Seat No.: _____ Enrolment No.____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION - WINTER 2013

Subject Code: 141401 Date: 17-12-20			
_		Tame: Food Nutrition and Biochemistry 30 pm to 05:00 pm Total Marks: 70	
Instru		<u> </u>	
	2. I	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Do as directed. i) Highlight on the contribution of Lavoiser in human nutrition. ii) State the significance of Recommended Daily Allowances. iii) "Fat soluble vitamins should not be consumed excessively." Justify the statement. iv) Define apoenzyme and coenzyme. v) Introduce the term: Net Protein Utilization vi) What is the importance of amylase in food digestion? vii)Enlist the factors affecting human nutrition.	07
	(b) (c)	Draw a well labeled Food guide pyramid along with different food groups. What are functions of carbohydrate in human nutrition?	04 03
Q.2	(a)	Derive Michaelis Menten equation for enzyme kinetics. Explain competitive and non-competitive inhibition.	07
	(b)	Discuss classification of protein on the basis of nutritional point along with its role in human health.	07
	(b)	OR What do you mean by basal metabolism rate? Discuss the factors affecting it.	07
Q.3	(a) (b)	How the carbohydrate gets affected during heat processing of food product? What are deficiency symptoms and excessive consumption consequences of vitamin D?	07 04
	(c)	State the importance of bile in food digestion. OR	03
Q.3	(a) (b) (c)	Discuss the digestion and absorption of fat in human. Enlist the important applications of food enzymes in food processing industries. What is BMI? How it can be used to assess the nutritional status?	07 04 03
Q.4	(a)	What are salient features of water soluble vitamins? Discuss the functions and human requirement of thiamin.	07
	(b)	Explain briefly glycolysis and comment on ATP generation in glycolysis. OR	07
Q.4	(a) (b)	Define mineral. Discuss the classification of mineral with the suitable examples. Explain the functions of water in human body.	07
Q.5	(a)	What do you understand by balanced diet? Write diet plan for adult person including basic food groups.	0'

	(b)	Calculate the calorific value of food product weighing 180 g and having the	04
		following composition.	
		Carbohydrate -60% , Protein -15% , Fat -8% , Water -15%	
	(c)	State the vitamin deficiency in the following health disorders	03
		1. Xerophthalmia 2. Scurvy 3. Pellagra	
		OR	
Q.5	(a)	Discuss the physiological functions of food.	07
	(b)	Explain briefly food supplementation and food fortification with suitable examples.	04
	(c)	Brief about remarkable properties of enzymes.	03
