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MFN-004

**MASTER OF SCIENCE (DIETETICS
AND FOOD SERVICE
MANAGEMENT)
[M.SC. (DFSM)]**

Term-End Examination

June, 2025

MFN-004 : ADVANCE NUTRITION

Time : 3 Hours

Maximum Marks : 100

Note : (i) Q. No. 1 is compulsory.

(ii) Answer **five** questions in all.

(iii) All questions carry equal marks.

1. (a) Define the following : 2×5=10

(i) Estimated Average Intake

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- (ii) Resistant Starch
 - (iii) DIAAS
 - (iv) Essential fatty acids
 - (v) Pernicious anaemia
- (b) Give the nutrient requirement (EAR) for each of the following individuals as recommended by ICMR (2020) : 10
- (i) Adult Sedentary Women (Energy requirement)
 - (ii) Protein requirement of adult man heavy worker
 - (iii) Calcium intake of adolescent girl 16-18 years.
 - (iv) Iron need of pregnant women in third trimester.
 - (v) Vitamin A need of lactating women.

2. (a) Briefly discuss the various components of energy expenditure. 10
- (b) Describe briefly the properties and functions of dietary fibre in human nutrition. 10
3. Explain the following statements, giving examples : 5+5+5+5
- (a) Age, gender and body weight are the determinants of nutrient requirement.
- (b) Energy requirement of an infant is expressed as energy per kg body weight.
- (c) Mutual supplementation means to improve nutritive value of protein in the diet.
- (d) Fats are present as integral component in plant and animal foods.

4. Explain the role of the following in our body : 5+5+5+5

- (a) Pyridoxine in the conversion of tryptophan to niacin
- (b) Vitamin E in the protection of poly-unsaturated fatty acid from oxidative damage.
- (c) Vitamin K in maintenance of normal blood coagulation.
- (d) Folate in reducing risk of heart disease and stroke.

5. (a) Enumerate the methods/measures you would adopt to assess the status of the following nutrients in a population group : 5+5

- (i) Iron
- (ii) Vitamin A

- (b) Present a review on factors affecting iron absorption in our diet. Substantiate your answer giving examples. 5
- (c) Give the significance of electrolytes in maintaining fluid balance in our body. 5
6. (a) What do you understand by the term 'Prebiotics' ? Give the dietary sources and their health affects. 5
- (b) Describe the importance of nutrition in the context of the following : 4+4
- (i) Foetal growth and development
- (ii) Successful lactation
- (c) Present the guidelines and/or feeding schedule for the following : 3+4
- (i) Infant 0-6 months of age
- (ii) Infant 7-12 months of age

7. (a) Enumerate the common nutritional problems of adolescents. Suggest measures you would adopt to overcome them. 7

(b) What dietary modifications would you suggest for providing nutritious meals to elderly ? 7

(c) How would you classify body composition ? Present any *one* technique for measuring body composition. 3+3

8. Write short notes on any *four* of the following : 5+5+5+5

(a) Nutritional requirement of a sportsperson engaged in power event

- (b) Nutrient need in high altitude
- (c) Common nutritional deficiencies encountered during calamity or emergencies and measures to overcome them
- (d) Special food for space mission
- (e) Health benefits of polyphenols

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