

02023

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

December, 2010

MFN-004 : ADVANCE NUTRITION

Time : 3 hours

Maximum Marks : 100

Note : Answer five questions in all. Question No. 1 is compulsory.

1. (a) Differentiate between the following sets of 10 terms :

(i) Estimated Average Intake and Recommended Dietary Intake

(ii) Essential fatty acid and Trans fatty acid

(iii) Intracellular fluid - Extracellular fluid

(iv) Pre-formed Vitamin A and Pro - Vitamin A

(v) Prebiotic and Probiotic.

(b) List the condition caused by the deficiency of the following nutrients : 5

(i) Folate

(ii) Selenium

(iii) Iodine

(iv) Sodium

(v) Riboflavin

(c) List one important function of the following nutrient (s) compounds in our body. 5

(i) Niacin

(ii) Vitamin E

(iii) Vitamin B₁₂

(iv) Copper

(v) Phytoestrogens

2. (a) What are the components of energy expenditure ? Briefly describe the factors which influence energy expenditure. 2+8=10

(b) Explain the process of digestion and absorption of the following in our body

(i) Carbohydrate

(ii) Proteins

(iii) Fats.

4+3+3

3. (a) Give the ICMR recommended allowance for vitamin A for infants and children 4
- (b) Briefly describe the role of vitamin D in our body. 6
- (c) List the important micro minerals required by our body. Explain the nutritional role and relate them to the physiological functions and symptoms of inadequate intake of any Two micronutrient in our body. 2+4+4=10
4. (a) Describe the physiological changes occurring during pregnancy and list the nutrient needs (Recommended dietary Intakes) during pregnancy as given by ICMR and FAO / WHO / UNU. 6+4=10
- (b) Explain the common health / nutritional problems affecting infants and pre-scholers in our country. 10
5. Explain the following briefly : 5+5+5+5=20
- (a) Features which influence the nutrient needs of adolescent.
- (b) Nutritional requirement and dietary modifications in the diet of elderly .
- (c) Nutrient requirement during lactation.
- (d) Use of exchange list versus food composition table for more planning.

6. (a) What are ergogenic aids ? Present a critical analysis of their use and importance for training and competition for sports persons. 8
- (b) Briefly explain the factors which influence calcium absorption in human nutrition. 6
- (c) Which are the dietary factors with anti nutritional effects ? Explain the effect of any one factor briefly. 2+4
7. (a) What do you understand by the terms - "Carbohydrate", "Dietary Fibre" and "Resistant starch" ? Discuss their role in our body. 10
- (b) "Can we improve the quality of protein in our diet" Comment on the statement by giving appropriate justification. 6
- (c) Give the essential fatty acid requirements during : 2+2
- (i) Infancy
- (ii) Adulthood
8. Write short notes on *any four* of the following ;
- (i) Methods for studying the nutrient requirements. 5+5+5+5
- (ii) Factorial estimate of total energy expenditure.
- (iii) Role of pyridoxine (Vitamin B₆) in our body
- (iv) Major nutrient deficiencies and nutrient requirement during emergencies
- (v) Spare food systems - Type of food.