

B. Voc. (Food Processing and Preservation) FYUP
First Semester
BFP-101: Fundamentals of Food Science

Time allowed: 3 Hours

Max. Marks: 40

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

Q1 Attempt the following:-

- a) Define Nutrient with example.
- b) Differentiate between macronutrients and micronutrients with examples.
- c) Discuss nutritive aspects of carbohydrates in food.
- d) Explain the concept of bioavailability of nutrients
- e) Explain the concept of BMR.
- f) Describe the steps involved in food packaging as a unit operation.
- g) Discuss the role of vitamins in disease prevention.
- h) What is protein quality, and why it is important in food science? (8x1)

UNIT - I

Q2

- a) Define nutrition and discuss the classification of nutrients.
- b) Explain the importance of dietary guidelines in maintaining health. (4,4)

Q3 Write short note on following

- a) Basic concept of food and its role in human health.
- b) Food Groups (5,3)

UNIT - II

Q4 Discuss the occurrence, properties, and nutritive significance of fats and oils. (8)

Q5

- a) Define dietary fiber and describe its role in maintaining digestive health.
- b) Explain the importance of water as a constituent of food. (5,3)

UNIT - III

Q6

- a) What are recommended dietary allowances? Explain their significance for different age groups.
- b) Discuss the role of a balanced diet in health and disease prevention. (5,3)

Q7 Write short note on following

- a) Stability of nutrients in food.
- b) Energy metabolism process and its relevance to food science. (4,4)

UNIT - IV

Q8

- a) Discuss the various unit operations involved in food cleaning and separating.
- b) Explain the principles of mixing and grinding in food processing. (4,4)

Q9

- a) Describe the importance of materials handling in the food processing industry.
- b) Explain heat exchange as a unit operation in food processing with examples. (4,4)

x-x-x