

B.FTBE 2 ND YEAR 1 ST SEMESTER SUPPLEMENTARY EXAMINATION- 2017

PRINCIPLES OF FOOD PRESERVATION Time: 3hrs Full Marks: 100

Use Separate Answer Script for each Part

(50 marks for each part)

PART- I

Answer question 1 and any two from the rest.

1. Explain the following:

4x5

- a) nutritional changes in food products due to canning.
- b) curing of meat
- c) thermal death point, moisture ratio and D-value
- d) Tray drying of food material

2a) What is canning? Define F-value and Z-value.

b) Comment on:

- i) filling liquid for canning of fruits and vegetables.
- ii) exhausting before can sealing.

5+5+5

3a) What is meant by critical moisture content, equilibrium moisture content, relative humidity and bound moisture.

b) A food product contains 20% moisture by wet basis. What will be the moisture content on dry basis?

c) What is osmo drying? Give example of osmotic agent.

d) Explain steps of drying.

6+2.5+2.5+4

4. Write short notes on: (any three)

3x5

a) factors affecting osmotic dehydration process

b) peeling of fruits and vegetables

c) freeze drying of food material

d) problems in making pickle .

B.E (FTBE) SECOND YEAR, 1ST SEMESTER SUPPLEMENTARY EXAM-2017

PRINCIPLES OF FOOD PRESERVATION

PART - II (50 MARKS)

Answer Q1 and Any Two from the rest

Q1. Explain diagrammatically (any two):

2 × 5 = 10

- a. Heat removal during freezing of foods
- b. Effect of initial concentration on decrease of volume and increase in molality of unfrozen phase in a food product
- c. Pasting profiles of rice starch before and after γ -irradiation

Q2. Explain why (any four):

4 × 5 = 20

- a. Quick freezing is recommended for frozen berries.
- b. Glazing and Reglazing water are added during fish freezing.
- c. Indirect freezing of foods is preferred over direct freezing.
- d. Blanching is ineffective as a pretreatment method when frozen foods are to be stored at -10°C .
- e. Frozen milk expands while frozen strawberries do not.

Q3. What is/are (any four):

4 × 5 = 20

- a. Humectants and Anticaking agents
- b. Radura
- c. Role of sodium sulphite in dehydrated fruits
- d. Five benefits of gamma ray irradiation of foods
- e. Role of sorbic acid in cheese
- f. Cryoprotectants

Q4. Distinguish between (any four):

4 × 5 = 20

- a. Energy requirements in Radappertization and Radpasteurization
- b. Plate freezing and Tunnel freezing
- c. Restoration and Enrichment
- d. Gamma-irradiation and Electron beam irradiation
- e. Direct Food Additives and Indirect Food Additives
- f. Flavoring agents and Flavor enhancing agents