

B.Sc. (FNS) (NEP) Sem.-1 Examination

DSC-C-111

Fundamental of Food Science & Processing

Time : 2-00 Hours]

February-2025

[Max. Marks : 50

Question 1 Write the following

- (i) What is food ? Explain food pyramid with the help of neat diagram (5 Marks)
- (ii) Classify different methods of cooking and explain any five methods (5 Marks)

OR

- (i) what are preliminary preparations in cooking? Discuss any five preliminary methods with their advantages and disadvantages. (5 Marks)
- (ii) Describe the different methods of cooking in which water and steam is used. (5 Marks)

Question 2 Write the following

- (i) Discuss the nutritional composition of pulses, including their macronutrient and micronutrient content. How does the protein quality of pulses compare to that of animal-based proteins, and how can their nutritional value be improved through processing methods such as germination and cooking? (5 Marks)
- (ii) Describe the structural components of an egg, including the shell, membranes, albumen, and yolk. Explain the role of each component in the protection, development, and nutritional value of the egg. Additionally, discuss how the composition of egg white and yolk differ in terms of proteins, fats, and minerals. (5 Marks)

OR

- (i) Discuss the importance of various cooking methods for fish and meat. How do different cooking techniques impact the texture, flavor, and nutrient retention of these foods? (5 Marks)
- (ii) Discuss the milling process of wheat, detailing the separation of different components such as bran, germ, and endosperm. How does this process affect the nutritional composition of wheat-based products? (5 Marks)

Question 3 Write the following

- (i) Describe the cheese production process in detail. (5 Marks)
- (ii) Write down methods to minimize nutrient losses during cooking. (5 Marks)

OR

- (i) Write a detailed note on enzymatic and non enzymatic browning. Also write down ways to prevent enzymatic browning. (5 Marks)
- (ii) List down water soluble pigments and explain them in detail. (5 Marks)

(P.T.O)

Question 4 Write the following

- (i) Classify fat and fatty acids with suitable examples. (5 Marks)
- (ii) Give fatty acid composition of various cooking oil and explain EFA. (5 Marks)

OR

- (i) Explain the processing of peanut oil (5 Marks)
- (ii) Explain the role of sugar cookery. (5 Marks)

Question 5 Attempt any ten out of fifteen

(10 Marks)

- (i) Braising is a combined method of ____ and ____.
- (ii) Define balanced diet.
- (iii) In which cooking method does food typically float in hot oil?
- (iv) Write the difference between stringing and peeling
- (v) Name two fruits that are excellent sources of beta carotene.
- (vi) How does using a sharp knife reduce nutrient loss in vegetables?
- (vii) Which process is used to ensure milk fat and serum form a stable emulsion?
- (viii) How is skimmed milk produced?
- (ix) What is the significance of pressure cooking in meat preparation, and how does it affect the juiciness and tenderness of the final product?
- (x) Why is the biological value of egg protein considered the highest among various dietary protein sources?
- (xi) What are the major edible marine and freshwater fish species consumed globally?
- (xii) What is marbling in meat, and how does it affect the texture and taste of different meat cuts?
- (xiii) What is brown sugar?
- (xiv) What is lard?
- (xv) Explain properties of sugar.
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