Q. Code:935324

Reg. No. | | | | | | | | | | | | |

B. E / B. TECH.DEGREE EXAMINATIONS, MAY 2024

Seventh Semester

CH18017 – INTRODUCTION TO FOOD TECHNOLOGY

(Chemical Engineering)

(Regulation 2018/2018A)

TIME:3 HOURS **MAX. MARKS: 100**

CO1 Relate and incorporate the principles of food science in practical, real- world situations and problems.

CO2 Identify government regulations required for the manufacture and sale of food products.

CO3 Classify various food processing and preservation techniques.

CO4 Illustrate the effects of food additives on food products.

CO5 Interpret the separation techniques and packaging technology required to produce the given food product.

PART- A(10x2=20Marks)

(Answer all Questions)

		CO	RBT LEVEL
1	Differentiate between Sterilization and Pasteurization.	**1**	**2**
2	Classify the food preservation techniques	**1**	**2**
3	Write the different process variables that must be controlled when milk is pasteurized.	**2**	**2**
4	Differentiate refrigeration and freezing.	**2**	**2**
5	Demonstrate the accepted levels of lactic acid to be used in food preservation.	**3**	**2**
6	Give the significance of concentration polarization.	**3**	**2**
7	Elucidate unit operations used for separation in food processing.	**4**	**2**
8	Mention the types of reverse Osmosis and Ultra Filtration systems.	**4**	**1**
9	Give some domestic examples of product containment in packaging.	**5**	**2**
10	Give the properties of cheese.	**5**	**1**

PART- B (5x 14=70Marks)

		Marks	CO	RBT LEVEL

11. (a)	Outline the application of different chemical engineering principles and unit operations in food processing industries.	**(14)**	**1**	**3**
	(OR)			
(b)	Give a detailed account of food requirements of the world population and discuss the current scenario of Indian food industries.	**(14)**	**1**	**3**
12. (a)	Explain the various systems for heating and cooling food products.	**(14)**	**2**	**3**
	(OR)			
(b)	Elucidate on the different systems used in freezing of foods.	**(14)**	**2**	**3**
13. (a)	Give a brief account of the following methods of food preservation: (i) Concentration (4 Marks) (ii) Drying (3 Marks) (iii) Fermentation (4 Marks) (iv) Irradiation(3 Marks)	**(14)**	**3**	**3**
	(OR)			
(b)	Elucidate the principle and working of the various processing systems used to preserve foods.	**(14)**	**3**	**3**
14. (a)	Describe in detail the application of the following unit operations in food industry: (i) Sedimentation (3 Marks) (ii) Centrifugation (4 Marks) (iii) Mixing (3 Marks) (iv) Drying (4 Marks)	**(14)**	**4**	**3**
	(OR)			
(b)	Discuss the uses of different membrane modules in membrane processes.	**(14)**	**4**	**3**
15. (a)	Highlight the features of aseptic packaging and the process of aseptic canning of fruit pulp.	**(14)**	**5**	**3**
	(OR)			
(b)	Outline the Canning procedures for fruits, vegetables, meats, poultry and marine products.	**(14)**	**5**	**3**

PART- C (1x 10=10Marks)

(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
16.	Evaluate the role and properties of dietary fats and proteins in food processing industries.	**(10)**	**1**	**5**