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# First Semester B.Sc. Degree Examination, January 2024 First Degree Programme under CBCSS

#### **Botany**

Complementary Course for Home Science, Zoology, Bio-chemistry

## BO 1131: MICROTECHNIQUES, ANGIOSPERM ANATOMY AND REPRODUCTIVE BOTANY

(2019 - 2021 Admission)

Time: 3 Hours Max. Marks: 80

#### PART - A

Very short answer questions (one word to minimum of two sentences).

Answer all questions. Each question carries 1 mark.

- 1. What is FAA?
- 2. What is carnoys formula?
- 3. Name a mechanical tissue.
- 4. What is aerenchyma?
- 5. What are lenticels?
- 6. Name a dehydrating agent used for histological preparations.
- 7. What is tapetum?

- 8. What is nucellus?
- 9. What are trichomes?
- 10. What is protoxylem?

 $(10 \times 1 = 10 \text{ Marks})$ 

#### PART - B

Short Answer (Not to exceed one paragraph)

Answer any eight questions. Each question carries 2 marks.

- 11. What is killing and fixation of plant tissues?
- 12. What is double Staining?
- 13. Briefly explain Histogen theory.
- 14. What are meristematic tissues?
- 15. What are palisade tissues? Explain its functions.
- 16. What are annual rings?
- 17. What is pollination?
- 18. Explain Double fertilization.
- 19. What is pollinium?
- 20. What is monosporic embryosac? Give an example.
- 21. What is biocollateral vascular bundle?
- 22. What are bulliform cells?

 $(8 \times 2 = 16 \text{ Marks})$ 

#### PART - C

### Short Essay (Not to exceed 120 words)

Answer any six questions. Each question carries 4 marks.

- 23. Write short notes on :
  - (a) Safranin
  - (b) Haematoxyline
  - (c) Acetocarmine.
- Explain the organisation to rootapex in monocots.
- Briefly explain about complex tissues.
- Comment on epidermal tissue systems.
- 27. Explain the classification of meristems based on position.
- 28. Differentiate heartwood and sapwood.
- 29. Explain extra stelar secondary growth in dicot stem.
- Explain different types of ovules in plants.
- 31. With suitable diagram explain structure of dicot embryo?

 $(6 \times 4 = 24 \text{ Marks})$ 

#### PART - D

#### Long Essay.

Answer any two questions. Each question carries 15 marks.

- 32. With suitable diagram explain anomalous secondary growth in Boerhaavia.
- With suitable diagram explain the structure and functions of simple permanent tissues.
- 34. Briefly explain Microsporogenesis. Draw Diagrams.
- 35. What is embryosac in plants? Explain different types of embryosac with examples.

 $(2 \times 15 = 30 \text{ Marks})$