

FACULTY OF SCIENCE

M.Sc. II-Semester (CBCS / Non-CBCS) Examination, April / May 2014

Subject: Biochemistry
Paper - I: Enzymology

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 (4 x 8 = 32 Marks)**
(Short Answer Type)

1212-13-914-007

- 1 Coupled enzyme reactions
- 2 PLP and Biotin dependent enzyme reactions
- 3 Drugs as enzyme inhibitors
- 4 Explain Bi-Substrate reactions
- 5 Transition state in enzyme catalysis
- 6 Enzyme activation by ligand binding
- 7 Complement activation
- 8 High throughput screening arrays

26
16 - 10
4
10
5 + 20 = 25

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

- 9 (a) Given an account of the nomenclature and classification of enzymes by various methods.
- OR
- (b) Write about :
 - (i) Chemical methods to identify enzyme active sites
 - (ii) Role of FAD, NADP and Pantothenic acid as enzyme cofactors
- 10 (a) Give an account of enzyme kinetics and significance of Briggs-Haldane and Michaelis – Menton equations.
- OR
- (b) Explain :
 - (i) Concept of cooperativity with suitable example.
 - (ii) Hysteretic behavior in enzymes
- 11 (a) Explain acid base and covalent mechanism of catalysis by chymotrypsin. Add a note on other types of catalytic mechanisms.
- OR
- (b) Write about the allosteric regulation of enzyme with suitable examples.
- 12 (a) Explain enzymes cascade with relevance to cell division and apoptosis.
- OR
- (b) Discuss about:
 - (i) Enzymes in dairy industry
 - (ii) Enzymes in food processing technology

17
10
10
10
10
10
10
10
10
10

1
10
6
2
4
8
29
2
31

16 + 10
26
7
32

122 10 45

12/10/11

12 + 12 + 6 + 5 + 10
22 + 13
13
35
33
