

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT) (M.Sc. DFSM)**

Term-End Examination

June, 2018

MFN-004 : ADVANCE NUTRITION

Time : 3 hours

Maximum Marks : 100

- Note :*
- (i) *Question No. 1 is compulsory.*
 - (ii) *Attempt five questions in all.*
 - (iii) *All questions carry equal marks.*

1. (a) Give one example for each of the following : 10
- (i) Predominant electrolyte in the Intracellular fluid
 - (ii) Precursor of Vitamin A
 - (iii) Function of Vitamin B₁₂
 - (iv) Deficiency of riboflavin
 - (v) Essential fatty acid
 - (vi) Soluble dietary fibre
 - (vii) Lifestyle classification with PAL value
 - (viii) Method of determination of protein/ amino acid content in foods
 - (ix) Clinical manifestation of Xerophthalmia
 - (x) Antioxidant nutrient

- (b) Mention any one criteria/parameter you will use for the assessment of the status of the following nutrients : **4**
- (i) Vitamin A
 - (ii) Iron
 - (iii) Vitamin D
 - (iv) Iodine
- (c) Differentiate between prebiotic and probiotic giving examples. **3**
- (d) What are functional foods ? Give examples. **3**
2. Explain the following briefly : **6+6+8**
- (a) Concept of human nutritional requirements.
 - (b) Components of total energy expenditure.
 - (c) Factors affecting energy expenditure.
3. (a) What do you understand by the term energy imbalance ? Briefly discuss the consequences of energy imbalance. **2+8**
- (b) Briefly explain why ORS always contain sodium chloride and glucose/sugar. **4**
 - (c) Enumerate the measures you would adopt to improve the nutritive value of plant proteins. **6**
4. (a) Describe the properties of fibre which contribute to its physiological role in our body. **10**
- (b) Explain the following in the context of fats and oils : **4+4+2**
 - (i) LDL is called as "Bad Cholesterol" and HDL as "Good Cholesterol".
 - (ii) Blending of oils for healthful gains.
 - (iii) Ratio of n-6/n-3 and PUFA/SFA in our diet.

5. (a) Water plays several key roles in our life processes. Justify the statement giving the functions of water. 5
- (b) Comment on the factors that affect bioavailability of carotenoids. 5
- (c) Explain the role of Vitamin D in mobilization of bone calcium and phosphorous. 5
- (d) Highlight the food sources and the bioavailability of niacin in our body. 5
6. (a) Describe the anti-oxidant role of Vitamin E and selenium in our body. 5+5
- (b) What is the effect of the following in our body ? 5+5
- (i) Polyphenols
- (ii) Protease Inhibitors
7. (a) Identify the determinants of poor pregnancy outcome. 5
- (b) Comment on the effect of malnutrition on lactation performance. 5
- (c) What points would you keep in mind while feeding 6-12 month infants ? 5
- (d) Enumerate the nutritional problems of adolescent. 5
8. Write short notes on **any four** of the following :
- (a) Dietary modifications in the diet of the elderly. 5+5+5+5
- (b) Energy, Carbohydrate and Protein demands of a sports person.
- (c) Nutritional requirement during emergencies.
- (d) Types of food included in space food system.
- (e) Nutritional requirement for high altitude.
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