

15022

M.Sc. DEGREE EXAMINATION, OCTOBER/NOVEMBER 2018.

FIRST SEMESTER

Biochemistry

Paper II — ANALYTICAL BIOCHEMISTRY

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. Good practices in laboratory.
2. Fluorescence microscopy.
3. Chemiluminescence.
4. Decay constant.
5. Ion-exchangers.
6. Northern blot.
7. Electromagnetic spectrum.
8. Applications of ESR spectroscopy.

PART B — (4 × 15 = 60 marks)

Answer ALL the questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. How to isolate proteins using density gradient centrifugation?

Or

10. Explain the principle, construction and applications of electron microscope.
11. What are the various counters employed in measuring radioactivity?

Or

12. Discuss the applications of radioisotopes in metabolic and molecular biology studies.

13. Write the principle, methodology and applications of affinity chromatography.

Or

14. Write the principle, procedure and applications of SDS-PAGE in protein analysis.

15. Draw the flow diagram of NMR spectrometer and explain its applications in structural analysis of biomolecules.

Or

16. How to construct spectrofluorimeter and discuss its applications in biophysics?

