 2024

Time : 2:00 Hrs. Max. Marks : 35

Note* :–** This paper is of Thirty Five (35) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. ***Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

Section–A

Long Answer Type Questions 2×9½=19

***Note* :–** Section 'A' contains Five (05) Long-answer type questions of Nine and Half (9½) marks each. Learners are required to answer any *two* (02) questions only.

1. Describe the structure of the anther in Angiosperms. Explain how the male gametophyte develops within it.
2. Explain the process of Double fertilization in angiosperms.
3. Discuss the types of endosperm development in angiosperms. How does endosperm support seed development ?
4. How does the embryo develop in angiosperms ? Describe the stages from zygote to mature embryo.
5. How is embryology applied in Taxonomy, Agriculture, and Horticulture ?

Section–B

Short Answer Type Questions 4×4=16

***Note* :–** Section 'B' contains Eight (08) Short-answer type questions of Four (04) marks each. Learners are required to answer any *four* (04) questions only.

1. Draw a well labeled diagram of Angiosperm Ovule.
2. Write short notes on any *two* of the following :
   (a) Sexual Incompatibility
   (b) Pseudo embryo sac
   (c) Aleuronic layer

3. What is Sexual incompatibility in angiosperms ? Describe its types and importance in preventing self-fertilization.

4. What is Apomixes ? Discuss its significance in plant reproduction and agriculture.

5. What is Polyembryony ? How it benefits in certain plants.

6. Define Parthenocarpy. Discuss its types and applications in horticulture.

7. Write short notes on the following :

   (a) Applications of Embryology

   (b) Palynology

8. Write a short note on Experimental embryology .

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