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

Term-End Examination

December, 2013

MFN-004 : ADVANCE NUTRITION

Time : 3 hours

Maximum Marks : 100

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

1. (a) Indicate any two major functions and two food sources of each of the following in our body. 10
- (i) Riboflavin
 - (ii) Vitamin C
 - (iii) Vitamin K
 - (iv) Selenium
 - (v) Vitamin B₁₂
- (b) Explain the relationship between the following sets of terms. 10
- (i) Rhodopsin – Visual cycle
 - (ii) Dietary fibre – Cardiovascular disease
 - (iii) Protein quality – Mutual supplementation
 - (iv) Exchange list – Menu planning
 - (v) Pre pregnancy weight and height – Foetal Outcome

2. (a) Enumerate the different components of total energy expenditure in a child. 8
- (b) What are the two major problems linked with energy imbalance ? Give the classification(s) you would use to identify individuals with these two conditions. 2+5
- (c) Explain the concept of dietary reference intake. 5
3. (a) Classify the fatty acids we obtain from our diet. Discuss their relevance from the nutritional standpoint. 8
- (b) Describe the various functions of water in our body. 7
- (c) Briefly explain the process of digestion of proteins in our body. 5
4. (a) List five factors each that affect the bioavailability of the following nutrients in our body : 3+3+3
- Carotenoids
 - Calcium
 - Iron
- (b) What are electrolytes ? Explain their key functions in our body. 2+5
- (c) What are functional foods ? Enumerate their significance in our diet. 4

5. (a) "Human milk is the best food for the baby". 6
Discuss the statement with reference to composition of milk.
- (b) (i) Present the recommended dietary 3+3
intakes for a lactating woman who plans to feed her baby for one year after birth. (Give the requirement for energy, protein and three other important nutrients).
- (ii) What dietary considerations you 8
would keep in mind while planning meals for this lactating woman ? Explain briefly.
6. (a) Give the nutritional guidelines you would 10
advocate to develop good eating habits and good health among older school children and adolescents.
- (b) "The nutrient requirement for adults are 10
influenced by age, sex and activity level". Justify the statement giving appropriate examples.
7. (a) Explain the concept of body composition 6
highlighting the different components and techniques for measuring body composition.
- (b) Discuss the importance of the pre-exercise 6
or pre-event meal in the context of nutrition for a sports person.

- (c) What are the changes in body composition linked with space mission ? How do they influence the nutrient needs ? 4+4

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

- (a) Process of give expression 5+5+5+5
- (b) Handy tips related to complementary feeding of infants
- (c) Health benefits of polyphenols
- (d) Methods used for assessment of iron status
- (e) Role and deficiency of folate in our body
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