

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

December, 2014

MFN-004 : ADVANCE NUTRITION

Time : 3 hours

Maximum Marks : 100

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

1. (a) Differentiate between the following sets of terms : 10
- (i) Probiotics and Prebiotics.
 - (ii) Exchange list and food composition table.
 - (iii) Two compartment model and multi-compartment model (for measuring body composition).
 - (iv) Intracellular fluid and Extracellular fluid.
 - (v) Biological value and Chemical score (methods for evaluation of protein quality).

- (b) Match the items in Column A with the items in Column B. 10

Column A		Column B	
(a)	Moon face	(i)	Mottling
(b)	Ketosis	(ii)	Severe underweight
(c)	RDA	(iii)	Gums and Musilage
(d)	Total Energy Expenditure (TEE)	(iv)	Kwashiorkar
(e)	BMI<16.0	(v)	Impaired glucose tolerance
(f)	Dietary Fibre	(vi)	EAR + 2SD
(g)	Keshan disease	(vii)	Diarrhoeal disease
(h)	Zinc supplementation	(viii)	Zinc deficiency
(i)	Chromium deficiency	(ix)	Moderate underweight
(j)	Fluoride	(x)	Selenium deficiency
		(xi)	PAL × BMR
		(xii)	Diabetes

2. (a) Give the WHO classification you will use for assessing : 6
- (i) Weight status in children based on percentile curves for BMI-for-Age.
 - (ii) Chronic energy deficiency and/or underweight in adults.
- (b) Discuss the effect of dietary fibre on the absorption of nutrients. 6
- (c) Enumerate the measures we can adopt to improve the nutritive value of proteins (or the quality of proteins in our diet). 8

3. (a) What are the major determinants of nutrient requirement ? Explain briefly. 7
- (b) Explain the components of energy requirement. 7
- (c) "Nature of fatty acids present in fats determine the chemical and biological significance of lipids". Comment on the statement highlighting the categories of fatty acids important from nutritional stand point. 6
4. (a) List the different forms of vitamin A and their significance to human health. 2+5
- (b) Discuss the role of vitamin D in mobilization of calcium and phosphorous in our body. 5
- (c) Highlight the role of pyridoxine in our body. 4
- (d) What is the significance of folate in the diet of a pregnant woman ? 4
5. (a) What are electrolytes ? Enumerate their functions in our body. 2+5
- (b) What are the factors which influence iron absorption ? 7
- (c) Briefly explain the metabolic role of selenium in our body. 6
6. (a) Comment on the dietary factors with anti-nutritional effects which effect human health. 10

- (b) Briefly discuss the dietary recommendations for energy protein, carbohydrates, fats and micronutrients for sports and exercise. **10**
7. (a) Discuss the effect of maternal dietary intake and maternal anthropometric measurements on foetal outcome. **10**
- (b) Give the recommended dietary allowances of various nutrients for infants. Comment on the infant feeding practices you would advocate to a mother linking it with the nutritional recommendations. **5+5**
8. Write short notes on **any four** of the following :
- (a) Nutritional requirement for high altitude.
- (b) Nutritional recommendations for space flight. **5+5+5+5**
- (c) Physiological changes and their impact on dietary intake in elderly.
- (d) Growth monitoring a tool to assess nutritional status of children.
- (e) Diet and dietary patterns specific to adolescents.
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