

00325

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

Term-End Examination

June, 2015

MFN-004 : ADVANCE NUTRITION

Time : 3 hours

Maximum Marks : 100

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- Note :** (i) *Question No. 1 is compulsory.*
(ii) *Answer five questions in all.*
(iii) *All questions carry equal marks.*
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1. (a) Define or explain the following in 2 - 3 lines each : **12**
- (i) Estimated Average Intake (EAR)
 - (ii) Apoptosis
 - (iii) Chemical score
 - (iv) Pernicious anemia
 - (v) Lignans
 - (vi) Low birth weight infants

- (b) Fill in the blanks : 4
- (i) Increase in energy expenditure in cold climate results in _____ in carbohydrate oxidation.
 - (ii) The losses of nutrient that occur when an individual is put on a diet free of that nutrient is termed _____ .
 - (iii) In 1747 James Lind first identified _____ by eliminating oranges and lemon in the diets of sailors.
 - (iv) The hydrolytic enzymes involved in the digestion of carbohydrate is _____ .
- (c) List two best sources of the following : 4
- (i) Iron
 - (ii) Vitamin A
2. Briefly explain the following : 5+5+5+5
- (a) Concept of bioavailability of nutrients.
 - (b) Thermic effect of food.
 - (c) Regulation of blood glucose concentration.
 - (d) Resistant starch.
3. (a) Explain the process of digestion and absorption of proteins. 12
- (b) How will you estimate the protein quality ? 8
Briefly explain any one method.

4. (a) What are saturated fatty acids, non saturated fatty acids and poly-unsaturated fatty acids ? Explain giving suitable examples of each. 12
- (b) Briefly comment on the requirements of fats and oils for an adult. 4
- (c) Describe the process of regulation of water balance in the body. 4
5. Explain the nutritional and biochemical role of the following minerals in human nutrition. Relate these to their deficiency symptoms. 10+10
- (a) Iodine
- (b) Zinc
6. Comment on the following statements : 5+5+5+5
- (a) "Pregnancy - A critical stage in the life cycle".
- (b) "Breast feeding is beneficial for infant's growth and development".
- (c) "Stunting during childhood has serious implications".
- (d) "Obesity in childhood and adolescence is of special concern to nutritionists today".
7. (a) Explain the basic principles of sports nutrition. Describe any two tests used for measurement of body composition. 10
- (b) Discuss the nutritional requirements for : 5+5
- (i) Space mission
- (ii) High Altitude

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

- (a) Gene expression process 5+5+5+5
 - (b) Dietary modifications in the diet of elderly
 - (c) Growth monitoring
 - (d) Health benefits of polyphenols
 - (e) Methods of assessment of iron status
 - (f) Role of riboflavin in human metabolic processes.
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