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.

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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.

$6 \times 2 = 12$

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.