Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER – V • EXAMINATION – WINTER – 2015

Subject Code: 250003 **Date: 10/12/2015**

Subject Name: Pharmaceutical Chemistry – V (Biochemistry)

Time: 10.30 AM to 1.30 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)**	Describe α-helical structure of protein.	**06**
	(b)	Write a note on Natural Fat.	**05**
	(c)	Give an account of chemical tests of carbohydrates.	**05**
Q.2	**(a)**	Define bioenergetics. Discuss concept of free energy.	**06**
	(b)	Discuss Transport of macromolecules across the biological membranes.	**05**
	(c)	Define oxidative phosphorylation. Discuss chemiosmotic hypothesis in detail.	**05**
Q.3	**(a)**	Classify enzymes on the basis of the type of reactions they catalyze with relevant examples.	**06**
	(b)	Write a detailed note on iso-enzymes.	**05**
	(c)	Give an account on mechanism of enzyme action.	**05**
Q.4	**(a)**	Explain about amphibolic nature of citric acid cycle.	**06**
	(b)	Discuss aerobic glycolysis with energetics.	**05**
	(c)	Write a note on glycogen storage disease.	**05**
Q.5	**(a)**	Discuss the edman's techniques for determination of sequence of amino acids.	**06**
	(b)	Classify the Lipids. Give the functions of Lipids.	**05**
	(c)	What are fatty acids? Explain the various parameters measured to check the purity of fats and oils.	**05**
Q. 6	**(a)**	Enumerate vitamins used as coenzymes. Discuss any two of them.	**06**
	(b)	Describe the role of hormones in maintenance of blood sugar level.	**05**
	(c)	Explain role of metals as coenzymes.	**05**
Q.7	**(a)**	Define gluconeogenesis. Discuss cori's cycle.	**06**
	(b)	Discuss pentose phosphate pathway.	**05**
	(c)	How is galactose and fructose metabolized in the body?	**05**

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