

A-0016

Total Pages : 3

Roll No.

MSCBOT-508

M.Sc. Botany (MSCBOT)

(Plant Development)

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. Explain the organization of root apex with the help of the various theories.
2. Describe in detail about the anomalous structure in dicot stems.
3. Discuss about the different theories associated with root development. Support your discussion with suitable diagrams.
4. Describe in detail the characteristic features of monocotyledon and dicotyledon stems with a labeled diagram.
5. What is nodal anatomy ? Discuss the classification of nodes. What is the significance of nodal anatomy in the field of plant taxonomy ?

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. Write short notes on the following :
 - (a) Monocotyledon and dicotyledon stem
 - (b) How C₃ and C₄ plants differ in their anatomy.

2. Write a short note on the following :
 - (a) Name any *five* plants showing C3 cycle
 - (b) *Quiescent centre*
3. What is wood, and how is it classified based on seasons and location ?
4. Define the important theories related to mechanism of stomatal opening and closing
5. Draw well labeled diagrams of the following :
 - (a) T.S. of Monocot and Dicot root
 - (b) T.S. of *Nyctanthes* stem
6. Write a brief note on permanent tissues with its characteristic features, functions and distribution.
7. What is vascular system in plant ? Describe its different types.
8. What is trichome ? Give a detailed account on the types of trichome studied by you.
