

2021
M.Sc.
First Semester
CORE – 04
BOTANY
Course Code: MBOC 1.41
(Plant Morphology & Anatomy)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. Give an illustrated account in the growth and differentiation of leaf. 14
2. Describe the leaf structure of C₄ plant with the help of diagram and mention its difference from C₃ plant. 14

UNIT-II

3. Describe the organisation of root apical meristem with the help of appropriate theories. 14
4. Write short notes on: 7+7=14
 - (i) Root microbes interaction
 - (ii) Quiescent centre and its significance

UNIT-III

5. Give a detailed account of the organization and development of the shoot apex with the help of diagrammatic illustrations. 10+4=14
6. Give a detailed account on the genetic control of the development of shoot apex. Furnish diagrams to illustrate your note. 10+4=14

UNIT-IV

7. Write a note on types of trichomes. How do trichomes help in protection and water absorption in plants? 7+7=14
8. (a) Write a comparative account on dia-mesoperigenous and aniso-mesoperigenous ontogeny of stomata. 10
- (b) Write a brief account on the functional aspects of transfer cells. 4

UNIT-V

9. What is secondary growth? Explain how secondary growth takes place in dicot stem with the help of diagrammatic illustrations. 2+12=14
10. Write notes on ray parenchyma and axial parenchyma. 14
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