

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

Term-End Examination

00332

December, 2018

MFN-004 : ADVANCE NUTRITION

Time : 3 hours

Maximum Marks : 100

Note :

1. *Answer five questions in all.*
2. *Question no. 1 is compulsory.*
3. *All questions carry equal marks.*

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1. (a) List any four methods we can use for measuring body composition. 2
 - (b) Name the two hormones which instigate the lactation process. 2
 - (c) Indicate the pre-pregnancy weight and height which should be considered as high risk for pregnancy. 2
 - (d) Give two dietary sources of prebiotics in our diet. 2

- (e) Name the disease symptom caused by the deficiency of the following nutrients : 5
- (i) Selenium
 - (ii) Potassium
 - (iii) Calcium
 - (iv) Vitamin B₁₂
 - (v) Niacin
- (f) Name the different forms of Vitamin A useful for human health. 3
- (g) Define the following terms in the context of fluid compartments of the body, giving appropriate examples : 4
- (i) Transcellular fluid
 - (ii) Extracellular fluid
2. (a) Briefly discuss the factors that influence and/or determine the human nutrition requirements. 12
- (b) What do you understand by the following terminologies used in the context of nutritional requirements ? 8
- (i) Estimated Average Intake (EAR)
 - (ii) Recommended Dietary Allowances (RDA)
 - (iii) Safe Requirement
 - (iv) Upper Level (UL)

3. (a) Briefly describe the components of total energy expenditure. 12
- (b) Present the WHO classification of height status in adults and children according to Body Mass Index. 8
4. (a) Comment on the physiological and potential health benefits of fibre in our diet. 10
- (b) Explain briefly the following, giving examples : 5+5
- (i) Protein requirement is influenced by age
- (ii) Considerations to be kept in mind while choosing fats and oils in our diet
5. (a) Explain the function of Vitamin A in visual perception. 5
- (b) Elaborate on the role of Vitamin K in blood coagulation. 5
- (c) Give the key metabolic role of thiamine in the cellular production of energy. 5
- (d) What is the role of folate in the DNA biosynthesis and methylation cycle ? Explain briefly. 5

6. (a) Comment on the dietary factors affecting iron absorption. 6
- (b) What are polyphenols ? Enumerate their health benefits. 8
- (c) What are the effects of protease inhibitors and amylase inhibitors on human health ? 6
7. (a) Give the nutritional needs during pregnancy. Critically review how maternal dietary intake will influence foetal outcome. 7+3
- (b) Enumerate the various physiological changes occurring during the period of infancy. 5
- (c) Enumerate five points you would keep in mind while feeding adolescents. 5
8. Write short notes on any *four* of the following : 5+5+5+5
- (a) Ergogenic aids for training and competition
- (b) Changes in body composition during space mission
- (c) Major nutritional deficiency diseases in emergencies
- (d) Dietary modifications in the diet of the elderly
- (e) Nutritional composition and importance of breast milk