

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV(New) EXAMINATION – SUMMER 2016

Subject Code:2141408**Date:06/06/2016****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 (a) Do as directed. 14

- i) ----- is the most active form of vitamin A in human body.
- ii) Define nutrition.
- iii) Enlist the major functions of nutrients in human being.
- iv) List out the factors affecting human nutrition.
- v) State the pro-vitamin of vitamin D.
- vi) Mention rich food sources of folic acid.
- vii) Define RDA.
- viii) What do you mean by balanced diet?
- ix) Liver secretes ----- required for digestion of food.
- x) Glucose is ----- transported in human body.
- xi) Carbohydrate is referred as energy currency in human body. Justify.
- xii) Plant origin proteins are incomplete proteins. Justify.
- xiii) State the deficiency symptoms of vitamin thiamin.
- xiv) What are excessive consumption consequences of fat?

Q.2 (a) Define basal metabolism rate. Enlist the factors affecting BMR. 03**(b) Briefly explain the functions of food. 04****(c) Calculate the energy value of lunch consisting of 3 breads (75 g each), 40 g of rice, 30 g of pulses and 60 g of potato. The composition of each commodity is as given below. 07**

Nutrient	Bread	Rice	Pulse	Potato
Carbohydrate	61%	58%	28%	54%
Protein	7%	5%	18%	1%
Fat	2.5%	1%	1%	0 %

OR**(b) Draw a schematic representation of Food Guide Pyramid along with food groups serving sizes. 07****Q.3 (a) What are functions of vitamin C in human being? 03****(b) Jignesh is moderate working person whose weight is 68 kg. Calculate the daily calorific requirement for him. 04****(c) Draw a schematic representation of Nutrient wheel and discuss each nutrient with respect to requirement and food sources examples. 07**

OR

- Q.3** (a) Classify minerals on the basis of requirement in human body. **03**
(b) State the deficient vitamin in the following disorders/ diseases. **04**
- i) Beri - beri
 - ii) Xero-ophthalmia
 - iii) Ricket
 - iv) Scurvy

(c) Discuss the effect of cooking on carbohydrate. **07**

- Q.4** (a) Brief on the RDA recommendations for the consumption of carbohydrate, protein and fat. **03**

(b) What are functions of dietary fiber in human body? **04**

(c) Discuss the digestion of fat in human being. **07**

OR

- Q.4** (a) Enlist the advantages of food fortification. **03**

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

(c) Discuss the nutritional requirements for infant and adult age groups. **07**

- Q.5** (a) Highlight on the advantages of vegetarian diet in human. **03**

(b) What are precautions must be exercised to ensure healthy old age? **04**

(c) Differentiate between the followings. **07**

- i) Vitamin K and vitamin Riboflavin
- ii) Saliva and Pancreatic secretion

OR

- Q.5** (a) Briefly explain the factors affecting food digestion in human being. **03**

(b) Calculate the quetelet index of an individual whose weight and height are 76 kg and 5 feet 9 inches respectively. Comment on obesity grade. **04**

(c) Explain the classification of food on the basis of physiological function in human being. **07**