

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- IVth SEMESTER-EXAMINATION – MAY/JUNE- 2012****Subject code: 141401****Date: 18/05/2012****Subject Name: Food Nutrition and Biochemistry****Time: 10:30 am – 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.

Q.1	(a)	Answer the following questions in short.	06
		(i) Define nutrition.	
		(ii) What is satiety value of food?	
		(iii) What do you understand by Protein efficiency ratio?	
		(iv) What is ketosis?	
		(v) Write name of enzymes and reaction responsible for enzymatic browning in fruits and vegetables	
		(vi) List out type of specificity of enzymes with examples	
	(b)	Differentiate between carbohydrate digestion and protein digestion.	04
	(c)	What are lock & key and induced fit models of enzyme–substrate interactions?	04
Q.2	(a)	Write seven characteristics of enzymes.	07
	(b)	Explain Food Guide pyramid with its diagrammatic representation.	07
		OR	
	(b)	Discuss the functions of water in human nutrition.	07
Q.3	(a)	Give account on glycolysis of glucose metabolism human body.	05
	(b)	Discuss functions and deficiency symptoms of vitamin C?	05
	(c)	Enlist important first eight entities in B-complex vitamin.	04
		OR	
Q.3	(a)	Write role of indigenous enzymes that affecting texture of food modification	05
	(b)	Write health disorder occurring in the deficiency of the following minerals. 1. Calcium 2. Iron 3. Potassium 4. Iodine 5. Magnesium	05
	(c)	Discuss the functions and deficiency symptoms of vitamin E.	04
Q.4	(a)	Discuss the importance of lipids in human nutrition.	05
	(b)	How the digestion of fat takes place in human body?	05
	(c)	Give classification and nomenclature of enzymes with suitable examples	04
		OR	

Q.4	(a)	Discuss the effect of cooking on protein.	05
	(b)	Discuss the factors which affects on human nutrition.	05
	(c)	Draw a various curves that shows different types of inhibition	04
OR			
Q.5	(a)	What mean by initial velocity and what are condition should be maintain in assay system for V_o measurement	05
	(b)	What measures can be employed to retain most vitamins during cooking?	05
	(c)	What is quetlet index? State its significance.	04
Q.5	(a)	Give β -oxidation of C16 carbon fatty acid and calculate number of ATP generated on complete oxidation to CO_2 .	05
	(b)	What is RDA? State its uses.	05
	(c)	Introduce the following terms briefly. 1. Restoration 2. Enrichment 3. Supplementation 4. Fortification	04
