

P-38

Total Pages : 3

Roll No.

MSCBOT-508

Plant Development

M.Sc. Botany (MSCBOT)

2nd Semester Examination, 2023 (June)

Time : 2 Hours]

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 answer 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 Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

- 1.** Give an account of the organisation and development of shoot apex in different plant groups and the theories associated with them.

2. What is root-stem transition ? Explain different types of root-stem transition.
3. What is anomalous secondary growth? Describe anomalous secondary growth in *Boerhaavia* and *Salvadora* stem.
4. Write down detailed account on the structure and functions of vascular tissue of the plant.
5. Write explanatory note on any *two* of the following :
 - (a) Trichomes.
 - (b) Classification of wood.
 - (c) Structure and types of stomata.

SECTION-B

(Short Answer Type Questions)

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. (4×8=32)

1. Briefly explain simple tissues of plants.
2. Explain the transverse section of a dicot root with the help of suitable diagram.

3. Write short note on any *two* of the following :
 - (a) Vascular bundle and its types.
 - (b) Formation of bark.
 - (c) Anatomy of C₄ plant leaves.

 4. Differentiate between any *two* of the following-
 - (a) Meristematic tissue and permanent tissue.
 - (b) Primary xylem and secondary xylem.
 - (c) Anatomy of root and stem.

 5. Describe the structure and development of vascular cambium.

 6. Discuss the formation of annual rings and their relation with seasonal activity.

 7. Describe the structural variation found in the secondary phloem in dicots.

 8. Mention main differences between anatomy of dicot and monocot leaves.
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