

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

FIRST SEMESTER

Zoology

Paper IV — TOOLS AND TECHNIQUES IN BIOLOGY

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Phase Contrast Microscopy
2. Significance of pH scale
3. Radio isotopes
4. TLC
5. SDS-PAGE
6. Blotting Technique
7. Tissue culture laboratory
8. Cell proliferation measurements.

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Write a detailed account on Electron Microscopy.

Or

10. Write about the basic principles involved in Centrifugation.

11. Write about the principles involved in HPLC. Add a note on the significance in Biological Sampling procedures.

Or

12. Write about briefly on Ion-Exchange and Affinity Chromatography with suitable examples.

13. Write an essay on different types of stains and staining procedures adopted for Biological materials for evaluation studies.

Or

14. Describe the principle and procedure involved in ELISA.

15. Write about the different culture media and their use. Add a note on the components of culture media by group at least two media.

Or

16. Write briefly about techniques involved in Cell viability testing and harvesting methods.

