

Seat No.: _____

Enrolment No. _____

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**