

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

02429

Term-End Examination

June, 2013

MFN-004 : ADVANCE NUTRITION

Time : 3 hours

Maximum Marks : 100

Note : *Attempt five questions in all. Question No. 1 is compulsory. All questions carry equal marks.*

1. (a) Define the following : 10
- (i) Thermic Effect of Feeding (TEF).
 - (ii) Safe Requirement
 - (iii) Protein Energy Ratio (NDP Cal%)
 - (iv) Carotenoids
 - (v) Cyanocobalamin
- (b) Fill in the blanks : 5
- (i) _____ is the coenzyme derivative of riboflavin.
 - (ii) Vitamin C is a powerful _____ because it can donate a hydrogen atom and form stable free radical.
 - (iii) The calcium phosphorous ratio of _____ should be maintained in adults for healthy bones.

- (iv) The iodine content of food varies because of the variation in the iodine content of _____.
- (v) Isoflavones, lignins are the main classes of _____.
- (c) Give one example for each of the following : **5**
- (i) National programme targeting adolescents.
- (ii) Risk factor for pregnancy.
- (iii) Ill effects of fluoride toxicity.
- (iv) Symptom of zinc deficiency.
- (v) Function of folate.
2. (a) How will you use the factorial method for estimating the energy expenditure for an adult ? Explain giving example and highlighting the various components. **10**
- (b) Briefly describe the various factors that are determinant of nutrient requirements. **10**
3. (a) Enumerate the significant properties of dietary fibre which lends to the physiological/metabolic role of fibre in our body. **10**
- (b) Based on the amino-acid make-up how will you classify proteins. Explain giving examples. Also enlist the measures you would adopt to improve protein quality of a diet. **5+5**

4. Explain the following briefly : 5+5+5+5
- (a) Role of vitamin A in visual perception
 - (b) Role of vitamin D in the mobilization of bone calcium and phosphorous.
 - (c) Role of vitamin E in the protection of polyunsaturated fatty acids.
 - (d) Role of pyridoxine in the conversion of tryptophan to niacin.
5. (a) Enlist the calcium and iron requirements (recommended dietary allowances) for a pregnant woman. 4
- (b) Enumerate the factors that influences the absorption of calcium and iron in the body. 10
- (c) What dietary considerations would you keep in mind while planning meals for pregnant woman ? 6
6. (a) "Stunting during childhood has serious implications". Justify the statement giving appropriate examples. 5
- (b) Enumerate the guidelines you would follow for planning a balanced diet for the elderly. 8
- (c) What is growth monitoring ? How are growth charts useful in growth monitoring ? Explain highlighting the uses of growth chart. 2+5
7. (a) Discuss the role of carbohydrates, proteins, water and electrolytes in the diet of a sports person. 3+3+3

- (b) What are the nutritional problems encountered during a calamity or an emergency situation ? Explain the nutritional management of a population (adult) during a calamity. **2+5**
- (c) Enlist the types of food recommended in space mission. **4**

8. Write short notes on **any four** of the following :

- (a) Dietary factors with anti - nutritional effects. **5+5+5+5**
- (b) Factors influencing our food choices.
- (c) Importance of human milk for infant growth and development.
- (d) Maternal nutritional status and its impact on foetus.
- (e) Role of thiamin in our body.
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