Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)
Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Master's Degree Examination – May 2025
II Semester

Class : I P.G. **Time: 3 Hours**
Major : Botany **Max. Marks: 100**

23MBOC08 Anatomy of Angiosperms

Course Outcomes:
CO1: Knowledge on fundamental concepts of plant anatomy
CO2: Understand the structure and importance of meristems in tissue organization of plant
CO3: Understand the various tissue systems and wood anatomy
CO4: Knowledge on Primary anatomical structure and practical skills in anatomical sectioning
CO5: Understand the secondary structure in plants and evaluate the ecological adaptations in plants

Part A **10 x 1 = 10**
Choose the Correct Answer

1. Plasmodedesmata is identified for the first time by CO1K1
a. Dixon and Jolley b. Strasburger c. Robert Hook d. Najeli

2. The process of addition of cell wall to the primary cell wall is termed as CO1K1
a. exclusion b. incrustation c. adcrustation d. accumulation

3. Laticifers are specialized cell/tissues that produce and store CO2K1
a. sugar b. latex c. wax d. DNA

4. The massively thickened sclerenchymatous cells with pits in plant body are called CO2K1
a. sclereid b. tracheid c. fibers d. phellogen

5. Stomatal guard cells are modified CO3K1
a. ground tissue b. epidermal cells c. vascular tissue d. dead cells

6. The thickness in Casperian strip is due to the deposition of CO3K1
a. starch b. suberin c. pectin d. actin

7. The interfascicular cambium is present in CO4K1
a. pith b. vascular bundle c. pericycle d. endodermis

8. The thin reduced fibers extending from pith to cambium layer are known as CO4K1
a. medullary ray b. tracheid c. cork cambium d. sapwood

9. Sunken stomata are present CO5K1
a. xerophytes b. halophytes c. mesophytes d. parasites

10. The root hairs are produced from CO5K1
a. trichoblast b. rhizodermis c. epidermis d. trichodermis

Part B **5 x 6 = 30**
Answer ALL questions
Each answer should not exceed 400 words or two pages

11.a. Infer the scope of anatomy in pharmacognosy. CO1K2

(or)

11.b. Write a critical account on the thickening of plant cell wall. CO1K3

12.a. Distinguish between internal and external secretory tissues. CO2K4

(or)

12.b. Evaluate the structure in relation to function of phloem tissue. CO2K5

13.a. Illustrate the epidermal tissue system in Angiosperms. CO3K3

(or)

13.b. Discriminate the types of vascular bundles in Angiosperms. CO3K4

14.a. Outline the structure of dicot root with the help of a labelled diagram. CO4K2

(or)

14.b. Critically analyse the origin of interfascicular cambium. CO4K4

15.a. Evaluate the cork development in dicots. CO5K4

(or)

15.b. Infer the anatomical significance of *Dracaena* stem. CO5K3

Part C **5 x 12 = 60**

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Discuss the non-living inclusions in the cytoplasm. CO1K2

(or)

16.b. Explain the cyto differentiation of tracheary elements and sieve elements. CO1K2

17.a. Describe the organisation of root apex in Angiosperms. CO2K1

(or)

17.b. Illustrate the origin, structure and functions of xylem tissue. CO2K3

18.a. Analyse the anatomical features contributing to the commercial use of the wood. CO3K4

(or)

18.b. Compare the nodal anatomy of dicots and monocots. CO3K4

19.a. Illustrate the anatomical features of dicot leaf. CO4K3

(or)

19.b. Establish the development, structure and function of cambium in higher plants. CO4K4

20.a. Illustrate the anomalous secondary growth in *Bougainvillae* stem. CO5K3

(or)

20.b. Demonstrate the ecological adaptations in halophytes. CO5K2

****