

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

Second Semester

Botany — Core

PLANT ANATOMY AND MICRO TECHNIQUES

(For those who joined in July 2021–2022)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Dermatogen gives rise to
(a) Epidermis (b) Xylem
(c) Phloem (d) Cortex
2. Which one of the following is a water conducting tissue.
(a) Parenchyma (b) Phloem
(c) Xylem (d) Collenchyma

7. Trilacunar nodes are present in
(a) Aralium (b) Grass
(c) Nerium (d) Azadirachta
8. One of the following is not an example for epidermal outgrowth.
(a) Glands (b) Hairs
(c) Rhizoids (d) Trichome
9. Simple microscope was constructed by
(a) Leonardo da vinci
(b) Leeuwenhoek
(c) Jensen
(d) Robert B Tolles
10. Methylene blue is a
(a) Neutral stain
(b) Acidic stain
(c) Basic stain
(d) Vital stain

3. Sclerenchymatous bundle sheath is present in
(a) Monocot leaf
(b) Monocot root
(c) Dicot leaf
(d) Dicot stem
4. Polyarch xylem is found in
(a) Dicot root
(b) Monocot root
(c) Monocot stem
(d) Dicot stem
5. In which one of the following plant anomalous secondary thickening is seen
(a) Mirabilis
(b) Phyllanthus
(c) Pisum
(d) Boerhaavia
6. Which of the following gives rise to cork tissue?
(a) Periderm (b) Periblem
(c) Phellogen (d) Phelloderm

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 functions of Sclerenchyma.
Or
(b) Write short notes on Histogen theory.
12. (a) With labelled diagram explain the internal structure of dicot root.
Or
(b) Describe the internal structure of monocot leaf.
13. (a) What is secondary growth? Write about the secondary growth takes place in dicot root.
Or
(b) Write the anomalous secondary thickening takes place in Dracaena stem.
14. (a) What are glands? Highlight their functions.
Or
(b) Explain the structure of trilacunar node.

15. (a) Describe the structure of simple microscope.

Or

(b) Write briefly about the various types of stains.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Define meristem and write the classification of meristem.

Or

(b) Describe the structure and functions of phloem.

17. (a) Define dorsiventral leaf. Explain any one dorsiventral leaf studied by you.

Or

(b) Describe the internal structure of dicot stem.

18. (a) Describe the secondary thickening takes place in dicot stem.

Or

(b) Describe the anomalous secondary thickening seen in Boerhaavia.

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19. (a) Give a detailed account on Trichomes.

Or

(b) Explain the different types of stomata with examples.

20. (a) Describe the principle and structure of TEM.

Or

(b) Give a detailed account on double staining.

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