



Code No. : 625

FACULTY OF SCIENCE
M.Sc. II Semester Examination, April/May 2013
BIOCHEMISTRY
Paper – II : 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

(8×4=32 Marks)

1. Define the terms-specific activity of enzymes and entropy.
2. Write short notes on catalytic RNA.
3. Explain the terms K_m and V_{max} with their significance.
4. Discuss briefly on the multiple binding sites on an enzyme.
5. Explain the acid-base mode of enzyme catalysis.
6. Discuss briefly on the chemical modification approach carried out on enzymes to determine the active functional groups of an enzyme.
7. Explain the transamination reaction with a suitable example.
8. Explain the reaction catalysed by pyruvate dehydrogenase complex.

PART – B

(4×12=48 Marks)

9. Discuss the different methods used for isolation and purification of enzymes.

OR

Discuss the IUB-nomenclature and classification of enzymes giving suitable examples. Add a note on regulation of enzyme activity.



10. Enumerate the effects of various factors affecting the rate of an enzyme catalysed reaction. Add a note on the importance of Lineweaver Burk Plot in enzyme kinetics.

OR

How do you differentiate between the ordered and random addition of substrates to enzymes and release of products from enzyme-substrate complex ?

11. Discuss the different types of enzyme catalysis with suitable examples.

OR

Sketch the mechanism of action of lysozyme and trypsin.

12. List out the coenzymes indicating their structures and comment on their role in enzyme catalysis.

OR

Differentiate between the allosteric and cooperative interactions between the enzyme and substrate with suitable examples.