



- iv) Which one of the following enzymes is used in energy investment phase of glycolysis ?
- a) Phosphoglycerate kinase
 - b) Enolase
 - c) Phosphofructokinase
 - d) Pyruvate kinase.
- v) Which of the following generates prostanoids ?
- a) Cyclo-oxygenase
 - b) Lipoxigenase
 - c) Sphingo lipid
 - d) None of these.
- vi) The cofactor used for Vitamin B_6 is
- a) Thiamine diphosphate
 - b) NAD^+
 - c) Pyridoxal phosphate
 - d) Menaquinone.
- vii) Activation of fatty acid occurs in the
- a) Cytosol
 - b) Mitochondria
 - c) Stomach
 - d) Membrane.
- viii) Cytochrome C oxidase is inhibited by
- a) Succinate
 - b) Pyruvate
 - c) Malate
 - d) Cyanide.



GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. How do you determine the primary structure of protein ? Write about the β -plated sheet of secondary structure. Write the factors affecting protein stability. What are the bonds present in 3D structure of protein ? What are allosteric proteins ? How is a peptide bond formed in primary structure of protein ? $3 + 3 + 3 + 2 + 2 + 2$
8. Explain Beta-oxidation process of palmitic acid and energetics associated with it. What is the structure of cholesterol ? $9 + 4 + 2$
9. Derive Michaelis-Menten equation for ES complex formation. What is Lineweaver-Burk plot ? Define its significance. Define K_m . $7 + 4 + 3 + 1$
10. a) How does the amino acid sequence affect the stability of an α -helix ?
- b) Write a note on ATP production and its significance.
- c) Discuss the role of vitamins and metals as cofactors.
- $5 + 5 + 5$
11. Write a detailed note on oxidative phosphorylation in reference with its different mechanisms and processes. Write short note on inhibitors involved in different processes of oxidative phosphorylation. $9 + 6$