

AQ - 841

First Semester M. Sc. (CBCS) Examination

BIOCHEMISTRY

Paper - III

Advanced Enzymology

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

Note : All questions are compulsory and carry equal marks.

1. (a) Write the concept of steady state kinetics. 4
- (b) Explain single reciprocal plot. 4
- (c) Explain effect of pH on enzyme catalysed reactions. 4
- (d) Explain effect of enzyme concentration on reaction rate. 4

OR

- (p) Derive Michaelis-Menten equation. 4
- (q) Explain double reciprocal plot. 4
- (r) Explain effect of temperature on reaction rate. 4
- (s) Explain effect of substrate concentration on reaction rate. 4

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2. (a) Describe role of metals on enzyme kinetics. 4
- (b) Describe kinetics of reversible enzyme catalysed reactions. 4
- (c) Explain competitive and non-competitive enzyme inhibition. 4
- (d) Explain Haldane Effect. 4

OR

- (p) Describe bisubstrate kinetics. 4
 - (q) Explain role of coenzyme in metabolism giving example. 4
 - (r) Describe Activator kinetics. 4
 - (s) Explain kinetics of enzyme inhibition. 4
3. Describe chemical modification studied by active site directed reagents. 16

OR

Explain various physical methods for determination of active site confirmation. 16

4. What are multienzyme complexes ? Explain its significance in detail giving examples. 16

OR

What are isoenzymes ? Explain its significance in enzymology giving examples. 16

5. (a) Explain Enzyme induction and repression. 4
- (b) Explain concept of receptors and antagonists. 4
- (c) Explain allosteric regulation. 4
- (d) Explain product inhibition. 4

OR

- (p) Describe nature of allosteric enzyme. 4
- (q) Describe feed back control. 4
- (r) Describe mode of action of allosteric enzyme. 4
- (s) Describe mode of hormonal action on enzymes. 4

