FACULTY OF SCIENCE
M.Sc. II-Semester Examination, May / June 2015
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. Enzyme Nomenclature
2. Competitive enzyme inhibition
3. Role of TPP
4. Feedback mechanism
5. Optical rotation
6. Affinity chromatography
7. Counter current distribution
8. Stable isotopes

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

9 a) Describe the different methods available for determination of enzyme activity.

OR

b) Discuss the various strategies employed in the isolation and purification of an enzyme with a suitable example.

10 a) Discuss the mechanism of action of Ribonuclease. Add a note on zymogen activation.

OR

b) What are allosteric enzymes? Discuss the different mechanisms involved in the regulation of enzyme activity with an example.

11 a) Discuss the principle, construction and applications of spectrophotometer.

OR

b) Describe the principle and applications of gel filtration chromatography.

12 a) Describe the different methods used in the elucidation of intermediary metabolic pathways.

OR

b) Discuss the use of liquid scintillation counter in the detection and measurement of radioactivity. Add a note on autoradiography.

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