PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024
(Second Semester)

Branch – **FOOD TECHNOLOGY MANAGEMENT**

POST HARVEST MANAGEMENT & PROCESSING OF FRUITS & VEGETABLES

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	Name the stage when a fruit is capable of further development when it is harvest. a. Horticulture maturity b. Physiological maturity c. Tropical maturity d. None of the above	K1	CO1
	2	Infer Transpiration rate = transpiration coefficient X mass X _____. a. vapor pressure difference b. relative humidity difference c. water activity d. residual respiration	K2	CO1
2	3	Mention the fully reactive blanketing of MAP. a. CO_2 or CO_2/O_2 b.CO_2/N_2 c. O_2/CO_2 d.N_2	K1	CO2
	4	Show the wax coating that is NOT allowed on fruits. a. Beeswax b. Carnauba wax c . Petroleum wax d. Shellac wax	K2	CO2
3	5	The head space in the canned food shall not be more than a. 1.6 cm b.2.6 cm c. 3.6 cm d.4.6 cm	K1	CO3
	6	Indicate the combination factor that leads to a very high deterioration rate in fresh produce. a. Low temperature and High RH b. Low temperature and Low RH c. High temperature and High RH d. High temperature and Low RH	K2	CO3
4	7	Which of the following storage method involves air forced through wet cooling pads? a. Cellars b. Windbreaks c. Evaporative cooling d. Night ventilators	K1	CO4
	8	Recall the other name for forced air cooling. a. Pressure cooling b. Room cooling c. Hydrocooling d. Precooling	K2	CO4
5	9	What is the appropriate TSS content in jams? a. 62% b.68% c.75% d.80%	K1	CO5
	10	Fruit ingredient finely divided by sieving, screening or other mechanical means is called a. Fruit pulp b.Fruit juice c. Pit fragments d.Fruit puree	K2	CO5

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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.	Evaluate the various determinants and methods of judging maturity indices.	K3	CO1
		(OR)		
	11.b.	Recommend the post-harvest management system to minimize pre and post-harvest losses in fruits and vegetable commodities.		
2	12.a.	Choose the applications of irradiation as a treatment option to enhance the quality attributes of root vegetables.	K3	CO2
		(OR)		
	12.b.	Show the impact of minimal processing on extending the shelf-life of fruits.		
3	13.a.	State the factors affecting drying of fruits and vegetables.	K4	CO3
		(OR)		
	13.b.	Simplify aseptic processing with a flow chart and explain the process.		
4	14.a.	Compare the various types of freezing technologies used for fresh produce.	K4	CO4
		(OR)		
	14.b.	Appraise the impact of air, moisture and humidity on freezing foods.		
5	15.a.	Determine the quality attributes and test of doneness of jams.	K5	CO5
		(OR)		
	15.b.	Explain the role of ingredients in pickle manufacturing.		

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	Evaluate the role of ethylene in the regulation of fruit ripening.	K5	CO1
2	17	Explain the post-harvest handling of fruits from farm to fork.	K5	CO2
3	18	Compare the applications of various non-thermal techniques of fruits and vegetable preservation.	K4	CO3
4	19	Examine the effect of low temperature storage on the physical, chemical, microbiological and nutritional characteristics of fruits.	K4	CO4
5	20	Elaborate on the role of ingredients, technological and quality aspects of vegetable powders.	K6	CO5

Z-Z-Z END