

**A-0017**

**Total Pages : 3**

**Roll No. ....**

**MSCBOT-509**

**M.Sc. BOTANY (MSCBOT)**

**(Plant Reproduction)**

**2nd Semester Examination, Session December 2024**

**Time : 2:00 Hrs.**

**Max. Marks : 70**

*Note :- This paper is of Seventy (70) 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)      2×19=38**

*Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.*

1. Describe the process of Microsporogenesis lead to the formation of the male gametophyte with suitable diagrams.
2. Explain the development, structure, and types of the Embryo sac in flowering plants.
3. Give a detail account of the development of Ovule and its types, with suitable diagrams.
4. Describe the technique of Embryo culture, including the steps involved, and how it is used in plant breeding and improving crop. varieties.
5. What are the Natural and Artificial methods of vegetative reproduction in flowering plants, and what are their advantages and disadvantages ?

### **Section–B**

**(Short Answer Type Questions)**      4×8=32

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

1. Describe the reproductive parts of a flower with suitable diagrams.
2. Differentiate between Self and Cross pollination.

3. Define Apomixis and explain how it differs from sexual reproduction in flowering plants.
4. What is Polyembryony ? Discuss its significance.
5. Define Parthenocarpy and explain how it differs from normal fruit development.
6. Define Seed ? Describe various types of Seeds.
7. Define role of different phytohormones in seed germination.
8. Write short notes on the following :
  - (a) Aestivation
  - (b) Placentation
  - (c) Anemophily
  - (d) Aggregate fruits

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