Exam. Code : 107404
Subject Code : 2148

B.Sc. (Bio-Technology) Semester—IV

ENZYMOLOGY

Paper—BT-8

Time Allowed—3 Hours] [Maximum Marks—40

SECTION—A

Note :— Attempt *all* questions from this section. 1×8=8

1. Define the following in not more than ***five*** lines each :
   (a) Apoenzyme
   (b) Rate of reaction
   (c) Allosteric enzyme
   (d) Ribozyme
   (e) Uncompetitive inhibitor
   (f) Feedback inhibition
   (g) Lyase
   (h) Thermodynamic equilibrium.

SECTION—B

Note :— Attempt any ***five*** questions from this section 4×5=20

2. Classify enzymes based on their mechanism of action.
3. Explain lock and key model of enzyme specificity.

4. Give the functions of enzyme in any biochemical reaction.

5. List four ways in which enzyme activity is generally regulated and give an example of each.

6. What are isozymes ? Support your answer with suitable example.

7. What is activation energy ? How does the activation energy change in the presence and absence of enzymes ?

8. Differentiate between active and allosteric site.

9. Explain acid base catalysis with suitable diagram(s).

SECTION- C

Note :— Attempt any *two* questions 6×2=12

10. What are co-enzymes ? Define their role in enzyme action.

11. Explain ping-pong enzyme mechanism with example.

12. What is mixed inhibition ? Explain the effect of such inhibitor an enzyme velocity.

13. Describe in detail the industrial application of enzymes.