

**A-0012**

Total Pages : 3

Roll No. ....

**MSCBOT-503**

**M.Sc. Botany (MSCBOT)**

**(Pteridophytes, Gymnosperms and Palaeobotany)**

Examination, June 2025

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. With the help of neat sketches describe the variations in arrangement of sporophylls and stem anatomy of *Selaginella*. Mention the views regarding the division of this genus.
2. Write notes on Heterospory in pteridophytes and the evolution of seed habit.
3. Describe the mode of pollination, fertilization and post fertilization changes in *Pinus*.
4. Describe economic significances of Gymnosperms with reference to wood, resins, essential oils and drugs.
5. Explain different types of plant fossils, their formation and preservation.

### **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. Give an account of the female gametophyte development in *Cycas*.
2. Describe the morphology and internal structure of reproductive organs in *sphenophyllum*.

3. Write a note on female cone of Pinus.
4. Describe the structure and reproduction in Isoetes.
5. Describe resin-producing Gymnosperms.
6. Write the land adaptive features in Preridophyta.
7. Give general account of fossil pteridophytes.
8. Compare Cycas and Pinus leaflets, giving neat sketches.

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