FACULTY OF SCIENCE
M. Sc. II – Semester Examination, May / June 2016

Subject : Microbiology

Paper – IV : Enzymology and Biochemical 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)

1. Oxidoreductases
2. Enzyme inhibitors
3. Feedback mechanism
4. Allosteric enzymes
5. Dialysis
6. Fluorometry
7. Scintillation counter
8. Isoelectric pI

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

9. (a) Describe the effect of pH and temperature on the enzyme kinetics.
   OR
   (b) Write an account on major classes of enzymes with suitable examples and their significant role in biology.

10 (a) Describe the mechanism of thiamine pyrophosphate enzyme activity.
    OR
    (b) Explain the mechanism of enzyme action of chymotrypsin and trypsin.

11 (a) Discuss the chromatographic techniques and their applications in biochemical studies.
    OR
    (b) Explain the principle of Beer-Lambert law and applications of UV-Visible spectrophotometry in quantitative estimations of biomolecules.

12 (a) Describe the methodology of two-dimensional electrophoresis techniques.
    OR
    (b) Explain how the mutants are used in study of metabolism.

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