

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER– III• EXAMINATION – WINTER -2023

Subject Code: Biochemistry**Date: 16/01/2024****Subject Name: BP303TP****Time:10:30 AM to 1:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	(a) Define and classify Carbohydrates. Describe the structure and functions of polysaccharides.	06
	(b) Discuss Aerobic Glycolysis with its energetic.	05
	(c) Define bioenergetics and discuss concept of free energy.	05
Q.2	(a) Write a note on TCA cycle.	06
	(b) Explain Oxidative phosphorylation and its mechanism.	05
	(c) Discuss components and reactions of the electron transport chain.	05
Q.3	(a) Discuss β -oxidation of fatty acids.	06
	(b) Discuss following diseases: i) Alkeptonuria ii) Atherosclerosis	05
	(c) Give a brief note on Gluconeogenesis.	05
Q.4	(a) Discuss conversion of cholesterol into bile acids and biological significance of cholesterol.	06
	(b) Give a brief note on De novo synthesis of fatty acids.	05
	(c) Describe significance of Dopamine and 5 HT.	05
Q.5	(a) Explain in detail about biosynthesis of purine nucleotides.	06
	(b) Describe in brief DNA replication.	05
	(c) Explain structure and functions of different types of RNAs.	05
Q. 6	(a) Define Enzyme and discuss enzyme inhibitors with examples.	06
	(b) Write a note on regulation of enzyme activities.	05
	(c) Write a brief on Enzyme kinetics.	05
Q.7	(a) What is Translation? Discuss different steps involve in it.	06
	(b) Write a note on hormonal regulation of blood glucose level.	05
	(c) Explain in detail about catabolism of heme.	05
