Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

D.Ph. - SEMESTER–I • EXAMINATION – SUMMER 2013

Subject Code: 410004 **Date: 17-05-2013**

Subject Name: Biochemistry and Clinical Pathology

Time: 10.30 am - 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)**	Describe Krebôs cycle in detail and calculate its energetics	**08**
	(b)	Write a note on i) Gluconeogenesis & ii) Hexose monophosphate pathway	**08**
Q.2	**(a)**	Write a note on (Any four) i) Amphoteric nature of Amino acids ii) Functions & importance of Protein iii) Structure of protein iv) Catabolism of Tyrosine v) Formation of epinephrine from Tyrosine vi) Fate of amino acids	**16**
Q.3	**(a)**	Discuss in detail Beta oxidation of fatty acid with its energetics	**08**
	(b)	Write a short note on (Any Two) i) Classification of lipids ii) Ketone bodies iii) Biological significance of Phospholipids	**08**
Q.4	**(a)**	Define Enzyme,Classify enzyme & Discuss factors affecting enzyme activity	**08**
	(b)	Give descriptive note on i) Mechanism of Enzyme action ii) Enzyme inhibition	**08**
Q.5	**(a)**	Discuss chemistry, sources, physiological functions and deficiency diseases of Fat soluble vitamins	**08**
	(b)	Answer following i) Describe Physiological significance and clinical condition associated with iron and calcium ii) Write a descriptive note on Thiamin and Riboflavin	**08**
Q. 6	**(a)**	Describe Diabetes mellitus, Discuss in detail with its different types, symptoms and diagnostic tests.	**08**
	(b)	Write a note on (Any Two) i) Heteropolysaccharides ii) Tests for Carbohydrates iii) Epimers	**08**
Q.7	**(a)**	Describe the abnormal constituents of urine with its significance in diseases.	**06**
	(b)	Discuss Body water balance mechanism in detail	**05**
	(c)	Explain following terms i) Saponification value ii) iodine value iii) Acid value iv) Acetyl value v) Reichert meissel no.	**05**

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