

## M.Sc. Sem.-1 Examination

404

## Food Sciences &amp; Nutritions

January-2024

Time : 2-30 Hours]

[Max. Marks : 70

**Instructions:** Illustrate your answers with neat diagrams wherever necessary.

**Q. 1 Write the following**

- (i) Define RDA and give the principles of deriving nutrient requirement. (7)
- (ii) Enlist direct and indirect methods of body composition analysis and describe skin-fold measurement in detail. (7)

**OR**

- (i) Describe Skin fold measurement techniques in detail. (7)
- (ii) Describe the dilution principle used for analysis of body fluids. (7)

**Q.2 Write the following**

- (i) Explain the term "protein quality". Enlist methods of protein quality evaluation. Discuss Non biological methods in detail. (7)
- (ii) How do the mechanisms of sodium-dependent and sodium-independent transport differ in the absorption of monosaccharides, and what factors influence the rate of monosaccharide absorption? (7)

**OR**

- (i) Discuss the digestion and absorption of protein in human body (7)
- (ii) Describe lactose intolerance, including its symptoms and the diagnostic tests used to assess lactose digestion. (7)

**Q. 3 Write the following**

- (i) Write a brief note about factors enhancing and factors inhibiting absorption of non-haeme iron. (7)
- (ii) Write a note on the visual cycle and discuss the role of vitamin A in normal vision. (7)

**OR**

- (i) Write a brief note on the functions of Vitamin E in the human body (7)
- (ii) Discuss in detail the deficiency disorders of Riboflavin. (7)

**Q. 4 Write the following**

- (i) What are the components of energy expenditure? Explain in detail. (7)
- (ii) What is BMR? Explain factors affecting BMR. (7)

**OR**

- (i) Explain dual centre theory in detail. (7)
- (ii) Explain set point theory in detail. (7)

P.T.O.

**Q. 5 Attempt any seven out of twelve**

- (i) Write two functions of phosphorus?
- (ii) How much iron does hemoglobin contain?
- (iii) Differentiate between fat free mass and lean body mass.
- (iv) Write a short note on Very long chain fatty acids.
- (v) Write a short note on Cis versus Trans fatty acids.
- (vi) Define nutritional blindness. How can it be prevented?
- (vii) Define: Cori cycle
- (viii) What is positive and negative nitrogen balance?
- (ix) Define hypervitaminosis. Why do fat-soluble vitamins pose a greater risk of toxicity?
- (x) Write any two difference between essential and non-essential amino acids?
- (xi) Write RDA of sodium?
- (xii) What is EEPA?

