Seat No./Enrollment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BACHELOR OF PHARMACY – SEMESTER 3 – EXAMINATION – SUMMER 2026

Subject Code: BP303TP **Date: 25/05/2026**

Subject Name: Biochemistry

Time: 02:30 PM TO 05:30 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)**	Explain in brief therapeutic applications of enzyme.	**06**
	(b)	Define Enzyme, Iso enzyme, coenzyme, prosthetic group and apoenzyme.	**05**
	(c)	Explain the synthesis of catecholamines.	**05**
Q.2	**(a)**	Explain Urea cycle with its metabolic disorders	**06**
	(b)	Discuss Jaundice and hyperbilirubinemia.	**05**
	(c)	Discuss DNA replication.	**05**
Q.3	**(a)**	Describe Kreb's cylce with its energetics.	**06**
	(b)	What do you mean by genetic code and explain different characteristics of genetic code.	**05**
	(c)	Explain why sucrose is called as invert sugar.	**05**
Q.4	**(a)**	Explain the structure and biochemical function of following coenzyme derived from vitamin : Thiamine, Pyridoxine,Biotin,Coenzyme A, Folic acid.	**06**
	(b)	Discuss different causes and treatment of fatty liver and Atherosclerosis.	**05**
	(c)	Describe protein biosynthesis.	**05**
Q.5	**(a)**	Define lipids and classify them with suitable examples.	**06**
	(b)	Discuss biological significance of ATP.	**05**
	(c)	Explain Competitive and Non Competitive inhibition.	**05**
Q.6	**(a)**	Write down different components and reactions of ETC.	**06**
	(b)	Discuss catabolism of purine nucleotides.	**05**
	(c)	Discuss various metabolic disorders related to phenylalanine and tyrosine metabolism.	**05**
Q.7	**(a)**	Explain Glycolysis with its energetics.	**06**
	(b)	Explain the Watson and Crick model of DNA.	**05**
	(c)	Define polysaccharides. Classify them and write their importance.	**05**

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