

(041420102)

M.Sc. DEGREE EXAMINATION, APRIL 2018

SECOND SEMESTER

Branch - Botany

Paper I — TECHNIQUES IN CELL BIOLOGY AND CYTOLOGY

Time : 3 Hours

Max. Marks : 70

PART - A

Answer any FOUR questions.

Each question carries 5 marks.

(Marks : 4×5 marks = 20 marks)

1. Applications of Chromatography.
2. Radioisotope significance.
3. Transmittance.
4. Centrifugation applications.
5. Functions of Plasmamembrane.
6. Peroxisomes.
7. Heterochromatin.
8. Mitotic spindle.

PART - B

Answer ONE question from each Unit.

Each question carries 12.5 marks.

(Marks : 4×12.5 marks = 50 marks)

UNIT - I

9. Write in detail the basic principle, optical pathway and applications of Electron microscopy.
- Or
10. What are tracer techniques, explain the working principle and their applications in Biology.

[P.T.O]

UNIT - II

11. Explain the Principle, derivation and significance of Beer's Lambert Law.

Or

12. Describe the basic principle, types and uses of centrifugation in separation of different materials.

UNIT - III

13. What is a cell wall? Explain its chemical composition, structure, origin and function of plant cell wall.

Or

14. Give an account on structural organization and functions of Chloroplast.

UNIT - IV

15. Discuss the Molecular organization of Centromere and Telomere.

Or

16. Give an account on cell cycle and add a note on the Biological significance of cell division.
