

02223

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

Term-End Examination

June, 2016

MFN-004 : ADVANCE NUTRITION

Time : 3 hours

Maximum Marks : 100

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- Note :** (i) *Attempt five questions in all.*
(ii) *Question No. 1 is compulsory.*
(iii) *All questions carry equal marks.*
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1. (a) (i) Name the active forms of niacin which function as co-factors for various co-enzymes in our body. 1
- (ii) List the deficiency symptoms of riboflavin deficiency. 2
- (iii) Mention (in points form) the key functions of electrolytes. 2
- (iv) Name the nutrient linked with the following disease conditions : 2
- (A) Wilson disease
- (B) Keshan's disease
- (v) List the beneficial effects of prebiotics 3
- (b) Differentiate between the following sets of terms : 10
- (i) Body Mass Index (BMI) and Basal Metabolic Rate (BMR)
- (ii) Chemical Score and NDP cal %
- (iii) Glycemic Index and Glycemic Load
- (iv) Dietary Fibre and Resistant Starch
- (v) Bad Cholesterol and Good Cholesterol

2. (a) Enumerate the different components of energy requirement for an adult. 6
- (b) Give the different lifestyle classifications with their PAL value. 6
- (c) What are recommended dietary allowances ? How do they differ from dietary reference intakes ? 8
3. (a) Briefly describe the physiological effects of fibre in our body, giving appropriate examples. 10
- (b) What are the recommendations put forth by ICMR for choosing oils/fats for cooking in the context of n-3 and n-6 fatty acid ratio, PUFA, MUFA and SFA ratio ? 7
- (c) What measures will you advocate to improve the nutritive value of proteins from plant sources in the diet ? 3
4. Explain the following briefly : 5+5+5+5
- (a) Consequences of disturbances in fluid balance.
- (b) Bioavailability of vitamin A from foods.
- (c) Role of vitamin D in mobilization of bone calcium and phosphorous.
- (d) Biological role of vitamin K in the blood coagulation.
5. (a) What are polyphenols ? Discuss their health benefits. 8
- (b) Discuss the role of selenium and zinc in human nutrition. 8
- (c) Elaborate on the factors which influence calcium absorption. 4

6. (a) Briefly discuss the consequences of maternal malnutrition on foetal outcome and lactation performance. 5+5
- (b) Discuss the nutrient need and diet of adolescent girls for good health. 10
7. (a) What are the different types of food included in the space food system ? Explain briefly. 6
- (b) What advice would you give to a sports person regarding : 5+5
- A pre-event meal
 - prevention of dehydration during event/exercise
- (c) List the immediate and long term adjustments in the body to altitude hypoxia. 4
8. Write short notes on any four of the following : 5+5+5+5
- (a) Resistant starch
 - (b) Factors affecting food choice
 - (c) Modifications in the diet of the elderly
 - (d) Nutrient needs of infants
 - (e) Nutrition at high altitude
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