

FACULTY OF SCIENCE

M. Sc. I – Semester (CBCS / Non-CBCS) Examination, December 2013

Subject : Biochemistry

Paper – III (103) : Bioanalytical Techniques

Time : 3 Hours

Max. Marks: 80

Note : Answer all questions from Part–A and Part–B. Each question carries 4 marks in Part–A and 12 marks in Part – B.

PART – A (8 x 4 = 32 Marks)
(Short Answer Type)

Write a note on the following:

1. Molar extinction coefficient
2. Atomic absorption spectroscopy
3. Principle of TLC
4. Peptide mapping
5. Zonal electrophoresis
6. Types of rotors
7. Autoradiography
8. Meselson and Stahl experiment

PART – B (4 x 12 = 48 Marks)
(Essay Answer Type)

9.(a) Discuss the principle, instrumentation and applications of fluorescence spectroscopy.

OR

- (b) Give an account on principle and applications of
(i) CD
(ii) Mass spectroscopy

10.(a) Explain the principle, instrumentation and applications of GC.

OR

- (b) Describe the principle and applications of :
(i) Affinity chromatography
(ii) RP-HPLC

11.(a) Give an account on :

- (i) Ultracentrifugation
- (ii) DNA - Foot printing

OR

- (b) Write a note on
(i) Zymography
(ii) IEF
(iii) Northern Blotting

12.(a) Explain the following:

- (i) GM counter
- (ii) Disposal of radioactive waste

OR

- (b) Give an account on the following:
(i) Phosphor-imaging
(ii) Isotopes used for labeling proteins & nucleic acids
