

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025***Fifth Semester**Agricultural Engineering***AI3002 - Food and Dairy Engineering***Regulations - 2021***Duration : 3 Hrs****Maximum : 100 Marks****PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

Q.No	Questions	BLT	CO	Marks
1.	Write short notes on sterilization.	L1	1	2
2.	Write short notes on canning.	L1	1	2
3.	Differentiate between bound and unbound moisture.	L2	2	2
4.	Write short notes on causes of food spoilage.	L1	2	2
5.	List the importance of milk testing.	L1	3	2
6.	Write short notes on packaging of milk and milk products.	L1	3	2
7.	Differentiate between gravity and centrifugal cream separation.	L2	4	2
8.	List the advantages and disadvantages of homogenization.	L1	4	2
9.	Write short notes on concepts of nanotechnology.	L1	5	2
10.	List the applications of nanotechnology in food processing.	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11.	a i Discuss briefly on rheological properties of food materials.	L2	1	6
	ii Explain briefly on batch and continuous sterilization equipment.	L2	1	10
	Or			
	b i Explain briefly on freeze and membrane concentration.	L2	1	8
	ii Explain briefly on cooking, blanching and pasteurization techniques.	L2	1	8
12.	a i Explain working of spray dryer with neat sketch.	L2	2	10
	ii List the advantages and disadvantages of spray dryer.	L2	2	6
	Or			
	b i Explain briefly on equilibrium moisture content and water activity and its importance.	L2	2	10
	ii Discuss briefly on sorption behavior of foods.	L2	2	6

13.	a	i	Explain briefly on reception and handling of milk in a dairy plant.	L2	3	10
		ii	Discuss briefly on thermal properties of milk.	L2	3	6
Or						
	b	i	Explain briefly on LTLT, HTST and UTH pasteurization.	L2	3	10
		ii	Discuss briefly on milk storage tanks with a neat diagram.	L2	3	6
14.	a	i	Explain briefly on working of homogenizer with neat sketch.	L2	4	10
		ii	Discuss briefly on paneer manufacturing process.	L2	4	6
Or						
	b	i	Explain briefly on working of cream separator with neat sketch.	L2	4	10
		ii	Discuss briefly on cleaning in place.	L2	4	6
15.	a	i	Explain briefly on non-thermal processing methods in food processing.	L2	5	10
		ii	Discuss briefly on various applications of nanotechnology in Food packaging.	L2	5	6
Or						
	b	i	Discuss briefly on environmental impact of nanomaterials and their potential effects on global economics.	L2	5	8
		ii	Discuss briefly on tools and techniques of nanomaterials.	L2	5	8