

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMEER 2024
(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 × 1 = 10)

Question No.	Question	K Level	CO
1	The moisture content of biscuits compared to that of breads is a. Lower b. Higher c. Same d. None of the above	K1	CO1
2	The water activity of fresh fruits, vegetables, meats and milk falls in the range of a. 0.97 to 0.99 b. 0.90 to 0.95 c. 0.85 to 0.90 d. 0.80 to 0.85	K2	CO1
3	In inclined draper, the major factor causing the separation of grain is: a. Shape and size b. Shape and surface texture c. Shape and weight d. Weight and size	K1	CO2
4	Indented cylinder separator separates the grains on the basis of: a. Weight b. Relative length c. Length d. All are correct	K2	CO2
5	Which drying method is best suited for heat-sensitive food products? a. Sun drying b. Spray drying c. Drum drying d. Vacuum drying	K1	CO3
6	Which equipment is commonly used for size reduction in food processing, particularly for grains and seeds? a. Hammer mill b. Homogenizer c. Centrifuge d. Wet Grinder	K2	CO3
7	What is the primary function of a belt conveyor in food processing? a. To transport liquids between processes b. To move food products in a continuous, horizontal flow c. To sort and classify food products based on size d. To remove moisture from food products	K1	CO4

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8	Which of the following application is a belt conveyor used for? a. Material transportation over long distances b. Material transportation within premises c. Material transportation for processing d. All of the above mentioned	K2	CO4
9	How pulsed electric field destroys microorganisms? a. Formation of large pores in the bacterial membrane b. Formation of large pores in the bacterial chromosomes c. Formation of large pores in the bacterial nucleus d. Formation of large pores in the bacterial mitochondria	K1	CO5
10	Which of the following is true about Sound Ultrasound? a. Generates mechanical energy to enhance chemical action on surfaces b. Scrubbing action loosens the dirt particles and cleans the food particle c. Both a and b d. None of the mentioned	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.	Explain the indirect methods of moisture measurement.	K2	CO1
	(OR)		
11.b.	Interpret the difference between moisture content and water activity and also list any 6 factors that influence the water activity of food products.		
12.a.	Freshly harvested wheat kernels contain mixed impurities. List out and relate the impurities with its suitable separators.	K2	CO2
	(OR)		
12.b.	Explain how the efficiency of separators is calculated and explain the different factors that affects its efficiency.		
13.a.	Illustrate the mechanism of drying with drying curves.	K2	CO3
	(OR)		
13.b.	Elaborate about any 2 size reduction equipments.		
14.a.	Classify the different conveying equipments used in food industries and explain about any one.	K2	CO4
	(OR)		
14.b.	Explain why shelling/ decortication is necessary and describe about any one hand operated decorticator with neat sketch.		

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15.a.	Describe the working and principle of pulsed electric field with a neat schematic diagram.	K2	CO5
(OR)			
15.b.	Explain the types of cold plasma generation methods.		

SECTION -C (30 Marks)

Answer ANY THREE questions

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

Question No.	Question	K Level	CO
16	Why it is important to study about the engineering properties of food materials and also mention its applications.	K1	CO1
17	List out and explain the physical characteristics of seeds and mention the need for cleaning.	K2	CO2
18	List out and explain the different extrinsic parameter that affect the drying rate of food products.	K2	CO3
19	Identify the suitable conveying system for conveying paddy grains from one end to the other end of same floor. Explain its working with neat sketch.	K3	CO4
20	Identify the reason, why non-thermal methods are better than thermal methods of food processing. Also mention the limitations in using non-thermal methods.	K3	CO5

Z-Z-Z END