BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – B.Optometry-2023
Course Name – Nutrition
Course Code - BOPTOC104
(Semester I)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Discuss the common eye condition associated with severe PEM

a) Myopia b) Cataracts
c) Conjunctivitis d) Glaucoma

(ii) ..... vitamin deficiency is often associated to eye problems in PEM

a) Vitamin A b) Vitamin C
c) Vitamin D d) Vitamin K

(iii) Accumulation of ketone bodies in blood is reported as

a) Ketonuria b) Ketosis
c) Ketoacidosis d) Acetone formation

(iv) Classify the six essential nutrients

a) Carbohydrates, Proteins, enzymes, vitamins, minerals, and water. b) Carbohydrates, proteins, antioxidants, vitamins, minerals, and water.
c) Carbohydrates, proteins, fats, vitamins, minerals, and water. d) Carbuhydrate and water

(v) Which of the following food group contains lauric acid which is used treat certain infections and also in the manufacture of soaps

a) Coconut Oil b) Olive Oil
c) Mustard Oil d) Butter

(vi) State the elements present in the proteins are

a) Carbon, hydrogen, nitrogen, and oxygen. b) Carbon, hydrogen, and oxygen.
c) Hydrogen, nitrogen, and oxygen. d) Carbon and hydrogen

(vii) Identify the following essential amino acids which is not synthesized by the body

a) Arginine b) Glutamine
c) Histidine d) Proline

(viii) Up to the age of six months, ---------- is selected as the ideal food for newborns and young infants

a) soy milk
b) rice cereal
c) breast milk
d) iron-fortified formula

(ix) State the name of the disease which is caused by protein-energy malnutrition

a) angina
b) goiter
c) marasmus
d) tuberculosis

(x) Which mineral helps in the regulation of blood volume and blood pressure?

a) Sodium
b) Phosphorous
c) Iron
d) Iodine

(xi) What is known as disorders related to nutrition?

a) balancing of nutrition
b) insolubility of nutrition
c) solubility of nutrition
d) malnutrition

(xii) Amino acids are mostly synthesized from

a) Fatty acids
b) Mineral salts
c) Alpha ketoglutaric acid
d) Volatile acids

(xiii) Which one is a protein deficiency disorder?

a) Scurvy
b) Anaemia
c) Kwashiorkor
d) None of the above

(xiv) Write the full form of RDA.

a) Retired dietary allowances
b) Recommended dairy allowances
c) Recommended daily allowances
d) Recommended dietary allowances

(xv) Which of the following vitamin functions as both, hormone and visual pigment?

a) Thiamine
b) Retinal
c) Riboflavin
d) Folic acid

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Discuss about balanced diet (3)
3. Explain the role of trace element which is a component of the enzyme that activates vitamin A in the eye (3)
4. Describe the role of fibers in nutritional management (3)
5. Explain the significance of anthropometric measurements like body mass index (BMI) in assessing nutritional status. (3)
6. Estimate the daily protein requirements for an athlete engaged in intense training, based on their body weight and activity level. (3)

OR

Evaluate the nutritional status of an elderly person living alone who has limited access to fresh foods and relies mostly on canned and packaged items (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Explain how essential amino acids play a crucial role in supporting muscle growth and repair. (5)
8. Differentiate between omega-3 and omega-6 fatty acids in human health, including their physiological functions and sources (5)
9. Explain about PEM (Protein energy malnutrition) (5)
10. Explain the molecular mechanisms underlying the absorption of calcium in the intestines (5)
11. Assess the challenges in setting RDA values for energy, protein, and fat, considering the diverse dietary patterns across different cultures and regions. How can these challenges be overcome to promote global health and nutrition? (5)
12. Compare and contrast the RDA for fat with other macronutrients. (5)

OR

Estimate the daily energy needs of an average adult and explain how this estimation is used to set energy RDA levels. (5)

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