Exam. Code : 107404
Subject Code : 2308

B.Sc. (Biotechnology) 4th Semester

BT-8 ENZYMOLOGY

Time Allowed—3 Hours] [Maximum Marks—40

SECTION—A

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

Define the following in not more than **five** lines each :

1. Isomerases
2. Apoenzyme
3. Active site
4. Optimum temperature of an enzyme
5. Lock and Key hypothesis
6. Zymogens
7. Self catalytic RNA
8. Describe non-competitive inhibition.

SECTION—B

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

1. Explain Cofactors and give examples.
2. Define Enzyme specificity and explain its types.

3. Explain Collision theory.
4. Explain Strain and distortion theory.
5. Explain Lineweaver-Burk plot and its significance.
6. Differentiate between random order mechanism and compulsory order mechanism.
7. What are isozymes and allozymes ? Give examples.
8. Explain the effect of change in temperature on the rate of an enzyme catalyzed reaction.

SECTION—C

Note :— Attempt any **TWO** questions from this section. 6×2=12

1. State and explain how allosteric enzymes show Michaelis Menten behaviour.
2. Explain different classes of enzymes and their characteristics.
3. Explain the mechanism of covalent and acid-base catalysis.
4. Derive an expression for an enzyme catalyzed reaction in the presence of uncompetitive inhibitor.