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MFN-004

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

Term-End Examination

June, 2026

MFN-004 : ADVANCE NUTRITION

Time : 3 Hours

Maximum Marks : 100

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

1. (a) Define the following in the context of
energy requirements : $(4 \times 2 \frac{1}{2}) = 10$
(i) Reference Woman

(ii) Metabolic Response to Food

(iii) BMR

(iv) PAL

(b) Give *two* examples for each of the following : 10

(i) Essential fatty acid

(ii) Soluble dietary fiber

(iii) Essential Amino acid

(iv) Insoluble dietary fiber

(v) Mutual Supplementation

2. Explain the following briefly :

(a) Methods for studying the nutrient requirements. 8

(b) Goals for setting RDAs. 4

(c) Factors affecting the energy expended in physical activity. 8

3. (a) Define the following and highlight their role as an important index of protein quality : 3+3
- (i) Digestible Indispensable Amino Acid Score (DIAAS)
- (ii) NDP Cal %
- (b) Briefly discuss the physiological and health benefits of fiber in our diet. 8
- (c) Differentiate between visible and invisible fats, giving examples. 6
4. (a) Present the recommendations given by ICMR (2020) for choosing cooking oil. 6
- (b) Briefly describe the disturbances in fluid balance highlighting its consequences. 6

- (c) Enumerate the criteria you will use for assessment of Vitamin A status among individuals. 8
5. Briefly discuss the functions of the following in our body : 10+10
- (a) Vitamin D and Calcium
- (b) Folate and Vitamin B12
6. Explain the following briefly giving examples :
- (a) Factors affecting Iron absorption. 5
- (b) Deficiency and excess of electrolytes and their consequences. 5
- (c) Functions of Pyridoxine in our body. 5
- (d) Role of selenium in our diet and consequences of its deficiency in our body. 5

7. (a) Give the handy nutritional guidelines you would recommend for adolescents. 5

(b) Highlight the nutritional problems of infants and preschoolers. 5

(c) How do you physiological changes influence the nutrient needs of the following ? Highlight the physiological changes and the RDA. 5+5

(i) Pregnant women

(ii) Elderly men

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

(a) Nutritional needs of a sportsperson

- (b) Nutritional management in cold altitude
- (c) Space food and the special considerations
- (d) Nutritional management in emergencies
- (e) Guidelines for Infants and Young Children Feeding Practices

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