

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

Term-End Examination, 2019

MFN-004 : ADVANCE NUTRITION

Time : 3 Hours]

[Maximum Marks : 100

Note : Question no. 1 is **compulsory**. Answer **five** questions in all. Each question carries equal marks.

1. (a) Fill-in the blanks : [5]
- (i) For infants and children diet with an NDP Cal. % of _____ would be adequate to maintain growth.
- (ii) Sodium is the predominant electrolyte in the _____ fluid and potassium in the _____ fluid.
- (iii) The ICMR recommended intakes for iron are based on iron absorption of _____ % in women and adolescent girls.



- (iv) RDA for thiamine as recommended by ICMR for adults is _____mg/1000 kcal.
- (v) Dental fluorosis is characterized by browning and pitting of teeth is known as_____.
- (b) State true or false, correct the false statement : [5]
- (i) Recommended dietary intake is equal to the estimated average intake plus 35D requirement.
- (ii) Basal metabolic rate represent 20 percent of the total daily energy expenditure.
- (iii) Dietary fibre is the edible part of plants that are digested and absorbed in the human small intestine.
- (iv) Alpha linolenic acid (ALA) can be converted to eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).
- (v) Retinol is converted to vitamin A in the body and is called provitamin A.

(c) Explain the following in 2-3 sentences each : [10]

(i) Calcium homeostasis

(ii) Lactogenesis

(iii) Chemical score

(iv) Pre-event meal

(v) Food groups

2. (a) What are complementary foods ? What points / principles you will keep in mind while preparing complementary foods ? [2+6]

(b) Explain the process of digestion and absorption of carbohydrates, proteins and fats in our body. [4+4+4]

3. (a) Give the nutritional role / physiological functions, symptoms of inadequate intake and ICMR recommended nutrient intake for the following in adults : [6+6+6]

(i) Iron

(ii) Riboflavin

(iii) Vitamin A

(b) Present the energy intake as recommended by ICMR for pregnancy period. [2]

4. Explain the following briefly : [5+5+5+5]

(a) Factors that influence nutrient need of adolescents.

(b) Nutrient need during lactation

(c) Use of exchange list in meal planning

(d) Role of fibre in disease prevention

5. (a) What are the dietary factors with anti-nutritional effect ? Explain briefly giving examples. [10]

(b) Establish the link between free radicals and antioxidants giving appropriate examples. [5]

(c) Enumerate the factors that influence calcium absorption in human nutrition. [5]

6. (a) What do you understand by the factorial estimate of total energy expenditure ? Explain briefly. [8]

- (b) What are essential fatty acids ? Give the requirement for essential fatty acids for adults.[5]
- (c) "Quality of protein in a typical vegetarian diet is poor". Comment on the statement giving appropriate justifications and measure to improve protein quality. [7]
7. (a) Comment on the nutrient requirement and food intake pattern during : [7+7]
- (i) Emergencies
- (ii) Astronauts in space mission
- (b). Briefly discuss the techniques you will use for measuring body composition. [6]
8. Write short notes on **any four** of the following : [5+5+5+5]
- (a) Weight gain during pregnancy and its consequences.
- (b) Co-enzyme activity of niacin
- (c) Major fluid compartments of the body.

- (d) WHO classification to assess weight status of adults and children.
- (e) Health benefits of polyphenol.

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