Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2141408 **Date: 03/06/2017**

Subject Name: Fundamentals of Food Nutrition

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.**

Q.1 Do as directed. **14**

1. What do you understand by protein efficiency ratio?

2. ---------- is the only animal protein which is incomplete. (Fill in the blank)

3. Define nutrient.

4. Enlist the factors affecting human nutrition.

5. Write the two pro-vitamins of Vitamin E.

6. " Carbohydrate has sparing effect on protein". Justify the statement.

7. ---------- minerals are required in less than 100mg/day. (Fill in the blank)

8. Write the precursor of vitamin A.

9. Why carbohydrate is referred as energy currency in human body?

10. Thiamin requirement is correlated with calorific intake of an individual. Justify the statement.

11. Define trans-fat.

12. Fats, oils and sugars are placed at apex of Food guide pyramid. Justify.

13. List out RDA of protein and fat for adult.

14. What are excessive consumption consequences of carbohydrate?

Q.2 **(a)** Highlight on the functions of water in human nutrition. **03**

(b) Sonali is moderate working woman whose weight is 64 kg. Calculate the daily calorific requirement for her. **04**

(c) Calculate the energy value of the food product weighing 150 g and having the following consumption. **07**

Water	Carbohydrate	Protein	Fat
38%	35%	6%	23%

OR

(c) Discuss the classification of balanced diet on the basis of cost? **07**

Q.3 **(a)** Write the excessive consumption consequences of fat in human being. **03**

(b) Differentiate between fat soluble and water soluble vitamins. **04**

(c) Explain nutrient wheel with a well labeled diagrammatic representation. **07**

OR

Q.3 **(a)** Highlight the functions of saliva in human nutrition. **03**

(b) Differentiate between complete protein and incomplete protein. **04**

(c) Discuss Food guide pyramid with serving sizes of each food group. Also, draw a schematic representation for food guide pyramid. **07**

Q.4 **(a)** Write deficiency symptoms for the following minerals. **03**

i) Iodine ii) Iron iii) Sodium

(b) Briefly explain the classification of minerals based on the requirement. **04**

	(c)	Discuss the digestion of carbohydrate in human being.	**07**
		OR	
Q.4	**(a)**	State the important properties of cyanocobalamin.	**03**
	(b)	Briefly explain the absorption of fat in human being.	**04**
	(c)	Discuss the properties, functions and sources of folic acid.	**07**
Q.5	**(a)**	What are uses of RDA in practice?	**03**
	(b)	What are changes occurs during fat cooking?	**04**
	(c)	Define Food Fortification. What are guidelines for food fortification given by WHO/FAO? Enlist the advantages of food fortification.	**07**
		OR	
Q.5	**(a)**	What are symptoms of poor and good nutritional status?	**03**
	(b)	Write the deficient vitamin in the following disorders / diseases. i) Xero-ophthalmia iii) Rickets ii) Glossitis iv) Scurvy	**04**
	(c)	Discuss the functions of food in human life.	**07**