

**C079**

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# **MSCBOT-508**

## **Plant Development**

M.Sc. BOTANY(MSCBOT)

2nd Semester Examination, 2022 (June)

**Time : 2 Hours]**

**Max. Marks : 80**

**Note :** This paper is of Eighty (80) 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 Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

1. What do you understand by secondary growth? Describe it with reference to Dicot plants.
2. Describe the mechanism of opening and closing of stomata in detail.

3. Compare dicotyledonous root with monocotyledonous root along with well labelled diagrams.
4. Describe the anatomy of  $C_3$  and  $C_4$  plants.
5. Discuss various theories about shoot apex organization.

### SECTION-B

#### (Short Answer Type Questions)

**Note :** Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. Differentiate the following (any *two*):
  - (a) Vessels and Tracheid.
  - (b) Collenchyma and Sclerenchyma.
  - (c) Xylem and Phloem.
2. What do you understand by wood? Discuss briefly the important properties of the wood.
3. Write short notes on following (any *five*):
  - (a) Casparian strip.
  - (b) Velamen.
  - (c) Quiescent centre.
  - (d) Cork cambium.

- (e) Phyllode.
  - (f) Leaf gap.
  - (g) Annual ring.
4. Compare the internal structure of dorsiventral leaf with isobilateral leaf.
  5. Explain the different components of periderm.
  6. What are trichomes? Explain different types of trichomes. What is its importance?
  7. Describe different types of vascular bundles in plants.
  8. Describe two external and two internal glands present in plant body.
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