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MFN-004

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

M. SC. (DFSM)

Term-End Examination

December, 2023

MFN-004 : ADVANCE NUTRITION

Time : 3 Hours

Maximum Marks : 100

Note : (i) Answer **five** questions in all.

(ii) Question No. 1 is compulsory.

(iii) All questions carry equal marks.

1. (a) Explain the relationship between the following sets of terms : 10

(i) Rhodopsin—Visual cycle

(ii) Protein quality—Mutual supplementation

(iii) Water Imbalance—Oedema

(iv) Vitamin E—PUFA

(v) Vegan—Vitamin B₁₂

P. T. O.

- (b) Indicate any *two* major functions and *two* food sources of each of the following in our diet : 10
- (i) Thiamine
 - (ii) Vitamin C
 - (iii) Zinc
 - (iv) Prebiotics
 - (v) Phytoestrogens
2. (a) Discuss the role of dietary fibre in cardiovascular diseases. 5
- (b) Explain the concept of recommended dietary intake. 5
- (c) How are fats and oils digested absorbed and transported in our body ? 5
- (d) What are the functions of water in our body ? 5
3. (a) What is Vitamin K cycle ? 5
- (b) List *three* factors each that affect the bioavailability of the following nutrients : 3+3+3
- (i) Folate
 - (ii) Calcium
 - (iii) Carotenoids
- (c) What are electrolytes ? Explain their functions in our body. 6

4. (a) What are functional foods ? Enumerate their significance in our diet. 5
- (b) Explain briefly the functions and assessment of riboflavin status in our body. 5
- (c) Comment on the ill-effects of the deficiency of the following nutrients in our body : 5+5
- (i) Zinc
- (ii) Selenium
5. (a) What is the best time to introduce complementary feeding among infants ? Present the guidelines you would advocate to a mother regarding good infants and young child feeding practices. 2+8
- (b) What dietary guidelines you would advocate to lactating women for successful lactation ? Explain giving the recommended dietary allowances and the points you will keep in mind while planning meals for them. 10
6. (a) What are the factors that influence nutrient need of adults ? Explain giving examples. 10
- (b) Explain the concept of body composition highlighting the different components and techniques for measuring body composition. 10

7. (a) What nutrient requirement and food intake pattern would you recommend for individuals living in extreme environment ? 7
- (b) What is a pre-event meal ? Discuss its relevance in the context of nutrition for a sports person. 7
- (c) What do you understand by the terms Calamity/Emergency ? What nutrition guidelines would you recommend during emergency ? 3+3
8. Write short notes on any *four* of the following : 5+5+5+5
- (a) Guidelines for planning balanced diets for elderly
- (b) Types of food used in space
- (c) Methods used for assessment of iron status
- (d) Common concerns during pregnancy
- (e) Health benefits of polyphenols