Sr. No. 7056

Exam. Code: 210004
Subject Code : 4848

M.Sc. Botany - 4th Sem.

(2517)

Paper-BOTC-621: Plant Anatomy

Time allowed: 3 hrs. **Max. Marks: 50**

SET-I

NOTE: Attempt question no. 1 from Section A, seven questions from section B and three questions from section C. Draw labeled diagrams wherever required. Marks for each question are indicated in the paper.

Section A

Q1. Write very briefly about each of the following.

(i) Concentric bundle
(ii) Vascular cambium
(iii) Unilacunar node
(iv) Spring wood
(v) Conduplication
(vi) Hydathodes
(vii) Lignin
(viii) Quiscent centre 1x8=8

Section B

Q2. Describe the primary structure of a typical monocot stem.

Q3. Elucidate the histology of vascular cambium.

Q4. Elucidate the anatomical location and function of pericycle.

Q5. Elucidate the ultrastructure of tracheids with regard to their function.

Q6. What is longitudinal parenchyma? Give its structure and function.

Q7. Elucidate the anatomy of floral axis in relation to essential whorls.

Q8. Elucidate the cellular anatomy of coat of a dicot seed.

Q9. Discuss the anatomical features of hydrophytes.

Q10. Elucidate the anatomy of accessory whorls of flowers.

Q11. Illustrate the importance of density in commercial utilization of woods. 3x7=21

Section C

Q12. What is meant by root-stem transition? Illustrate various types with suitable diagrams.

Q13. What is meant by anomalous secondary growth? Discuss two types with suitable examples.

Q14. What is wood? Elucidate the physical and anatomical features of any four hardwoods of India.

Q15. Discuss the ultrastructural features of dicot fruits and seeds and their role in taxonomy.

Q16. Elaborate upon the anatomical specializations of various growth forms in dicots. 7x3=21

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