PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2025
(First Semester)

Btanch - **FOODS AND NUTRITION**

FOOD PROCESSING TECHNOLOGY

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

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

Question No.	Question	K Level	CO
1	Which physico-chemical property of cereals mainly determines their cooking quality? a) Water absorption capacity b) Bulk density c) Swelling power and gelatinization temperature d) Solubility index	K1	CO1
2	Predict the nutrient rich in rice bran obtained during milling a) Vitamin A b) γ-oryzanol and dietary fiber c) Vitamin B12 d) Lycopene	K2	CO1
3	Which pretreatment improves dehusking efficiency in pulses? a) Drying in hot air b) Oil and water treatment followed by sun drying c) Steam blanching d) Soaking in saline solution	K1	CO2
4	Express among the following the primary by-product of oilseed extraction used as cattle feed a) Lecithin b) Margarine c) Defatted cake d) Crude wax	K2	CO2
5	Controlled Atmosphere (CA) storage mainly regulates which of the following? a) Temperature and humidity only b) Light and packaging thickness c) Irradiation levels d) CO_2, O_2 concentration and temperature	K1	CO3
6	Infer how the edible coatings such as chitosan and alginate improve fruit shelf life a) By increasing sugar content b) By reducing microbial load and respiration rate c) By increasing water activity d) By enhancing protein content	K2	CO3
7	Which platform test is most commonly used to assess the acidity of raw milk? a) Clot-on-boiling test b) Alcohol test c) Resazurin reduction test d) All of the above	K1	CO4
8	Homogenization of milk is primarily done to: a) Kill pathogenic microorganisms b) Prevent cream separation by reducing fat globule size c) Standardize milk fat content d) Increase shelf life by freezing	K2	CO4
9	Pasteurization of milk is designed primarily to: a) Kill all microorganisms b) Destroy pathogenic microorganisms without major nutrient loss c) Increase viscosity of milk d) Remove cream and fat	K1	CO5

Cont...

10	Identify which non-thermal food processing method involves applying very short bursts of high voltage electricity? a) Ohmic heating b) High-pressure processing c) Pulsed electric fields d) Ultrasound treatment	K2	CO5

SECTION - B (35 Marks)

Answer **ALL** questions

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

Question No.	Question	K Level	CO
11.a.	Describe the physico-chemical properties of cereals and explain how they influence processing and utilization.	K2	CO1
	(OR)		
11.b.	Explain the paddy processing steps and add notes on different by-products obtained during rice milling and their industrial applications.		
12.a.	Illustrate the traditional and modern methods of pulse milling.	K3	CO2
	(OR)		
12.b.	Examine the unit operations involved in oilseed processing.		
13.a.	Illustrate the steps in canning peas.	K4	CO3
	(OR)		
13.b.	Point out the advantages of irradiation of processed fruits and vegetables.		
14.a.	Predict the nutritional losses during the processing of milk.	K5	CO4
	(OR)		
14.b.	Explain the preservation methods of meat with suitable examples.		
15.a.	Explain the principle of High-Pressure Processing (HPP) and its advantages in the food industry.	K5	CO5
	(OR)		
15.b.	Summarize the steps in the extraction of oleoresin.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

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

Question No.	Question	K Level	CO
16	Interpret on Unit operations in Jowar Processing.	K2	CO1
17	Construct the refining steps and discuss the utilization of defatted oilseed cakes.	K3	CO2
18	Examine the physical and chemical treatments used to increase the post-harvest shelf life of fruits and vegetables.	K4	CO3
19	Outline about the composition of mushroom and sketch the methods of dehydration and freezing of mushroom.	K6	CO4
20	Explain the concept of hurdle technology in food preservation.	K5	CO5

Z-Z-Z END