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Total Pages : 3

Roll No.

MSCBOT-508

Plant Development

M.Sc. Botany (MSCBOT)-20

2nd Semester Examination, 2022 (Dec.)

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.

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. What is stomata ? Describe the types of stomata and their development in dicots in the light of modern research.

2. What do you understand by secondary growth ? Explain secondary growth in dicot stem with the help of labelled diagram.
3. What is anomalous secondary growth ? Explain the major reasons of anomalous secondary growth with examples.
4. Write explanatory note on any two of the following :
 - (a) Formation and functions of cork cambium.
 - (b) Annual rings.
 - (c) Vascular cambium.
5. Describe root apical meristem. Discuss the theories regarding its evolution.

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. Give a general account on the patterns of arrangement of protoxylem and metaxylem in stems and roots.
2. What are the functions of secondary meristem in plants?

3. Write down the short note on any *two* of the following :
 - (a) Trichomes.
 - (b) Periderm
 - (c) Quiescent Centre.

 4. Differentiate between any *two* of the following :
 - (a) Sapwood and heart wood.
 - (b) Dorsiventral leaf and isobilateral leaf.
 - (c) Anatomy of C_3 and C_4 plant leaves.

 5. Give the classification of wood.

 6. Differentiate between anatomy of dicot and monocot stem with suitable diagram.

 7. What do you mean by meristematic tissue ? Discuss the characteristic features of meristematic tissue.

 8. Explain different components of xylem with their functions.
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