

**B.Sc. FNS Sem.-3 Examination**  
**FNS-211**

**Principles of Human Nutrition**  
**December-2025**

**Time : 2-30 Hours]**

**[Max. Marks : 70**

**Question 1 Write the following**

- (i) Explain the distribution of water in human body? (7 Marks)  
 (ii) Explain electrolyte balance? (7 Marks)

**OR**

- (i) What are the principles involved in determining the RDA of different nutrients? (7 Marks)  
 (ii) Explain the function of water? (7 Marks)

**Question 2 Write the following**

- (i) Write a note on digestion, absorption and metabolism of protein? (7 Marks)  
 (ii) Explain the role of fibre in human nutrition? (7 Marks)

**OR**

- (i) Explain health problem associated with fat? (7 Marks)  
 (ii) Write a note on digestion, absorption and metabolism of carbohydrate? (7 Marks)

**Question 3 Write the following**

- (i) Explain the functions, food sources, and deficiencies related to Iron. (7 Marks)  
 (ii) Describe the major function of iodine in the human body. Add a note on iodine deficiency disorders as well as the effects of excessive intake. (7 Marks)

**OR**

- (i) Describe the functions, absorption, metabolism, and dietary sources of Sodium. (7 Marks)  
 (ii) Write a detailed note on the functions, absorption, deficiency symptoms and toxicity of Calcium. (7 Marks)

**Question 4 Write the following**

- (i) Discuss the importance of thiamine in carbohydrate metabolism and the consequences of its deficiency on the nervous and cardiovascular systems. (7 Marks)  
 (ii) Discuss the dietary sources, absorption and metabolism of vitamin B2 (Riboflavin) in the body. (7 Marks)

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OR

- (i) Discuss the role of vitamin A in the body and explain the health consequences (7 Marks) of its deficiency.
- (ii) Discuss the dietary sources, absorption and metabolism of folic acid in the (7 Marks) body.

**Question 5** Attempt any seven out of twelve

(14 Marks)

- (i) What is oedema?
- (ii) What is extracellular fluid?
- (iii) Write any four sources of vitamin C.
- (iv) Define Neural mechanism?
- (v) Define crude fibre?
- (vi) What is the function of protein?
- (vii) Which fat soluble vitamin acts as an antioxidant?
- (viii) Define chylomicron?
- (ix) List the dietary sources of Selenium.
- (x) State the serum potassium level observed in a hypokalemic patient.
- (xi) Which organ is the major storage site for Zinc in the human body?
- (xii) What is Hashimoto's syndrome?

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