



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
 [AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
 Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 90008

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025

Seventh Semester

Computer Science and Engineering

U19BTOE7 - FOOD PROCESSING AND PRESERVATION TECHNOLOGY

(Common to EEE, ECE and BME)

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Differentiate between natural and synthetic food colorants with suitable examples.	2	K1	CO1
2.	List the methods of evaluating the energy value of foods.	2	K1	CO1
3.	Compare the processing of cereals and pulses in terms of their nutritional quality.	2	K2	CO2
4.	List any two methods of processing meat and fish.	2	K2	CO2
5.	Explain the changes occurring in food during thawing.	2	K2	CO3
6.	Why is blanching considered a pre-treatment step in thermal preservation?	2	K2	CO3
7.	How do ultrasonics help in extending the shelf life of fresh juices?	2	K2	CO4
8.	Differentiate between irradiation and hurdle technology in food preservation.	2	K2	CO4
9.	What are the advantages of multilayer packaging films over traditional materials?	2	K2	CO5
10.	Why is packaging design important for consumer safety and product marketing?	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Explain the impact of food additives on the shelf life and sensory properties of processed foods.	13	K1	CO1
	(OR)			
b)	Discuss the nutritional and toxicological concerns associated with artificial sweeteners.	13	K1	CO1
12. a)	Describe the methods of processing milk and milk products in terms of nutritional retention.	13	K2	CO2
	(OR)			
b)	Compare the storage stability and market value of fruits versus vegetables.	13	K2	CO2
13. a)	Discuss in detail the advantages and limitations of pasteurization, sterilization, and commercial canning.	13	K2	CO3
	(OR)			
b)	Analyze the freezing curve of food and explain how different freezing rates influence texture and nutrient loss.	13	K3	CO3
14. a)	Critically examine the role of high-pressure processing and membrane technology in ensuring microbial safety of foods.	13	K3	CO4
	(OR)			
b)	Discuss the effectiveness and consumer acceptance of irradiated foods.	13	K3	CO4
15. a)	Explain the role of retort pouch packaging in extending the shelf life of ready-to-eat meals.	13	K2	CO5
	(OR)			
b)	Compare different food packaging materials in terms of cost, recyclability, and barrier properties.	13	K2	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16. a)	A food company aims to launch a nutrient-rich instant soup mix utilizing cereals and legumes. Design the processing steps, fortification methods, and quality evaluation parameters. Justify your choices.	15	K2	CO2
	(OR)			
b)	As a food technologist, propose a zero-waste processing model for a fruit processing industry where peels, seeds, and pulp residues are generated. Suggest value-added products and outline their processing methods in detail.	15	K2	CO2