Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – I • EXAMINATION – SUMMER • 2014

Subject Code: 2240003 Date: 27-05-2014

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

Time: 02:30 pm - 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)**	Write a detail note on structure of protein.	**06**
	(b)	Explain properties of amino acids.	**05**
	(c)	Describe structure of DNA.	**05**
Q.2	**(a)**	Describe porphyrin biosynthesis and write a note on different types of hyperbilirubinemias.	**06**
	(b)	Discuss reactions of urea cycle.	**05**
	(c)	Write about utilization of methionine.	**05**
Q.3	**(a)**	Write in detail about the process of replication of DNA.	**06**
	(b)	Discuss about Transcription process.	**05**
	(c)	Write note on DNA repair mechanisms.	**05**
Q.4	**(a)**	Explain initiation process of protein synthesis. Add a note on various inhibitors for protein synthesis.	**06**
	(b)	Write a short note on Genetic code.	**05**
	(c)	Describe polymerase chain reaction.	**05**
Q.5	**(a)**	Define oxidative phosphorylation. Discuss chemiosmotic hypothesis in detail.	**06**
	(b)	Write in detail about enzymes involved in biological oxidation.	**05**
	(c)	Describe different enzymes and coenzymes involved in biological oxidation and reduction reactions.	**05**
Q. 6	**(a)**	Discuss in detail about purine biosynthesis.	**06**
	(b)	Write a short note on RNA.	**05**
	(c)	Discuss about respiratory chain with its role as energetic.	**05**
Q.7	**(a)**	Write a note on gene expression in eukaryotes.	**06**
	(b)	Define bioenergetics and discuss concept of free energy.	**05**
	(c)	Write in detail about different chromatographic techniques with their importance in biochemistry.	**05**

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