

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2023
(First Semester)

Branch - FOOD TECHNOLOGY MANAGEMENT

FOOD PROCESSING AND PRESERVATION TECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Recall, when the historical period has witnessed the emergence of convenience foods and additives in food processing. a) 19th century b) 18th century c) 20th century d) 17th century	K1	CO1
	2	Show which preservation method involves the use of high temperatures to kill microorganisms and enzymes. a) Freezing b) Dehydration c) Canning d) Fermentation	K2	CO1
2	3	Choose which property of foods is affected by freezing and thawing, leading to changes in texture. a) Color b) Protein structure c) Water content d) Flavor	K1	CO2
	4	Infer which high-temperature preservation method is commonly used for dairy products and fruit juices to achieve long shelf life without refrigeration. a) UHT processing b) Pasteurization c) Commercial sterilization d) Blanching	K2	CO2
3	5	Find a conventional drying method that utilizes natural air circulation to remove moisture from substances. a) Air drying b) Sonic drying c) Supercritical drying d) Hybrid drying	K1	CO3
	6	Show the characteristic for which multiple effect evaporators are recognized. a) Slow concentration rates b) Simplicity of design c) High energy efficiency d) Limited applications	K2	CO3
4	7	Spell the technique employed for purifying and isolating fermentation products. a) Filtration b) Distillation c) Freezing d) Evaporation	K1	CO4
	8	Show the enzyme responsible for breaking down proteins into smaller peptides. a) Pectinase b) Amylase c) Protease d) Lactase	K2	CO4
5	9	Find the specific area in which ultrasonic preservation demonstrates notable effectiveness. a) Pasteurization b) Dehydration c) Sterilization d) Emulsification	K1	CO5
	10	Show the food preservation process in which PEF technology is commonly employed. a) Dehydration b) Pasteurization c) Microwaving d) Smoking	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Compare and contrast between primary, secondary, and tertiary food processing.	K4	CO1
		(OR)		
	11.b.	List the key steps involved in food processing, from raw material handling to distribution.		
2	12.a.	Identify the importance of determining process time and process lethality in high-temperature preservation.	K2	CO1
		(OR)		
	12.b.	Construct the working principle of mechanical refrigeration systems used in low-temperature preservation.		
3	13.a.	Select and apply a novel drying method suitable for a heat sensitive products.	K3	CO1
		(OR)		
	13.b.	Construct the working principle and applications of forced circulation evaporators in food processing.		
4	14.a.	Analyze the benefits of fermented foods in terms of preservation and nutritional enhancement.	K4	CO1
		(OR)		
	14.b.	Classify enzymes based on their functions and provide examples of enzymes used in the food industry.		
5	15.a.	Explain the working principle of Pulsed Electric Field (PEF) technology in food processing.	K5	CO1
		(OR)		
	15.b.	Determine the principle of radio frequency and radiation control in food processing.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine on food deterioration and explain the control measures.	K4	CO1
2	17	Analyze the importance of determining process time and process lethality in high-temperature preservation.	K3	CO2
3	18	Construct an explanation of the various novel drying methods employed in the food industry.	K3	CO3
4	19	Categorize the microorganisms based on its role in fermentation processes.	K4	CO4
5	20	Elaborate the concept and application of cold plasma technology in food industry.	K5	CO5