

A-0016

Total Pages : 3

Roll No.

MSCBOT-508

M.Sc. BOTANY (MSCBOT)

(Plant Development)

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. Give a detail account on various theories of shoot apex organization with labeled diagram.
2. Write descriptive note on different type of anomaly found in plants.
3. Compare the Apical Cell Theory, Histogen Theory, and Tunica-Corpus Theory in explaining shoot apical meristem (SAM) development. Support your discussion with suitable diagrams.
4. Give an in-depth account on anatomy of C3 and C4 plant leaves and how these plants differ in their anatomy.
5. Describe in detail the internal structure of a dicot leaf. Give in details about its various tissues.

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 a short note on different types of roots in plants.
2. Differentiate the following :
 - (a) Monocotyledonous and Dicotyledonous leaves
 - (b) Pycnoxylic wood and Manoxylic wood

3. Give a brief note on mechanical support in the leaf.
4. Write short notes on the following :
 - (a) Name any five plants showing C4 cycle
 - (b) casparian strip
 - (c) velamen
 - (d) mesophyll
5. How would you differentiate the following :
 - (a) Vessels and Tracheid
 - (b) Collenchyma and Sclerenchyma
 - (c) Xylem and Phloem.
6. Write short notes on the following :
 - (a) Phyllode
 - (b) Velamen
 - (c) Mesophyll
 - (d) Transfusion tissue
7. Compare dicotyledons root with monocotyledons root with well labeled diagrams.
8. Discuss the differences between heartwood and sapwood.
