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Reg. No. :

Code No. : 20527 E Sub. Code : CMBO 21

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023.

Second Semester

Botany — Core

PLANT ANATOMY AND MICRO TECHNIQUES

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer

1. Increasing girth is due to _____
(a) Lateral Meristem
(b) Intercalary Meristem
(c) Primary Meristem
(d) Apical meristem
2. Tunica corpus theory is connected with
(a) Root apex (b) Root cap
(c) Shoot apex (d) Secondary growth

3. The tissue that lies between the upper and lower epidermis of the leaf is known as
(a) Fibres (b) Sclerenchyma
(c) Mesophyll (d) Veins
4. Border parenchyma is seen in _____
(a) Dicot leaf (b) Dicot root
(c) Dicot stem (d) Monocot stem
5. The number of xylem or phloem bundles in monocot root is
(a) 8 to 20 (b) 15 to 20
(c) 17 to 20 (d) 12 to 30
6. Endodermis is present in
(a) Monocot plant
(b) Dicot plant
(c) Gymnospermic plant
(d) All the above
7. Study of vascular supply to the leaf from stems is
(a) Nodal anatomy
(b) Anatomy
(c) Internal Morphology
(d) Taxonomy

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8. Unilocunar node is present in

- (a) Justicia (b) Azadirachta
(c) Aralia (d) Sunflower

9. Magnification of light microscope is

- (a) 1500X (b) 2000X
(c) 1000X (d) 2500X

10. Methylene blue is a

- (a) Neutral stain (b) Acidic stain
(c) Basic stain (d) Vital stain

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain the structure and function of Sclerenchyma.

Or

(b) Differentiate Xylem with phloem.

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12. (a) Write a note on primary structure of Dicot root.

Or

(b) Give an account on internal structure of Monocot leaf.

13. (a) Describe secondary thickening of Dicot root.

Or

(b) Explain the anomalous secondary growth takes place in *Dracaena*?

14. (a) What is Glands? Explain its types.

Or

(b) Briefly explain about Trichomes.

15. (a) Write down the procedure of simple staining.

Or

(b) List out the applications of Electron microscope.

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PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Elucidate the xylem tissue with suitable diagram.

Or

- (b) Explain the structure and functions of Phloem.

17. (a) Differentiate the primary structure of dicot and monocot stem.

Or

- (b) Illustrate the structure of Monocot stem.

18. (a) Explain the anomalous secondary growth takes place in *Boerhaavia*?

Or

- (b) Compare secondary thickening of dicot stem with dicot root.

19. (a) Write an essay on Nodal anatomy.

Or

- (b) Give a detailed account on epidermal tissue system.

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20. (a) Write an essay on Transmission electron microscope.

Or

- (b) Describe the procedure of permanent slide preparation.
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