Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- 3 (NEW) EXAMINATION

Subject Code: 2130403 Date:23/12/2015

Subject Name: BASIC BIOCHEMISTRY

Time:02.30pm to 05.00 pm Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

			MARKS
Q.1		Short Questions	14
_	1	Pentose phosphate pathway is also known as	
	2	Write the name of main enzyme for ATP synthesis.	
	3	What is amphoterism of amino acid?	
	4	Enlist the types of monosaccharides.	
	5	Write a full form of: IMP, AMP.	
	6	Define the covalent bond and write its example.	
	7	Write the structure of Adenine and Guanine.	
	8	Define the term Gluconeogenesis.	
	9	List out the enzymes involved in protein digestion.	
	10	Enlist various fat soluble vitamins.	
	11	Give the example of compound lipid with its definition.	
	12	Deficiency of which enzyme lead to Gout, a metabolic disorder?	
	13	Define weak acid and weak base.	
	14	Write the key step and key enzyme of glycolysis.	
Q.2	(a)	Write in detail about energetic of TCA cycle.	03
	(b)	Give a detail account on Glyoxalate pathway.	04
	(c)	Discuss about secondary structure of protein.	07
		OR	
	(c)	What are the properties of water? Write about ionization of water.	07
Q.3	(a)	Draw the structure of following:	03
	()	Lysine, Tyrosine, Tryptophan	
	(b)	Write the reaction with structure how IMP is converted to AMP?	04
	(c)	Give a detail account on polysaccharides.	07
		OR	
Q.3	(a)	Enlist various weak interactions involved in protein structure and explain their significances for protein structure.	03
	(b)	Explain the amphoterism and zwitter ionic property of protein.	04
	` '	Describe the classification of lipids based on structure.	07
Q.4	(a)	Explain role of enzymes used in glycogen breakdown.	03
V. 7	(b)	Define and explain denaturation and renaturation of protein.	04
	(c)	Describe in detail TCA cycle.	07
	(C)	OR	07
Q.4	(a)	Define glucoconjugates with example and importance.	03
~·¬	(b)	Explain preparatory phase of glycolysis.	04
	(c)	Describe the process of protein digestion in a physiological	07
	(0)	system.	J.
0.5	(a)	Enlist and write a role of enzymes involved in protein digestion	03

	(b)	Write pyrimidine degradation without structure.	
	(c)	Draw a labeled diagram of urea cycle with structure.	07
		OR	
Q.5	(a)	List out biological significances of lipid.	03
	(b)	Enlist with the role micro elements of biological system.	04
	(c)	Discuss β-oxidation of unsaturated lipid.	07
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