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0906E511

Candidate's Seat No : _____

M.Sc Sem.-2 Examination

P - 409

Biochemistry

June 2022

Time : 2-00 Hours]

Instructions:

[Max. Marks : 50

All questions in Section I & II carry equal marks
Illustrate your answers with neat diagrams wherever necessary.

Section- I Answer in detail (Any six)

[42]

- 1 Discuss the factor affecting enzyme activity with example.
- 2 Write difference between compulsory ordered sequential and random order sequential bisubstrate reactions with example.
- 3 Discuss M-M equation at very low and very high substrate concentration.
- 4 What is coupled reaction? How it is significant to identify rate of enzyme activity? Explain with example.
- 5 Discuss the four unique properties of the enzymatic reaction.
- 6 What is enzyme inhibition? Discuss different types of enzyme inhibitor with example.
- 7 What is enzyme immobilization? What are the limitations of using enzymes directly in the reaction without immobilization?
- 8 Write difference between continues assay and discontinues assay with example.
- 9 Discuss spectrophotometric methods to determine rate of enzyme activity with example.
- 10 Draw and explain the Lineweaver-Burk plot for competitive, non- competitive and uncompetitive enzyme inhibitions.
- 11 Write difference between feedback inhibition and feed forward stimulation of enzyme regulation with example.
- 12 Write short note on Ping-Pond type of multi-substrate reaction.

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Section -II Answer in short (Any eight)

[08]

- 1 What is double reciprocal plot?
- 2 List out the methods to examine enzyme substrate complex.
- 3 What are Allosteric enzymes?
- 4 List out the different methods of enzyme immobilization.
- 5 What is Enzyme Assay?
- 6 What is the significance of K_m ?
- 7 Define 1 Unit of enzyme
- 8 What is V_{max} ?
- 9 Write any one example of competitive inhibition.
- 10 Draw the diagrammatic representation of ping-pong reaction.
- 11 Draw the Michaelis – Menten plot.
- 12 What is the difference between reversible and irreversible enzyme inhibition?
- 13 What do you mean by multi substrate enzymatic reaction?
- 14 What is enzyme specificity?

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