Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Ph. - SEMESTER–III • EXAMINATION – SUMMER -2022

Subject Code: BP303TP **Date: 06/09/2022**

Subject Name: Biochemistry

Time: 02:30pm to 05:30pm **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**

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