

Bachelor of Science (B.Sc.) Semester-IV Examination
BIO-CHEMISTRY (ENZYMOLGY)
Paper—I

Time : Three Hours]

[Maximum Marks : 50

Note :— All questions are compulsory and carry equal marks. Draw well labelled diagrams and give examples wherever necessary.

1. Give a detailed account of Enzyme Catalysis with respect to acid-base and metal ion catalysis. 10

OR

Write a note on :

- (a) Specificity of enzyme action. 5
 (b) AT Case. 5
2. Give a detailed account of mechanism of action of ribonuclease. 10

OR

- (a) Describe the role of vitamins as coenzyme precursors with any two examples. 5
 (b) Describe the effect of temperature on enzyme activity. 5
3. Describe the Michaelis Menten equation and transform it into L. B. equation. 10

OR

Write notes on :

- (a) Bisubstrate reaction. 5
 (b) Derive Eadie-Hotstee equation and give its graphical representation. 5
4. Describe in detail the fractionation of enzymes using gel filtration and affinity chromatography. 10

OR

- (a) Write a note on enzyme assay. 5
 (b) Describe the effect of PH on enzyme activity. 5
5. Solve any ten of the following :
- (i) Define substrate. 1
 (ii) What is Holoenzyme ? 1
 (iii) What do you mean by regulatory enzymes. 1
 (iv) Chymotrypsin catalyzes reaction by mechanism. 1
 (v) What is Q_{10} ? 1
 (vi) The coenzyme form of Pyridoxine is _____. 1
 (vii) What is initial velocity ? 1
 (viii) What is K_m ? 1
 (ix) Name any one irreversible enzyme inhibitor. 1
 (x) Define katal. 1
 (xi) Define specific activity of an enzyme. 1
 (xii) What do you mean by homogeneity of an enzyme ? 1