

B.Sc. (Hons) FNS (NEP) Sem.2 Examination**DSC-C-121 T****Basic Nutrition & Nutrients****May-2025****Time : 2-00 Hours]****[Max. Marks : 50****Question 1 Write the following**

- (i) Define Functional Foods. Explain Functional Foods with the help of (5 Marks) example.
- (ii) Explain phytochemicals with examples & give their health benefits. (5 Marks)

OR

- (i) Explain nutraceuticals & classify them. (5 Marks)
- (ii) Explain relationship of nutrition with health & growth. (5 Marks)

Question 2 Write the following

- (i) Enlist Factors that Affect BMR. Explain at least five factors that affect an individual's basal metabolic rate. (5 Marks)
- (ii) What are the major dietary sources of carbohydrates, and how do daily requirements vary based on age, activity level, and health status? And discuss the health consequences of both carbohydrate deficiency and excessive intake. (5 Marks)

OR

- (i) Explain the process of lipid digestion, including the role of bile salts and pancreatic enzymes. (5 Marks)
- (ii) Describe the physiological roles of proteins, including their importance in growth, repair, and enzyme activity. (5 Marks)

Question 3 Write the following

- (i) Explain how Vitamin D is activated in the body and discuss Rickets in detail. Including its Sources & Symptoms. (5 Marks)
- (ii) Explain the role of Niacin in the body and discuss the deficiency disorders associated with it. (5 Marks)

OR

- (i) Discuss the sources, requirements, and functions of Vitamins E and K. (5 Marks)
- (ii) What are vitamins? Explain the classification of vitamins and describe one water-soluble vitamin. (5 Marks)

Question 4 Write the following

- (i) Explain calcium role in muscle contraction and draw its diagram of filament interaction. (5 Marks)
- (ii) Write sources, deficiency and toxicity of sodium with their symptoms. (5 Marks)

OR

- (i) Distribution, functions of iron in detail & write flowchart of Hb. synthesis (5 Marks) stages that involved in RBC formation.
- (ii) List out functions and explain absorption of zinc. (5 Marks)

Question 5 Attempt any ten out of fifteen

(10 Marks)

- (i) Define HEALTH.
- (ii) Explain Malnutrition?
- (iii) Who coined the term nutraceuticals?
- (iv) What are the types of Pellagra?
- (v) What are the types of Vitamin K and their scientific names?
- (vi) What are the clinical features of anaemia?
- (vii) What is infantile beriberi? Mention its symptoms.
- (viii) Write name of kidney stimulated hormone & its secreted by which gland?
- (ix) Name the 3rd most abundant mineral & write its normal blood serum level.
- (x) What is genu valgum? Caused by which mineral toxicity?
- (xi) What is acrodermatitis enteropathica? It caused by which mineral deficiency?
- (xii) List and briefly explain three key factors that influence an individual's basal metabolic rate.
- (xiii) What are essential fatty acids? And why are essential fatty acids important.
- (xiv) What is the difference between essential and non-essential amino acids explain with examples?
- (xv) Name two key enzymes involved in carbohydrate digestion and their function.