

(3 Hours)

[Total Marks: 80]

- N.B.** 1) Q.No. 1 is **compulsory**.
2) Attempt any **3** questions from Q.No. 2 to 6.
3) **All** questions carry **equal** marks
- Q1. Answer the following (any 4):- [20]
a. Define pH. What is its role in an Enzyme catalyzed reaction?
b. Explain the structure and importance of tRNA.
c. Give an account of the role of vitamins as cofactors.
d. What are disulfide bridges? What is its significance?
e. How does enzyme alter a biochemical reaction?
- Q2. a. Give an account of the primary, secondary and tertiary protein structure. [10]
b. What are lipids? Give its classification. [10]
- Q3. a. What is the effect of substrate concentration on enzyme activity? How would you determine the maximum rate of an enzyme catalyzed reaction? [10]
b. What are the hormones secreted by the pituitary gland? Give their significance. [10]
- Q4. Describe in detail the following pathways (any 2). [20]
a. Glycolysis
b. Urea Cycle
c. Cyclic and Non-cyclic Photophosphorylation
- Q5. a. Explain α , β and ω -Oxidation of fatty acids. [10]
b. Explain the Connection between Urea Cycle and Krebs' cycle [10]
- Q6. Explain the following terms: [20]
a. Laws of Thermodynamics
b. Entropy
c. Buffers
d. Hydrogen bonds
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