

Ref. No. Ex/FTBE/PC/B/T/312/2024(S)

**B.E (FTBE) THIRD YEAR, FIRST SEMESTER SUPPLEMENTARY EXAMINATION 2024**

**PRINCIPLES OF FOOD PRESERVATION-II**

Time : Three hours

Full Marks : 100

( 50 Marks for each Part)

Use separate answer script for each Part

**PART I (50 Marks)**

**Q1. Explain the following (any 5):**

**5 × 5 = 25**

- a. Slice tiffin cakes retain their sponginess.
- b. Tubewell water may be unfit for consumption.
- c. Bland noodles are tasty.
- d. Few bacteria can also preserve food.
- e. Citric acid has multiple roles as a food additive.
- f. Different antimicrobial agents are preferred for different food products.

**Q2. Distinguish between with examples (any five):**

**5 × 5 = 25**

- a. Flavoring agents vs. Flavor-enhancing agents
- b. Humectants vs. Anticaking agents
- c. Enrichment vs. Restoration
- d. Firming agent vs. Release agent
- e. Leavening agent vs. Bulking agent
- f. Chemical preservatives for Fruit juices vs. Dry fruits

[ Turn over

**B.E. FOOD TECHNOLOGY AND BIO-CHEMICAL ENGINEERING****THIRD YEAR FIRST SEMESTER SUPPLEMENTARY EXAM 2024****PRINCIPLES OF FOOD PRESERVATION – II**

Time: 3 hrs.

Full Marks : 100

**Part – II ( 50 Marks )****Answer any four of the flowing questions (12.5x4=50)**

1. Why canning is termed as 'commercial sterilization' process ? What should be the criteria of a container to be used for food canning purpose? Name the material which are conventionally used for making cans. What is 'TFS'? show the can wall composition layer by layer for tin plate cans. Draw a neat sketch of 'double-seam arrangement in metal cans and label properly.  
2 + 2.5 + 2 + 1 + 2 + 3
2. What are 'two-piece' and 'three-piece' cans? Classify food items in terms of pH. What are 'R-enamel' and 'C-enamel' ? Write the steps of a vegetable canning process . Write the names of different types of peeling processes followed in canning industry.  
3 + 2.5 + 2 + 3 + 2
3. Write the objectives of 'blanching' and 'exhausting' in canning operation. What do you mean by 'flipper ' and 'springer' in reference to spoilage in cans. What do you mean by 'flat souring'? Name the causative organism for sulphur stinker . What is 'head space' in a can and what is it range of value?  
4 + 3 + 2 + 1 + 2.5
4. With a neat sketch explain the principle of action of an extruder. What do you mean by 'expansion ratio' and 'L/D value' ? Why do extruded material are usually so porous ? What do you mean by twin-screw extrusion ?  
4.5 + 3 + 3 + 2
5. What are the advantages and disadvantages of extrusion ? Mention some applications of extrusion. Name instruments using which we can measure texture and microstructure of a food material , respectively. What are the extrusion process parameters which control the characteristics of products? Why extrusion is called 'HTST' process ?  
3 + 2 + 2.5 + 3 + 2