

2024

**Food Processing & Quality Management/Food Processing Technology/Food Processing
(AGRI)**

Paper: FPR0200204

(Food Processing-II)

Full Marks: 45

Time: 2 hours

The figures in the margin indicate full marks for the questions.

1. Answer the following: 1x5=5
- IQF stands for _____
 - HTST stands for _____
 - What is F-value?
 - Write the formula for calculation of moisture content on dry basis.
 - What is roasting?
2. Answer the following in brief: (Any Five) 2x5=10
- Explain briefly the primary purpose of blanching in food processing?
 - What is meant by 'refrigeration load' also identify the factors that influence it?
 - What is dehydro freezing?
 - Define psychrotrophs and thermophiles with example.
 - Differentiate between pasteurization and sterilization.
 - Discuss briefly the effect of frying on the nutritional value of food.
 - Differentiate between drying and dehydration.
 - Define the term new food product development and mention its significance.
 - Describe briefly the factors that affect the shelf life of a food product.
 - What is meant by refrigerant? What is the gas commonly used as a refrigerant in the food industry?
3. Write short notes on any four 5x4=20
- What is dielectric heating? Explain the principle of dielectric heating with a proper diagram. (1+4)
 - Explain the effect of heat on sensory characteristics of food.
 - What is meant by food concentration? Explain the changes that occur in food during concentration. (1+4)
 - Differentiate between refrigeration and freezing. What is the primary purpose of refrigeration in food processing. (3+2)
 - Write a short note on the different types of freezers used in food processing.
 - Explain with a proper diagram the freezing curve of food. What is meant by freezer burn of food? (4+1)
 - Explain briefly the steps involved in new food product development.
 - What is meant by freezing point? Explain briefly the changes that occur in food during freezing. (2+3)
4. Answer any one from the following: 10x1=10
- What is meant by unit operation? Give two examples of unit operation used in food processing. Name two machineries used for size reduction. What is meant by mixing and kneading? Write short note on ball mill. (2+1+1+3+3)