

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-III • EXAMINATION – SUMMER -2022

Subject Code: BP303TP
Subject Name: Biochemistry
Time: 02:30pm to 05:30pm

Date: 06/09/2022

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) Discuss β -oxidation of palmitic acid.	06
	(b) Describe the mechanism of enzyme action.	05
	(c) Write a note on glycogen storage disease.	05
Q.2	(a) Describe electron transport chain with its mechanism.	06
	(b) Explain HMP shunt pathway.	05
	(c) Comment on hormonal regulation of blood glucose level and describe diabetes mellitus.	05
Q.3	(a) Explain the genetic code in detail.	06
	(b) Define: (i) Allosteric enzyme (ii) Coenzyme (iii) Isoenzyme (iv) Uncoupler (v) High-energy compounds	05
	(c) Write a note on cori's cycle.	05
Q.4	(a) Classify amino acids. Discuss the function of protein in biological system.	06
	(b) Define: (i) Mutarotation (ii) Anomers (iii) Epimers (iv) Crabtree effect (v) Limit dextrin	05
	(c) Describe fatty liver and atherosclerosis.	05
Q.5	(a) Discuss in detail about purine ribonucleotide biosynthesis.	06
	(b) Explain catabolism of phenyl alanine and tyrosine.	05
	(c) Define ketone bodies. Discuss its formation and utilization.	05
Q. 6	(a) Write a note on TCA cycle with its energetics.	06
	(b) Discuss in brief inhibitors of protein synthesis.	05
	(c) Discuss the biological significance of ATP and cyclic AMP.	05
Q.7	(a) Write a note on DNA replication.	06
	(b) Describe therapeutic and diagnostic applications of enzymes and isoenzymes.	05
	(c) Explain catabolism of heme.	05
