Reg. No.												

Question Paper Code	12218

B.E. / B.Tech - DEGREE EXAMINATIONS, NOV / DEC 2023

Seventh Semester

Computer Science and Engineering

20CYOE903 - PRINCIPLES OF FOOD PRESERVATION

(Regulations 2020)

Duration: 3 Hours Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	How does dehydration contribute to food preservation? Provide an example of a dehydrated food product.	*2,K1,CO1*
2.	Differentiate between food deterioration and spoilage in processed foods.	*2,K3,CO1*
3.	How does refrigerated gas storage contribute to the extended shelf life of foods? Provide examples.	*2,K2,CO2*
4.	Differentiate between gas-packed refrigerated foods and sub-atmospheric storage methods in terms of food preservation.	*2,K3,CO2*
5.	How does infra-red microwave heating affect the quality of food products?	*2,K1,CO3*
6.	Why is water activity control crucial in the preservation of certain food items?	*2,K2,CO3*
7.	Define the rate of drying for food products.	*2,K1,CO4*
8.	What is freeze concentration, and how is it applied in food preservation?	*2,K2,CO4*
9.	How does supercritical technology enhance the preservation of food compared to traditional methods using chemical preservatives?	*2,K2,CO5*
10.	Define hurdle technology.	*2,K2,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	(i) Distinguish between the deterioration and spoilage of processed foods. Provide examples to illustrate each concept.	*7,K2,CO1*
		(ii) Define food safety and elaborate on its significance in the context of preserving processed foods.	*6,K2,CO1*
		OR	
	b)	Explain the different types of foods based on their perishability.	*13,K2,CO1*
12.	a)	Explain the technology behind retort pouch packing and its application in food preservation.	*13,K2,CO2*
		OR	
	b)	Compare the effects of gas atmospheric storage on meat, grains, seeds, and flour.	*13,K2,CO2*

13. a) Discuss the role of osmotic methods in preserving food products. *13,K2,CO3*

OR

b) Explain the principle behind ohmic heating and its application in food preservation. *13,K2,CO3*

14. a) Compare and contrast freezing and cold storage techniques for preserving food products. What are the key design considerations for each method? *13,K2,CO4*

OR

b) Explain the process of dehydro-freezing and its advantages over conventional freezing methods. *13,K2,CO4*

15. a) Explore the role of high-pressure technology in food preservation and its impact on the quality and safety of preserved products. *13,K3,CO5*

OR

b) Discuss traditional chemical preservatives in detail. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Describe in detail the process of membrane technology and its application in food preservation. *15,K3,CO5*

OR

b) Discuss the methods used to control water activity in foods. *15,K3,CO5*