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

Question Paper Code: 90021

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

Fifth Semester

Biotechnology

U23BTV21– FOOD PROCESSING & PRESERVATION TECHNIQUES

(Regulation 2023)

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.	State the dual role of citric acid in foods.	2	K1	CO1
2.	List any two artificial food colorants.	2	K1	CO1
3.	Identify any two types of separator used for stones in cereals.	2	K1	CO2
4.	Name any two food processed using abrasion peeling.	2	K1	CO2
5.	Recall, which type of foods can be processed by extrusion.	2	K2	CO3
6.	Quote any two examples where osmotic dehydration is applied.	2	K1	CO3
7.	Comment on the role of smoking in food preservation.	2	K2	CO4
8.	State the disadvantages of chemical preservatives.	2	K2	CO4
9.	Express, how the labelling is made for vegetarian and Non-vegetarian foods?	2	K2	CO5
10.	Define Codex Alimentarius.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11.	a) Describe the role of food additives in improving texture and shelf life.	13	K2	CO1
	(OR)			
	b) Illustrate with examples how biotechnology is used to develop food flavors.	13	K2	CO1
12.	a) Explain the working principles of disk separator and inclined belt separator.	13	K2	CO2
	(OR)			
	b) Compare pneumatic cleaning and magnetic separation in food raw material preparation.	13	K2	CO2
13.	a) Explain the process of heat sterilization with an example in food processing.	13	K2	CO3
	(OR)			
	b) Assess the role of freeze drying in preserving heat-sensitive foods.	13	K2	CO3
14.	a) Discuss the significance of hurdle technology with an example of its application in fruit preservation.	13	K2	CO4
	(OR)			
	b) Analyze how modified atmospheric storage differs from controlled atmospheric storage.	13	K2	CO4
15.	a) Evaluate the importance of food labeling in consumer safety and trade.	13	K2	CO5
	(OR)			
	b) Compare HACCP with FSSAI in ensuring food safety compliance.	13	K2	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16.	a) A start-up is planning to introduce vacuum-fried vegetable chips for urban markets. Suggest suitable pre-processing, preservation, and packaging strategies to maintain nutritional value.	15	K2	CO1
	(OR)			
	b) Propose a preservation and packaging plan for freshly squeezed juice to retain flavor and quality during distribution.	15	K2	CO1