

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(Second Semester)

Branch - FOOD TECHNOLOGY MANAGEMENT

GRAIN SCIENCE 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	Which of the following is the pseudocereal crop? a. Maize b. Rice c. Barley d. Buckwheat	K1	CO1
	2	Show the amino acid deficient in cereals. a. Methionine b. Lysine c. Tyrosine d. Arginine	K2	CO1
2	3	Choose the nutrient deficient in Polished rice. a. Iron b. Thiamine c. Vitamin K d. Selenium	K1	CO3
	4	Infer moisture content considered safe for Rice storage. a. 10 % b. 12 % c. 14 % d. 16 %	K2	CO3
3	5	Name the instrument used to find the resistance of dough to mixing with paddles. a. Alveograph b. Farinograph c. Extensiograph d. Mixograph	K1	CO2
	6	Interpret the purpose of Tempering of Wheat. a. To improve aesthetic quality b. To facilitate easier separation of bran and endosperm c. To enhance flavour d. To facilitate fermentation	K2	CO2
4	7	Find the botanical name of Pearl Millet. a. <i>Triticum aestivum</i> b. <i>Pennisetum glaucum</i> c. <i>Oryza sativa</i> d. <i>Sorghum bicolor</i>	K1	CO4
	8	Relate the stabilization process of oats that inactivates lipase enzyme activity. a. Kilning b. Bricking c. Crystallization d. Freezing	K2	CO4
5	9	What is the primary function of an emery roller in pulse milling? a. Size reduction b. Pitting c. Packaging d. Sorting	K1	CO5
	10	Show the quality index used to detect rancidity of oil. a. Peroxide value b. Baudouin test c. Sugar acid ratio d. Benedict's test	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.	Build an overview of Cereal production and utilization in India.	K3	CO1
	(OR)			
	11.b.	Develop an outline of the effect of processing on the nutritional value of Cereals.		
2	12.a.	Construct a diagram of rice grain and detail the nutritional composition.	K3	CO3
	(OR)			
	12.b.	Identify the utilization of byproducts from rice milling.		
3	13.a.	Inspect the role of leavening agents and flour improvers in baking.	K4	CO2
	(OR)			
	13.b.	Simplify the Bread Making Process.		
4	14.a.	Classify millets and elaborate on the pearling process of millets.	K4	CO4
	(OR)			
	14.b.	List and detail the critical parameter used to evaluate the quality of millet-based products.		
5	15.a.	Recommend strategies to reduce antinutritional factors and toxic substances in pulses.	K5	CO5
	(OR)			
	15.b.	Appraise the methodology for the production of soybean isolates.		

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	Distinguish dry and wet milling of corn with a neat illustration	K4	CO1
2	17	Analyze the milling operations and equipment used in paddy processing.	K4	CO3
3	18	Examine the significance of starch and gluten in the rheological properties of wheat flour dough	K4	CO2
4	19	Evaluate the health benefits of bioactive compounds present in millets. Discuss the process flow diagram of millet-based value-added products	K5	CO4
5	20	Explain the steps involved in edible oil processing from oil seed	K5	CO5

Z-Z-Z

END