Seat	No.:	Enrolment No						
	GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-IV(New) • EXAMINATION – WINTER 2016							
Subject Code:2141401 Date:18/11/201								
Sub Tim	Subject Name:Food Nutrition & Biochemistry  Fime: 02:30 PM to 05:00 PM  Instructions:  Total Marks: '							
		Attempt all questions.						
		Make suitable assumptions wherever necessary. Figures to the right indicate full marks.						
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Q.1		Do as directed.		14				
	1	Fats and oils are placed at the apex of Food Guide Pyramid. Justify.						
	2	Enlist the role of nutrients in human body.						
	3 4	State the pro-vitamin of Niacin.						
	5	Define biological value of protein.  Thiamin requirement is co-related with the calorific intake of an in	ndividual					
	J	Justify.	iai viadui.					
	6	State the most active form of riboflavin in human body.						
	7	Define Trans-fat.						
	8	Define apo-enzyme.						
	9	What do you understand by enzyme absolute specificity?						
	10	Enlist the factors affecting Recommended Daily Allowance (RDA).						
	11	What is white egg injury?						
	12 13	Digestion is referred as catabolic metabolism. Justify the statement.						
	14	Write the characteristics of soluble dietary fiber.  Define Body Mass Index.						
	17	Define Body Wass fidex.						
Q.2	(a)	Differentiate between complete protein and incomplete protein.		03				
	<b>(b)</b>	What are functions of bile secretion in human body?		04				
	(c)	Explain the characteristics, functions and deficiency symptoms of vit <b>OR</b>	tamin A.	07				
	(c)	What is utilization of nutrient? Explain Glycolysis metabolism in de ATP molecule generation.	etail with	07				
Q.3	(a)	What are guidelines for food fortification suggested by WHO?		03				
	<b>(b)</b>	What are excessive consumption consequences and food sources of f	fat?	04				
	(c)	Discuss properties, functions and deficiency symptoms of lactoflavin <b>OR</b>	n.	07				
Q.3	(a)	State the functions of folic acid in human nutrition.		03				
	<b>(b)</b>	Briefly explain the utilization of fatty acids in human body.	_	04				
	(c)	Draw a schematic representation of Nutrient wheel along with s consumption sizes. Discuss briefly each nutrient with significance sources.		07				

Q.4 (a) What is omega-3 fatty acid? State its role in human body.(b) Highlight on the effect of heat processing on protein.

 (c) Define essential amino acid. Explain protein digestion metabolism in human body.

OR

Q.4 (a) What are remarkable properties of enzymes?
(b) Explain the absorption process for cyanocobalamin.
(c) Calculate the calorific value of meal comprising of 150 g of wheat flour chapati, 75 g of potato, 50 g of rice, 30 g of pulse. The composition of each item is as follows.

Parameter Wheat Potato Rice Pulse

Parameter	Wheat	Potato	Rice	Pulse
	Chapati			
Carbohydrate	68%	60%	65%	45%
Protein	7%	2%	3%	18%
Fat	3%	Nil	1.5%	1%

Highlight on functions of water in human nutrition. Q.5 03 What do you understand by protein efficiency ratio and net protein 04 utilization? Discuss the classification and nomenclature systems for enzymes. **07** (c) OR Q.5 (a) What do you mean by Basal Metabolism Rate? Enlist the factors affecting on 03 BMR. (b) Calculate Quetelet Index for a person whose height and weight are 5 feet 7 04 inches and 72 kg respectively. Comment on obesity grade. (c) Discuss the advantages and limitations of vegetarian diet. Suggest the **07** remedial measures to overcome limitations of vegetarian diet.