15064

M.Sc. DEGREE EXAMINATION, OCTOBER/NOVEMBER 2015.

FIRST SEMESTER

Microbiology

Paper IV — BIOPHYSICAL AND ANALYTICAL TECHNIQUES

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. Biosensors
2. Flash evaporation
3. Partition Chromatography
4. Sedimentation coefficient
5. Circular Dichroism
6. Beer-Lambert Law
7. Isoelectric focussing
8. GM counter

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Explain the methods involved in the cell disruption.

Or

10. Discuss the principle and applications of membrane filtration.

11. Distinguish between isophycnic and isodensity centrifugation.

Or

12. Discuss the applications of FPLC and HPLC.

13. Write an account on salient features of mass spectrometry.

Or

14. Describe briefly about UV-VIS spectrophotometer.

15. Explain the methodology and applications of Southern blot.

Or

16. Write an account on autoradiography and quenching.
