Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III(New) EXAMINATION - SUMMER 2016

Subject Code:2130403 Date:02/06/2016

Subject Name:Basic Biochemistry

Time:10:30 AM to 01:00 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	Give an example of aldohexose sugar with its structure.	1
	2	Write full form of NADPH and UDP	1
	3	Name the polysaccharide present in plant cell wall.	1
	4	Name simplest amino acid and give its structure.	1
	5	Name the forces responsible for stability of proteins.	1
	6	Give an example of fat soluble vitamin.	1
	7	What is weak acid?	1
	8	Give an example of purine and pyrimidine base.	1
	9	Name the bond between two amino acids.	1
	10	What is diameter of helix of DNA?	1
	11	What are basic components of triglyceride?	1
	12	What are macro minerals?	1
	13	What are other names of TCA cycle?	1
	14	Where does urea cycle occur?	1
Q.2	(a)	What are monosaccharides? How are they classified?	03
	(b)	Write a brief account on secondary structure of proteins.	04
	(c)	Draw TCA cycle showing appropriate components. OR	07
	(c)	Draw Gluconeogenesis pathway showing appropriate	07
		components.	
Q.3	(a)	Explain general structure of amino acid.	03
	(b)	Write a brief account on protein degradation.	04
	(c)	Draw a table/chart showing classification of amino acids	07
		based on properties of side chains.	
		OR	
Q.3	(a)	What is biological significance of proteins?	03
	(b)	What is carnitine shuttle pathway?	04
	(c)	Explain urea cycle with a neat diagram.	07
Q.4	(a)	What is biological significance of lipids?	03
	(b)	Explain general structure of a nucleotide.	04
	(c)	Explain beta oxidation of odd number fatty acid with an example.	07
		OR	
Q.4	(a)	Write an account on sources and function of Vitamin D.	03
	(b)	Write down the reaction for formation of acetyl Co A from pyruvate.	04
	(c)	Explain the pathway for biosynthesis of purine.	07

Q.5	(a) (b) (c)	Write an account on sources and function of Vitamin C What is function of rRNA and tRNA? Explain the pathway for breakdown of pyrimidine cytidine.	03 04 07
		OR	
Q.5	(a)	Narrate properties of water.	03
	(b)	What is biological significance of minerals calcium and sodium?	04
	(c)	Explain Glyoxalate pathway.	07
