

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

**Term-End Examination
December, 2024**

MEN-004 : ADVANCE NUTRITION

Time : Three Hours

Maximum Marks : 100

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

1. (a) List any *three* methods you may advocate for estimating the nutrient requirements. 3
- (b) Differentiate between saturated fatty acids and trans fatty acids highlighting the recommendations regarding these fatty acids. 4
- (c) What is Pre-formed Vitamin A and Pro-Vitamin A ? Substantiate your answer with suitable examples. 3

- (d) Enlist the condition caused by the deficiency of the following nutrients in our diet : 3

(i) Selenium

(ii) Vitamin B₁₂

(iii) Chromium

- (e) Give *one* important function of the following nutrients in our body. Also give the RDA of these nutrients for yourself :

2+2+2

(i) Niacin

(ii) Vitamin C

(iii) Iodine

- (f) What is ariboflavinosis ? 1

2. (a) Present a brief review on the components of energy expenditure. 6
- (b) Briefly explain the effect of energy imbalance in our body. 6
- (c) Differentiate between dietary fibre and resistant starch, highlighting their potential health benefits. 8

3. (a) Comment on the quality of protein in the cereal-based Indian diets, giving suitable examples. 6
- (b) Briefly explain the digestion and absorption of proteins in our body. 7
- (c) What advice would you give to the general population regarding the choice of fats and oils they should select for healthy heart ? 7
4. (a) What are fat-soluble vitamins ? Give the functions and the RDA of any *one* fat-soluble vitamin for the general population. 2+6+4
- (b) Enumerate the health benefits of the following : 4+4
- (i) Phytoestrogens
- (ii) Polyphenols
5. Explain the following briefly : 5+5+5+5
- (a) Major fluid compartments of the body
- (b) Co-enzyme activity of thiamine
- (c) Role of zinc in our body
- (d) Role of pyridoxine in the conversion of tryptophan to niacin

6. (a) Comment on the physiological changes characteristic of pregnancy and how they influence the nutrient requirement. Present the nutrient requirement (energy, protein, calcium, iron) for a pregnant woman in the third trimester of pregnancy.
6+4
- (b) Explain the features/changes occurring during adolescence and how they influence the nutrient needs. Which nutrients would you emphasize in the diet of an adolescent girl and why ?
4+6
7. (a) Briefly explain the role of ergogenic aids in sports performance, giving examples. 7
- (b) Elaborate on the nutritional problems encountered during a calamity. Present handy guidelines for nutritional management of population groups during calamity.
4+4
- (c) Enlist the types of foods recommended in a space mission. 5

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

5+5+5+5

- (a) Factors influencing our food choices
- (b) Breast-feeding is the best food for an infant
- (c) Nutritional problems of preschoolers
- (d) Growth chart and its interpretation and action
- (e) Techniques for measuring body composition

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