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MFN-004

00355

MASTER OF SCIENCE (DIETETICS AND FOOD SERVICE MANAGEMENT)

Term-End Examination

June, 2011

MFN-004 : ADVANCE NUTRITION

Time : 3 hours *Maximum Marks : 100*

Note : *Attempt five questions in all.* ***Question No. 1*** *is* ***compulsory.***

1. (a) Fill in the blanks : **10**

(i) _____ losses occur when an individual is put on a diet free of any particular nutrient.

(ii) A PAL value of 1.80 is indicative of _____ active life style.

(iii) The hydrolytic enzymes involved in the digestion of carbohydrates are collectively called _____.

(iv) _____ acid is an example of mono saturated fatty acids.

(v) _____ is the predominant electrolyte in the ECF.

(vi) The daily requirement of vitamin A during pregnancy is _____ mcg.

(vii) Hapocorrin is a _____ binding protein.

(viii) In thyroid hormone deficiency, the BMR is _____.

(ix) Expansion of blood volume during pregnancy results in _____.

(x) Spotty clarifying bones that fracture spontaneously is called _____.

(b) Define/Explain the following is 2-3 lines each : 2+2+2+2+2

(i) Reference woman.

(ii) Peptides

(iii) Wernicke - Korsakoffs syndrome

(iv) Skeletal fluorosis

(v) Bifidogenic Effect of Fructans

2. Explain in short the following : 5+5+5+5

(a) History of identification of food factors and discovery of water-soluble vitamins.

(b) Methods of studying the nutrient requirements.

(c) Factors affecting energy expenditure and requirement.

(d) Effects of energy imbalance.

3. (a) How is blood glucose concentration regulated in the body ? Briefly explain the mechanisms involved in it. 6

(b) "The structural make up of fibre influences its properties which further affects the physiologic and metabolic roles" comment on the statement. 8

(c) Define the term "Glycemia Index of Foods". Explain the factors affecting GI of foods. 6

4. (a) Enumerate the methods of determination of proteins and amino acid content in foods. Describe any two methods in detail. 8

(b) Give a brief over view of protein deficiency in human population. 6

(c) Classify lipids, giving examples. 6

5. (a) How is vitamin A absorbed, transported, utilized and stored in our body ? Explain. 10

(b) Explain the synthesis of vitamin D_3 From its provitamin. Describe the interrelationship of vitamin D with other nutrients. 10

6. Explain briefly the following : 5+5+5+5

(a) Metabolism of iron in the body

(b) Functions of zinc.

(c) Functions and toxicity of fluorine

(d) Non-nutrient functional foods.

7. (a) "Maternal malnutrition has deleterious effects on both mother and the offspring" Critically discuss the statement. 8

(b) Describe the physical and physiological changes that occur during growth from infancy to per school years. 6

(c) Which nutrients would you emphasize in the diets of adolescent girls and why. 6

8. Write short notes on ***any four*** of the following : **4x5=20**

(a) Nutrient requirement and food intake pattern for people living in high altitudes.

(b) Functions and bioavailability of riboflavin.

(c) Regulation of water balance in the body.

(d) Functions of vitamin K.

(e) Resistant starch.

(f) Physiological changes associated with ageing.