Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Ph. - SEMESTER–IV • EXAMINATION – SUMMER-2018

Subject Code:2240003 Date:23/05/2018

Subject Name: Pharmaceutical Chemistry – V (Biochemistry – II)

Time: 10:30 AM TO 01:30 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)**	Enumerate various mechanism of oxidative phosphorylation and discuss chemiosmotic hypothesis in detail	**06**
	(b)	Explain Urea Cycle along with its energetics	**05**
	(c)	Write a short note on enzymes involve in biological oxidation	**05**
Q.2	**(a)**	What is PCR? Write detail note about it with its application	**06**
	(b)	Write note on inhibitors of Oxidative phosphorylation	**05**
	(c)	Write about transamination and deamination reactions of amino acids	**05**
Q.3	**(a)**	Describe the following terms : Gene, Chromosome, Nucleotide , Bioenergetics, zwitterions, Poly peptide	**06**
	(b)	Discuss reactions of De Novo synthesis of Purine nucleotides	**05**
	(c)	Write a note on isolation of nucleic acid	**05**
Q.4	**(a)**	Explain in detail DNA replication process.	**06**
	(b)	Describe secondary and tertiary structure of protein.	**05**
	(c)	Describe porphyrin biosynthesis and define hyperbilirubinemia.	**05**
Q.5	**(a)**	What is genetic code? Explain its characteristics in detail.	**06**
	(b)	Discuss concept of Free – Energy.	**05**
	(c)	Write a short note on Translation process.	**05**
Q. 6	**(a)**	Discuss components and reactions of Electron Transport Chain.	**06**
	(b)	Write a short note on Post Transcriptional Modification of mRNA	**05**
	(c)	Classify protein according to their biological functions	**05**
Q.7	**(a)**	Write a short note on gel electrophoresis.	**06**
	(b)	Define and classify amino acids along with examples.	**05**
	(c)	Discuss ATP – ADP cycle and give biosignificance of ATP.	**05**

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