

A-046

Total Pages : 4

Roll No. -----

MBOT-503

Gymnosperms and Plant Anatomy

M.Sc. Botany (MSCBOT)

1st Semester, Examination 2024 (June)

Time: 2:00 hrs

Max. Marks: 35

Note : This paper is of Thirty five (35) marks divided into Two (02) Section 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)

Note : Section 'A' contains Five (05) long-answer-type questions of Nine and Half (9.5) marks each. Learners are required to answer any Two (02) questions only.

[2x9.5=19]

P.T.O.

- Q.1. Graphical representation of the life cycle of any two of the following:
- Pinus
 - Gingko
 - Gnetum
- Q.2. With the help of suitable diagrams, describe the morphology of reproductive structures in Ephedra.
- Q.3. Write illustrated notes on the following:
- Tracheary element
 - Wound healing
 - Vascular bundle of monocot stem
 - Laticifers
 - Complex tissue.
- Q.4. Write explanatory note with diagram on the anatomy of monocot and dicot leaves.
- Q.5. Detailed note on the following:
- Theories of apical meristem
 - Megasporophyll and archegonia in Gymnosperms.

Section-B (Short-Answer-Type Questions)

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.

[4x4=16]

- Q.1. Write an essay on economic and ecological importance of Gymnosperms in detail.
- Q.2. What do you mean by meristematic tissue? Give the characteristics feature of the meristematic tissue.
- Q.3. Describe the anomalous secondary growth in *Dracaena* stem and *Boerhaavia* stem with diagram.
- Q.4. Differentiate between:
- Soft wood and hard wood.
 - Spring wood and autumn wood.
- Q.5. Compare the embryogeny of Cycadales and Coniferales with diagram.
- Q.6. Define the following:
- Meristems
 - Quiescent center
 - Sulphur shower
 - Petrification

P.T.O.

Q.7. Briefly answer the following:

- a. Structure and development of vascular cambium
- b. Name two cycads that are nitrogen fixers.

Q.8. Describe general character of Lyginopteridaceae and Medullosaceae.
