## PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

#### **BVoc DEGREE EXAMINATION MAY 2025**

(Second Semester)

### **Branch-FOOD PROCESSING TECHNOLOGY**

#### FOOD PROCESS ENGINEERING

Time: Three Hours

Maximum: 75 Marks

#### SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

 $(10 \times 1 = 10)$ 

Module	Question	Question	K Level	со
<b>No.</b>	No. 1	Halogen and infrared drying are the examples of  a) Thermogravimetric analysis b) Freeze drying methods c) Non-thermal analysis d) Desiccant methods	K1	CO1
	2	is the amount of moisture a material will absorb relative to ambient temperature and humidity conditions  a) Hydrophobic action b) Hydroscopic action c) Hydrophilic action d) All of the above	K2	CO1
2	3	Spiral separator separates the grains on the basis ofa) Length b) Mass c) Roundness d) Density	K1	CO2
	4	Specific gravity separator works on the principle of  a) Characteristics of grain to flow down over an inclined surface b) Flotation of the particles due to upward movement of air c) Both a & b	K2	CO2
3	5	In hammer mill, the force applied on grains is cut by a) Shear b) Impact c) Crushing d) Crushing and shear	K1	CO3
	6	In freeze drying, the removal of moisture takes place due to a) Sublimation b) Condensation c) Politing d) Vaporization	К2	CO3
4	7	Pneumatic conveying is done under which of the mentioned conditions.  a) High pressure  b) Vacuum	K1	CO4
	8	Which of the following products under shelling process?  a) Fruits b) Nuts c) Tubers d) All of the above	K2	CO4
5	9	Which method uses activated, highly reactive gaseous molecules to inactivate contaminating microorganisms in food and packaging materials  a) Ultrasonication b) Irradiation c) Cold plasma d) Pulsed electric field	K1	COS
	10	Choose the following is also called as high pressure pascalization or cold pasteurization  a) Cold plasma b) Irradiation c) Manosonication d) High pressure processing	K2	CO

#### SECTION - B (35 Marks)

Answer ALL questions
ALL questions carry EQUAL Marks

 $(5 \times 7 = 35)$ 

Module No.	Question No.	Question	K Level	СО
1	11.a.	Define moisture content and its need in food processing. How do you represent moisture content?		
	(OR)		K1	CO1
	11.b.	What is the need to study about engineering properties of food materials? Explain with four examples.		
2	12.a.	Illustrate the working of spiral separator along with its principle.	K2	
		(OR)		CO2
	12.b.	List the possible impurities of raw materials and mention the suitable cleaning equipment to remove such impurities.		<u> </u>
	13.a.	Explain the factors influencing the drying of foods.	K2	CO3
3		(OR)		
	13.b.	Summarize cryogrinding of spices and write its advantages.		
4	14.a.	5kg of Raw groundnut with shell needs to be decorticated by manual labor. Choose a suitable decorticator for the above application. Explain with a neat sketch.		
	(OR)		K3	CO4
	14.b.	A bulk volume of coarse maize needs to be transported to the dryer with the application of air as medium. Summarize the suitable conveying equipment.		
5	15.a.	Compare thermal and non-thermal processing of foods and list any four methods under each processing methods.	17/2	CO5
	(OR)		K3	COS
	15.b.	How the fourth state of matter is applied in processing? Explain the concept.	<u> </u>	

# SECTION -C (30 Marks) Answer ANY THREE questions ALL questions carry EQUAL Marks

 $(3 \times 10 = 30)$ 

Module No.	Question No.	Question	K Level	со
1	16	Explain the moisture measurement of foods using direct method.	K1	CO1
2	17	Illustrate the working of magnetic separator along with its principle.	K2	CO2
3	18	Classify dryers with examples.	K2	CO3
4	19	Summarize the principle of shelling and its application in food processing.	К3	CO4
.5	20	Application of high-pressure processing to the foods does not collapse the product. Justify it.	K3	CO5