

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 3 EXAMINATION – WINTER-2025

Subject Code: BP303TP**Date: 12-12-2025****Subject Name: Biochemistry****Time:10:30 AM TO 01:30 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) What are Amino acids? Give different classifications of Amino acids.	06
	(b) Explain in detail about structure of DNA and RNA.	05
	(c) Write in detail about Glycolysis with its energetic.	05
Q.2	(a) Define and classify Lipids. Write a note on Phospholipids.	06
	(b) Describe catabolism of Phenylalanine in detail.	05
	(c) Explain about HMP Shunt in detail.	05
Q.3	(a) Give properties of Carbohydrates. Write in detail about Polysaccharides.	06
	(b) Describe Glycogen metabolism in detail.	05
	(c) Describe Catabolism of Purine nucleotides with Gout.	05
Q.4	(a) Describe general reactions involved in metabolism of Amino acids.	06
	(b) Explain about Electron Transport Chain with its mechanism.	05
	(c) Write in detail about Regulation of Enzyme action.	05
Q.5	(a) Write in detail about Energy rich compounds with significances of ATP and cyclic AMP	06
	(b) Explain in detail about β -Oxidation of Fattyacids.	05
	(c) Explain the following terms. 1)Fatty liver 2) Alkeptonuria	05
Q. 6	(a) Write in detail about DNA replication.	06
	(b) Describe Enzyme kinetics in detail.	05
	(c) Write in detail about Urea Cycle.	05
Q.7	(a) Explain about formation and utilization of Ketone bodies with Ketoacidosis	06
	(b) Describe in detail about Catabolism of Heme with jaundice	05
	(c) Synthesis and significance of 5-HT and Melatonin.	05
