



**B.TECH DEGREE EXAMINATIONS: NOV/DEC 2022**

(Regulation 2018)

Seventh Semester

**BIOTECHNOLOGY**

U18BTE0003: Food Preservation Technology

**COURSE OUTCOMES**

- CO1:** Identify the causes of spoilage  
**CO2:** Categorize high temperature processing techniques  
**CO3:** Apply drying techniques for different foods  
**CO4:** Compare various low temperature processing techniques  
**CO5:** Examine various non-thermal methods of preservation  
**CO6:** Analyze various packaging techniques

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 2 = 20 Marks)**

**(Answer not more than 40 words)**

- |   |     |                   |
|---|-----|-------------------|
| 1. Recall the spoilage of cereals and cereal products.                | CO1 | [K <sub>2</sub> ] |
| 2. Why should the food be processed at domestic and largescale level? | CO1 | [K <sub>2</sub> ] |
| 3. Write the significance of blanching of food processing.            | CO2 | [K <sub>2</sub> ] |
| 4. During dehydration, the foods tend to lose vitamins. Justify.      | CO3 | [K <sub>4</sub> ] |
| 5. Spell out the principle of atomization in spray dryer.             | CO3 | [K <sub>2</sub> ] |
| 6. What are the benefits of chlorofluorocarbons in food industry.     | CO4 | [K <sub>1</sub> ] |
| 7. List the type of woods used for smoking of foods.                  | CO4 | [K <sub>1</sub> ] |
| 8. Write about thermosonication of foods.                             | CO5 | [K <sub>1</sub> ] |
| 9. Outline the functions of HACCP.                                    | CO6 | [K <sub>1</sub> ] |
| 10. What must appear on the label of your packaged food?              | CO6 | [K <sub>2</sub> ] |

**Answer any FIVE Questions:-**

**PART B (5 x 16 = 80 Marks)**

**(Answer not more than 400 words)**

- |   |    |     |                   |
|---|----|-----|-------------------|
| 11. a) Illustrate the industrial significance of food preservation.                 | 6  | CO1 | [K <sub>1</sub> ] |
| b) Explain the causes of milk and milk products spoilage with appropriate examples. | 10 | CO1 | [K <sub>2</sub> ] |
| 12. a) Describe the disadvantages involved in concentrating fruit juice.            | 8  | CO2 | [K <sub>L</sub> ] |

	b)	Discuss canning of pineapples with a neat flow diagram.	8	CO2	[K <sub>2</sub> ]
13.	a)	Discuss improved food storage area for grains along with its specification.	8	CO3	[K <sub>4</sub> ]
	b)	Describe refrigeration cycle with a neat diagram.	8	CO4	[K <sub>2</sub> ]
14.	a)	Explain the steps involved in high pressure processing technique and write its application in various types of food sector.	8	CO5	[K <sub>2</sub> ]
	b)	Describe the basic principles of equipments used in the preservation technique where electrical energy is converted to heat energy.	8	CO5	[K <sub>1</sub> ]
15.	a)	Outline the advantages of food packaging.	8	CO6	[K <sub>2</sub> ]
	b)	Summarize the basic types of packaging materials used in food industry.	8	CO6	[K <sub>2</sub> ]
16.	a)	Explain the construction and working of cryogenic freezer with a neat diagram for any product of your interest.	8	CO4	[K <sub>1</sub> ]
	b)	Describe the principle advantages and disadvantages of osmotic dehydration in food industry.	8	CO3	[K <sub>2</sub> ]

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