Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Ph.- SEMESTER–III • EXAMINATION – WINTER -2020

Subject Code:BP303TP **Date: 03/03/2021**

Subject Name: Biochemistry

Time: 02:30PM TO 04:30PM **Total Marks: 54**

Instructions:

1. **Attempt any THREE questions from Q-1 to Q-6.**
2. **Q.7 is compulsory to attempt.**
3. **Make suitable assumptions wherever necessary.**
4. **Figures to the right indicate full marks.**

Q.1	**(a)**	Discuss Aerobic Glycolysis with energetic.	**06**
	(b)	Discuss the Synthesis of Glucose from Non-Carbohydrate sources.	**05**
	(c)	Write a note on citric acid cycle & explaining its amphibolic nature.	**05**
Q.2	**(a)**	Discuss components and reactions of the electron transport chain.	**06**
	(b)	Define oxidative phosphorylation and discuss inhibitors of oxidative phosphorylation.	**05**
	(c)	Write a note on Glycogen Storage Disease.	**05**
Q.3	**(a)**	What are carbohydrates? Give classification of carbohydrates with examples & function of it.	**06**
	(b)	(1) Differentiate Saturated and Unsaturated Fatty Acids. (2) Define (i) Iodine number (ii) Saponification number (iii) Acid number	**05**
	(c)	Define bioenergetics and discuss concept of free energy.	**05**
Q.4	**(a)**	Discuss β-oxidation of fatty acids.	**06**
	(b)	What do you mean by ketone bodies? Discuss its formation and utilization.	**05**
	(c)	Discuss in detail Cholesterol Biosynthesis.	**05**
Q.5	**(a)**	Write in brief Genetic code. Add a note on various inhibitors for protein synthesis.	**06**
	(b)	Define Enzyme. Give the brief classification of enzymes with suitable examples.	**05**
	(c)	Define Enzyme inhibition. Explain reversible and irreversible inhibition of enzyme.	**05**
Q. 6	**(a)**	Write about reaction of Krebs-Henseleit cycle and enlist disorders of the cycle.	**06**
	(b)	Describe in detail transamination and deamination reactions for amino acids metabolism.	**05**
	(c)	Write in brief about atherosclerosis and jaundice.	**05**
Q.7	**(a)**	Discuss in detail about purine biosynthesis.	**06**
		OR	
	(a)	Discuss the Watson and Crick model of DNA structure.	**06**
		OR	
	(a)	Describe in brief DNA replication.	**06**

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