

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm - SEMESTER- 4 EXAMINATION – SUMMER -2021

Subject Code:2240003**Date:05/08/2021****Subject Name: Pharmaceutical chemistry V (Biochemistry II)****Time: 10:30AM TO 01:30PM****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) Define and classify proteins with examples by several ways.	06
	(b) Discuss structure of DNA with diagram.	05
	(c) Explain physical and chemical properties of amino acids.	05
Q.2	(a) Discuss steps of urea cycle along with its metabolic disorders.	06
	(b) Write about transamination and deamination reactions of amino acids.	05
	(c) Write about metabolism of sulphur containing amino acids.	05
Q.3	(a) Explain pathway for the biosynthesis of pyrimidine nucleotides.	06
	(b) Define porphyrins. Write its examples. Explain steps involved in biosynthesis of heme.	05
	(c) Define genetic code. Explain its characteristics.	05
Q.4	(a) Define polymerase chain reaction. Explain its principle and applications.	06
	(b) Write about enzymes and coenzymes involved in biological oxidation reactions.	05
	(c) Explain respiratory chain. Add a note on its inhibitors.	05
Q.5	(a) Discuss various theories explaining mechanism of oxidative phosphorylation.	06
	(b) Classify chromatographic techniques. Explain any two of them.	05
	(c) Define and classify amino acids with examples and structures.	05
Q. 6	(a) Explain the process of DNA replication along with diagram.	06
	(b) Write about repair process of damaged DNA produced during replication.	05
	(c) Explain the concept of Lac operon along with diagram.	05
Q.7	(a) Define free energy. Write a note on high energy compounds.	06
	(b) Discuss spectrophotometry, as a tool of biochemistry.	05
	(c) Give diagrammatical explanation of initiation of protein synthesis.	05
