

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]

- Define pH. Differentiate between an acid and a base.
- Explain the structure and importance of ATP.
- With the help of an example explain the role of vitamins as cofactors.
- Explain the role of rRNA in protein synthesis
- How does pH affect the enzyme activity?

Q2. Give structure and functions of the following:

[20]

- Phospholipids
- bDNA
- Haemoglobin
- Amylose

Q3. a. What are enzymes? Explain its importance in a biological system and add a note on the factors affecting its activity.

[10]

b. What are hormones? Give its classification and explain in brief the function and mechanism of any one hormone.

[10]

Q4. Describe in detail the following pathways (any 2).

[20]

- Glycolysis
- Urea Cycle
- Z-Pathway

Q5. a. Explain the stages involved in Fatty Acid Oxidation

[10]

b. Give a detailed account of the Krebs Cycle

[10]

Q6. Explain the following terms:

[20]

- Enthalpy
- Pyruvate Dehydrogenase Complex
- Buffers
- Peptide bond