

TKN/KS/16 – 5867

Fourth Semester B. Sc. Examination

BIOCHEMISTRY

Paper - I

(Enzymology)

Time : Three Hours]

[Max. Marks : 50

N. B. : (1) All questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. Describe in detail the Nomenclature and classification of enzymes. 10

OR

Write notes on following :—

- (a) Acid Base catalysis. 5
- (b) Proximity and orientation effect. 5

2. Give the mechanism of action of chymotrypsin. 10

OR

- (a) Describe the effect of temperature on enzyme activity. 5
- (b) Describe the role of pyridoxine as a coenzyme precursor. 5

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3. What is MM equation ? Give the assumptions and derivation of MM equation. Also mention its limitations. 10

OR

- (a) What is double reciprocal plot ? Give the significance of it. 5
- (b) Write a note on bisubstrate reaction. 5
4. ~~Write an account of enzyme assay with respect to the use of NAD coenzymes and coupled enzymes.~~

OR

- ~~Describe enzyme isolation based on Molecular size.~~ 10

5. Answer any ten of the following :—

- (i) ~~Define active site.~~ 1
- (ii) ~~Name the scientist who proposed induced fit model of enzyme action.~~ 1
- (iii) ~~Name one co-enzyme of Riboflavin.~~ 1
- (iv) ~~Name the amino acids present at the active site of Ribonuclease.~~ 1
- (v) ~~Define Km.~~ 1
- (vi) ~~Define coenzymes.~~ 1
- (vii) ~~What is competitive inhibition.~~ 1
- (viii) ~~TPP is the coenzyme of which vitamin ?~~ 1
- (ix) ~~Give the general graphical representation for LB plot.~~ 1

- ~~(i)~~ Define 'Katal'. 1
- ~~(ii)~~ Name one method of enzyme isolation based on electric charge. 1
- (xii) A typical pH profile of an enzyme is ———
shaped. 1

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