

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

**Term-End Examination**

**February, 2021**

**MFN-004 : ADVANCE NUTRITION**

*Time : 3 hours*

*Maximum Marks : 100*

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- Note :** 1. Answer *five* questions in all.  
2. Question no. 1 is *compulsory*.  
3. All questions carry equal marks.
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1. (a) List the function(s) and food sources of the following nutrients in our body : 2×5
- (i) Vitamin A
  - (ii) Iron
  - (iii) Iodine
  - (iv) Zinc
  - (v) Pyridoxine
- (b) Differentiate between the following sets of terms, giving examples : 2×5
- (i) Good cholesterol – Bad cholesterol
  - (ii) Animal protein – Plant protein
  - (iii) Dietary fibre – Resistant starch
  - (iv) n-3 fatty acid – n-6 fatty acid
  - (v) Intracellular fluid – Extracellular fluid

2. (a) Define the following terms used in the context of nutrient requirements :  $2\frac{1}{2}+2\frac{1}{2}$
- (i) AMDR
- (ii) RDA
- (b) Name the agency providing RDA for the Indian population. What is the basis of formulating RDAs ?  $2+5$
- (c) Give the AMDR recommended for Indian population.  $3$
- (d) Briefly explain the important components of energy requirements.  $5$
3. Explain the following giving examples :  $5+5+5+5$
- (a) Transport and storage of fat in our body
- (b) Measures to improve the nutritive value of a typical cereal-based Indian diet
- (c) Toxicity of fat-soluble vitamins
- (d) Factors influencing the absorption of nutrients in our body
4. (a) Briefly describe the importance of human milk and complementary feeding among infants. Prepare a checklist of good infant feeding practices for young mothers.  $3+3+5$

- (b) Explain briefly the physiological changes occurring during pregnancy and how they influence the nutrient needs. Give the RDA for a woman in the third trimester of pregnancy. 6+3
5. (a) Describe the nutritional requirements for the following : 5+5
- A sportsperson engaged in a power event
  - An individual in cold environment
- (b) Give the nutrient requirement and the foods included in space food system. 5+5
6. (a) “Vitamin B<sub>12</sub>” deficiency is commonly seen in vegans.” Justify the statement and highlight the measures you would advocate to vegans to meet their Vitamin B<sub>12</sub> requirements. 5
- (b) Briefly describe the biological role of Vitamin K in our body. Present a list of foods rich in Vitamin K which you will include in your diet. 5+3
- (c) What are phytoestrogens ? Give the dietary sources of phytoestrogens and their physiological effect in our body. 4+3

7. (a) Define menu planning. Give the rationale for menu planning. 2+3
- (b) Define exchange list. What are the advantages of using exchange list in planning and calculating diets ? 2+3
- (c) What are the factors influencing the nutrient needs of adults ? Explain briefly, giving the RDA for adult man and woman. 10
8. Write short notes on any **four** of the following : 5+5+5+5
- (a) Common concerns/problems of preschool children.
- (b) Guidelines for planning diets for elderly.
- (c) Various techniques for measuring body composition.
- (d) Concept of gene expression and role of specific nutrients in regulating gene function.
- (e) Role of folate in human nutrition.
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