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| Name: | |  | |
| Enrolment No: | | | |
| UPES End Semester Examination, December 2024 | | | |
| Course: Human Nutrition Program: MSc Nutrition and Dietetics Course Code: HSND7003 | | Semester : I Duration : 3 Hours Max. Marks: 100 | |
| Instructions: Read all the questions carefully. | | | |
| S. No. | Section A | Marks | COs |
| | Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks) | | |
| Q 1 | What is malnutrition? | 1.5 | CO1 |
| Q 2 | What do you understand by protein sparing action of carbohydrates? | 1.5 | CO2 |
| Q 3 | State one difference between essential and non-essential fatty acids. | 1.5 | CO3 |
| Q 4 | Why is milk intake not recommended during fever? | 1.5 | CO2 |
| Q 5 | List two differences between saturated and unsaturated fats. | 1.5 | CO3 |
| Q 6 | What is dark adaptation time? | 1.5 | CO4 |
| Q 7 | Why is vitamin K deficiency more common in infants? | 1.5 | CO4 |
| Q 8 | What is the role of vitamin C in bone health? | 1.5 | CO2 |
| Q 9 | State two significant differences between plant protein and animal protein. | 1.5 | CO3 |
| Q 10 | Highlight the eye-related symptoms of vitamin A deficiency. | 1.5 | CO2 |
| Q 11 | Name the coenzymes of: a. Thiamin b. Riboflavin c. Niacin | 1.5 | CO1 |
| Q 12 | Identify the clinical signs and symptoms when someone suffers from riboflavin deficiency? | 1.5 | CO3 |
| Q 13 | What is the recommended dietary intake of protein for athletes engaged in intense training? a. 0.8 grams per kilogram of body weight b. 1.0-1.2 grams per kilogram of body weight c. 1.5-2.0 grams per kilogram of body weight d. 2.5-3.0 grams per kilogram of body weight | 1.5 | CO2 |
| Q 14 | Analyze how safety margins help in devising RDA. | 1.5 | CO4 |
| Q 15 | What happens when populations rely heavily on maize based diets? | 1.5 | CO3 |
| Q 16 | Ritesh is dealing with acid reflux for some time and constantly takes antacids. How will this habit impact the absorption of iron and calcium? | 1.5 | CO4 |
| Q 17 | Which of the following is a common effect of fluoride toxicity? a. Goitre b. Dental fluorosis | 1.5 | CO3 |

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| | c. Anaemia d. Rickets | | |
| Q 18 | What is the primary cause of water intoxication in the human body? a. Excessive loss of electrolytes through sweat b. Rapid intake of large amounts of water diluting blood sodium levels c. Dehydration due to insufficient water intake d. Increased salt concentration in the blood | 1.5 | CO3 |
| Q 19 | Which form of vitamin A is important for growth and reproduction? a. Retinol b. Retinoic acid c. Beta-carotene d. Retinyl ester | 1.5 | CO2 |
| Q 20 | Reflect on why it is recommended to wash vegetables before cutting them. | 1.5 | CO4 |
| Section B (4Qx5M=20 Marks) | | | |
| Q 1 | Explain the significance of dietary reference intakes? | 5 | CO1 |
| Q 2 | Discuss factors affecting mineral absorption in the human body. | 5 | CO3 |
| Q 3 | Illustrate the role of kidney in regulating water and electrolyte balance in the human body. | 5 | CO3 |
| Q 4 | Describe the process of emulsification and its role in fat digestion. | 5 | CO3 |
| Section C (2Qx15M=30 Marks) | | | |
| Q 1 | a. Outline the absorption of Vitamin B12 in the human body. (5 marks) b. Explain the significance of folic acid during pregnancy and its clinical deficiency symptoms during prenatal development. (10 marks) | 15 | CO3 |
| Q 2 | a. How does alcohol abuse contribute to deficiencies of water-soluble vitamins in the body? (5 marks) b. Sarah typically consumes meals consisting of rice, beans, and vegetables. She enjoys this combination but wonders if it provides all the necessary amino acids. (10 marks) 1. Explain to Sarah the concept of a limiting amino acid. 2. Advise her how she can ensure she gets all the essential amino acids from different plant-based protein sources, by providing an example. | 15 | CO4 |
| Section D (2Qx10M=20 Marks) | | | |
| Q 1 | Illustrate how the body synthesizes vitamin D. (5 marks) Discuss the role of vitamin D in bone health. (5 marks) | 10 | CO3 |
| Q 2 | a. Explain the concept of energy balance in the human body. (5 marks) b. Discuss the factors influencing BMR in human body. (5 marks) | 10 | CO4 |