

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

**Term-End Examination**

**June, 2022**

**MFN-004 : ADVANCE NUTRITION**

*Time : 3 hours*

*Maximum Marks : 100*

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- Note :** 1. Question no. 1 is **compulsory**.  
2. Answer **five** questions in all.  
3. All questions carry equal marks.
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1. (a) What do you understand by the term Bioavailability ? Explain in 2 – 3 sentences, giving an example. 3
- (b) List the goals behind estimating RDAs. 3
- (c) Give any three methods that you can use for estimating energy expenditure and requirements. 3
- (d) Give the classification of proteins based on amino acid content. 3
- (e) What are Trans Fatty Acids (TFA) ? Give their food sources and permissible limits of TFA in foods. 3

- (f) List the consequences of disturbances in fluid balance. 2
- (g) Present the WHO classification for assessment of Vitamin A status. 3
- 2.** Briefly explain the following, giving examples. 5+5+5+5
- (a) Age, sex as a determinant of nutrient requirement
- (b) Factors affecting Basal Metabolic Rate (BMR)
- (c) ORS always contains sodium chloride and glucose/sugar
- (d) Digestion of proteins in our body
- 3.** (a) What is dietary fibre ? Give the recommended dietary intake of dietary fibre for adults. What are the potential health benefits of dietary fibre ? 4+6
- (b) Enumerate the different methods available for determination of protein quality. 10
- 4.** (a) Present the recommendations put forth by ICMR regarding the type of visible fat/cooking oil you need to include in your diet. 8
- (b) Briefly explain the functions of the following nutrients in our body : 6+6
- (i) Vitamin A
- (ii) Vitamin E

5. (a) Give the functions, RDA for adult sedentary women and criteria for assessing the status of the following in the body : 6+6
- (i) Riboflavin
  - (ii) Folic acid
- (b) Briefly discuss the factors affecting calcium absorption. 8
6. (a) Enlist the RDA of iron for pregnant women, lactating women and an adolescent 18-year-old girl. What are the consequences of iron deficiency and what methods can you use to assess iron status ? 8
- (b) Enumerate the importance of selenium in the diet of humans. What are the consequences of selenium deficiency ? 6
- (c) Briefly highlight the health benefits of polyphenols in our diet. 6
7. (a) Briefly explain the effect of pre-pregnancy weight, height, weight gain during pregnancy and maternal diet/intake on foetal outcome. 10
- (b) Enumerate the common nutritional problems of the following : 5+5
- (i) Preschoolers
  - (ii) Adolescents

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

- (a) Guidelines for planning diet for elderly
  - (b) Pre-event meal and its importance in sports nutrition
  - (c) Nutritional requirement at high altitude
  - (d) Types of foods included in space food system
  - (e) Major nutritional deficiency diseases in emergencies
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