Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Ph. / M. Ph. / D.Ph. - SEMESTER–I • EXAMINATION – WINTER-2016

Subject Code: 410004 **Date: 25/10/2016**

Subject Name: Biochemistry and Clinical Pathology

Time:10:30AM 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)**	Define Carbohydrates. Discuss Optical Isomerism and Mutaroation.	**06**
	(b)	Discuss the biochemical functions and deficiency symptoms of Iron and Calcium	**05**
	(c)	Define Proteins. Give detailed classification of proteins with examples.	**05**
Q.2	**(a)**	Give classification of fatty acids. Describe ß-oxidation of fatty acids.	**06**
	(b)	Define Lipids. Describe physical and chemical properties of lipids.	**05**
	(c)	Discuss the biological significance of Nucleic acids.	**05**
Q.3	**(a)**	Discuss the mechanism of enzyme action and its pharmaceutical importance.	**06**
	(b)	Discuss deficiency symptoms of Vitamin D & Vitamin E.	**05**
	(c)	Explain the synthesis of Catecholamine from Tyrosine.	**05**
Q.4	**(a)**	Discuss the followings :- i) Biological importance of lipids ii) Ketone body formation	**08**
	(b)	Give the principles and significance of the following qualitative tests :- 1) Barfoed's test 2) Molisch's test 3) Osazone test 4) Benedict's test	**08**
Q.5	**(a)**	Explain Kreb's cycle. Write its energetic and biological significance.	**08**
	(b)	Discuss the following terms :- (Any FOUR) i) Enzyme specificity ii) Optical activity iii) Zymogen iv) Acid value v) Saponification value	**08**
Q. 6	**(a)**	Discuss Glycolysis process with chart.	**08**
	(b)	Discuss the followings :- I) Disorders of blood II) Oxidative phosphorylation process	**08**
Q.7		Write short note on the followings :- (Any FOUR) a) Vitamin A b) Abnormal constituents of urine and their significance c) Diabetes mellitus d) Regulation of body water e) Gluconeogenesis and Glycogenolysis	**16**

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