Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY D.Ph. - PART- I • EXAMINATION - SUMMER-2017

Subject Code: Biochemistry & Clinical Pathology Date:02/06/2017

Subject Name: 410004
Time: 10:30AM TO 1:30PM
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) (b) (c)	Describe Citric acid cycle with bioenergetics	
Q.2	(a)	Define and classify vitamins. Write chemistry, source, functions and deficiency disease of Vitamin D.	06
	(b) (c)	Discuss briefly biochemical importance of Iodine, Calcium, Zinc and Selenium. Give clinical significance of following abnormal constituents of urine. 1. Ketone bodies. 2. Blood 3. Protein.	05 05
Q.3	(a) (b)	Define enzyme. Explain properties and diagnostic importance of Enzyme. Define the terms 1. Zymogen 2. Enzyme Specificity 3. Group Specificity 4. Co-enzyme	06 05
	(c)	Write a note factors affecting enzyme activity.	05
Q.4	(a)	What are lipids? Classify it with examples. Write biomedical importance of lipids.	06
	(b) (c)	Write a note on β-oxidation. Discuss briefly about phospholipids.	05 05
Q.5	(a)	Define amino acids and Zwitterion. Classify them with two examples in each class.	06
	(b) (c)	Write a note on urea cycle. Define and classify proteins based on structural organization.	05 05
Q. 6	(a) (b) (c)	Describe Hexose monophosphate pathway. Give difference between Glucogenesis and Glycogenolysis. Name chemical reactions of monosaccharide and discuss any one of them.	
Q.7	(a) (b) (c)	Discuss normal constituents of blood and brief abnormalities of each. Differentiate between: competitive & non-competitive inhibition. Name the co-enzyme of following vitamins. 1. Thiamin 2. Riboflavin 3. Niacin	06 05 05
