PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2023
(First Semester)

Branch – **FOOD TECHNOLOGY MANAGEMENT**

FOOD 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	Identify that Orifice type viscometer covert viscosity to _____ a) Force b) Pressure c) Displacement d) Potential difference	K1	CO1
2	Which of the following is not converting viscosity to pressure? a) Redwood viscometer b) Saybolt viscometer c) Orifice viscometer d) Rotameter viscometer	K2	CO1
3	When humidity ratio of air ____ air is said to be dehumidified. a) increases b) decreases c) remains constant d) none of the mentioned	K1	CO2
4	When air passes through silica gel? a) it absorbs water vapour molecules b) latent heat of condensation is released c) dbt of air increases d) all of the mentioned	K2	CO2
5	Which of the following is a method of heat transfer? a) Convection b) Radiation c) Conduction d) All of the mentioned	K1	CO3
6.	Which of the following heat transfer is used in non-dimensional parameter known as Stanton number? a) Natural convection heat transfer b) Unsteady state heat transfer c) Condensation heat transfer d) Forced convection heat transfer	K2	CO3
7	When is super saturation attained? a) When the solvent contains more solute b) When the solute contains more solvent c) When the solvent contains less solute d) When the solute contains less solvent	K1	CO4
8	Which of the following is crystallization? a) Solid-solid separation b) Solid-liquid separation c) solid-gas separation d) Liquid- gas separation	K2	CO4
9	The process of reverse osmosis is also known as _____ a) Hyper-filtration b) Double-filtration c) Double-osmosis d) Hyper-osmosis	K1	CO5
10	Indicate the method commonly used method to separate naphthalene from benzoic acid is (a) sublimation (b) crystallisation (c) distillation (d) chromatography	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.	Discuss the application of Bernoulli Equation.	K5	CO1
	(OR)		
11.b.	Elaborate the methods used for the Measurement of Viscosity.		
12.a.	Elucidate the role of Psychrometric charts in drying.	K3	CO2
	(OR)		
12.b.	Discuss about the various Thermodynamic properties.		
13.a.	Summaries about the different modes of Heat Transfer.	K3	CO3
	(OR)		
13.b.	Elucidate about the Convective Heat transfer in food processing.		
14.a.	Summarize about Particle size distribution in comminuted products.	K4	CO4
	(OR)		
14.b.	Outline the power requirements by Rittingers and Kicks law.		
15.a.	Highlight the features of Flash Vaporization.	K4	CO5
	(OR)		
15.b.	Discuss briefly about the different types of membranes and its application.		

SECTION -C (30 Marks)
Answer **ANY THREE** questions

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

Question No.	Question	K Level	CO
16	Examine the importance of Newtonian and non-Newtonian fluids behavior in food application.	K4	CO1
17	Elucidate briefly about the different types of Steam boilers.	K4	CO2
18	List the applications of Mass transfer in food processing.	K4	CO3
19	Analyze the Crystallization Process and its application in food industry.	K4	CO4
20	Discover the role of Reverse Osmosis in food applications.	K4	CO5

Z-Z-Z   END