

P. P. SAVANI UNIVERSITY

First Semester of M.Sc. Examination

February-March-2022

SSBT7070/SSMB7070-Advances in Biochemistry

09.02.2022, Wednesday Time: 12:00 p.m. to 02:30 p.m. Maximum Marks: 60

Section-I

- Q.1 Very Short Questions (Attempt any five)** [10]
- 1.1 Draw the double reciprocal plot and give its importance.
 - 1.2 Define allosteric enzyme and comments on its kinetics.
 - 1.3 Give the biological significance of lipid as biomolecules.
 - 1.4 What is feedback and covalent modification for the regulation of enzymes?
 - 1.5 Write down the fate of pyruvate in aerobic and anaerobic conditions.
 - 1.6 What is the significance of HMP pathway?
- Q.2 Write Short Notes (Attempt any two)** [06]
- 2.1 Discuss the reaction catalyzed by PDH complex
 - 2.2 Difference between glycogenesis and glycogenolysis.
 - 2.3 Write a note on classification of enzymes with suitable examples.
- Q.3 Detail questions (Attempt any two)** [14]
- 3.1 Derive MM equation along with MM plot.
 - 3.2 Describe the energy generation steps of glycolysis and TCA cycle in detail.
 - 3.3 Classify the enzyme inhibition and discuss the characteristics of various types of reversible inhibition with appropriate example.

Section-II

- Q.1 Very Short Questions (Attempt any five)** [10]
- 1.1 Explain the activation of fatty acid for breakdown
 - 1.2 Enlist difference between Denovo synthesis and salvage pathway?
 - 1.3 Name the enzymes for TG breakdown
 - 1.4 Enlist different enzymes useful for beta-oxidation of fatty acids.
 - 1.5 Which metabolic intermediates are useful to make purines?
 - 1.6 What is the significance of SGPT and SGOT?
- Q.2 Write Short Notes (Attempt any two)** [06]
- 2.1 Discuss anabolism of phospholipids.
 - 2.2 Give an account on fatty acid transport through cell membrane.
 - 2.3 Write a note on TG biosynthesis.
- Q.3 Detail questions (Attempt any two)** [14]
- 3.1 Discuss fatty acid synthesis in adipose tissue.
 - 3.2 Write Urea cycle in detail
 - 3.3 Discuss transamination reaction