

(3 Hours)

[Total Marks: 80]

- N.B.** 1) Q.No. 1 is **compulsory**.
2) Attempt any **3** questions from Q.No. 2 to 6.

- Q1. Answer the following (any 4):- [20]
 a. What are Hormones? Explain the significance of Thyroid Hormones.
 b. Give a brief account of triacylglycerol.
 c. Differentiate between a, b and z-DNA.
 d. State the First and Second Laws of Thermodynamics.
 e. How does binding energy help to lower the activation energy?
- Q2. Give structure and functions of the following: [20]
 a. Keratin
 b. Amylopectin
 c. Phospholipids
 d. Ribosomes
- Q3. a. Explain the effect of pH and temperature on an enzyme catalyzed reaction [10]
 b. Derive the Michaelis Menten Equation and double reciprocal plot. [10]
- Q4. Describe the following pathways in detail: [20]
 a. Glycolysis
 b. Urea Cycle
- Q5. a. Explain the 3 stages of Fatty acid oxidation. [10]
 b. Give an account of the functioning of the Photosystems I and II. [10]
- Q6. Write short notes on: [20]
 a. Adrenaline
 b. Vit K
 c. Peptidoglycan
 d. Chylomicron