

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Pharmacy – 1st Year Examination – OCTOBER 2012****Subject code: 410004****Date: 03-11-2012****Subject Name: Biochemistry and Clinical pathology****Time: 2:30 pm – 5:30 pm****Total Marks: 80****Instructions:**

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

Q.1	(a)	Define and classify the carbohydrates giving examples. Give an account of structural configuration of glucose.	06
	(b)	Write a note on Disaccharides and mucopolysaccharides	05
	(c)	Explain : 1) Mutarotation 2) Osazone formation	05
Q.2	(a)	Discuss in detail structural organization of protein.	06
	(b)	Give the structural classification of Amino acids.	05
	(c)	Write short notes on: a) Essential amino acids b) Colour reactions of protein.	05
Q.3	(a)	Give the detail classification of lipids. Discuss the biological role of lipid.	06
	(b)	Write a note on phospholipids and discuss their biological functions	05
	(c)	Define and explain : a) Rancidity b) saponification no. c) Iodine no. d) Acid value e) Reichert meissel no.	05
Q.4	(a)	What are Enzymes ? Discuss the various factors affecting Enzyme activity	06
	(b)	Describe mechanism of Enzyme action with “lock and key model” and “induce fit model”.	05
	(c)	Write a note on Enzyme inhibition	05
Q.5	(a)	Describe citric acid cycle with energetics.	06
	(b)	Discuss the β -Oxidation of fatty acids.	05
	(c)	What is Glycolysis? Describe various reactions of glycolysis.	05
Q. 6	(a)	Write chemistry, dietary source, functions and deficiency disorder of Vitamin A.	06
	(b)	Discuss the coenzyme role of Riboflavin and Thiamin.	05
	(c)	Write role of following minerals in our body : 1) Calcium 2) Iron	05
Q.7	(a)	Write a note on abnormal constituent of urine with their clinical significance.	06
	(b)	Discuss pathology of red blood cell and types of anemia.	05
	(c)	Write a note on : a) Phenylketonurea b) Diabetes	05
