**Question bank**

Q.1 (a) Discuss the process of purine degradation with structural representation.
    (b) Draw Glycolysis pathway.(Without Structures)

Q.2 (a) Write a short note on structural classification of proteins.
    (b) Write a short note on disaccharides and polysaccharides.
                                    **OR**
    (b) Describe classification of amino acids.

Q.3 (a) Define hormone. Enlist various mechanism of action of hormone. Describe the mechanism of hormone action for cell surface receptor.
    (b) Write a short note on Electron Transport Chain.
                                    **OR**
Q.3 (a) Write a note on various micro elements of the living system.
    (b) Draw Urea cycle.(Without Structure)

Q.4 (a) Write a short note on oxidation of Saturated fatty acids.
    (b) If 500 molecules of Glycealdehyde-3-Phosphate enter into Glycolysis then how many ATP produced till the end of TCA cycle?
                                    **OR**
Q.4 (a) Draw TCA cycle.(With structure)
    (b) If Fatty acid containing 22 carbon, then at the of end of fatty acid oxidation how many ATP released?

Q.5 (a) Describe in detail chemistry, biosynthesis, physiological significances of vitamin A.
    (b) Define buffer. Discuss the chemical properties of water.
                                    **OR**
Q.5 (a) Explain in detail how pyrimidine biosynthetic pathway is regulated in prokaryotic and eukaryotic system?

I. Answer the following : 10

1) What is a nucleotide ? Give example.

2) Define transamination reaction. Give example.

3) Name the enzyme that helps in synthesis of DNA from RNA.

4) What is catabolism ? Give its significance.

5) Give the significance of urea cycle.

6) Write the fate of pyruvate in anaerobic glycolysis.

7) Where does glycolysis occur in the cell ?

8) What is the role of helicase in DNA replication ?

9) List out two uses of ATP.

10) What are termination codons ?

II. A) Attempt **any two** of the following : 4

1) What is the role of carnitine in fatty acid oxidation ?

2) List out the enzymes and coenzymes involved in conversion of pyruvate to Acetyl-CoA.

3) Show the decarboxylation reaction of histidine and give the significance of the product.