Name:	WIID=C
Enrolment No:	UNIVERSITY OF TOMORROW

UPES

End Semester Examination, December 2023

Course: Pharmaceutical Engineering

Program: B. Pharm.
Course Code: BP304T
Instructions: All the sections are compulsory

Semester: III Time: 03 hrs. Max. Marks: 75

Instructions: All the sections are compulsory. SECTION A

(20Ox1M=20 Marks)

	(20Qx1M=20 Marks)		
S. No.		Marks	COs
Q 1	Reynold's number is indicative of a. Frictional Factor b. Type of Fluid flow c. Pumping Rate d. Roughness of pipe	1	CO1
Q 2	How many liquids are used in differential manometer? a. Four b. One c. Three d. Two	1	CO1
Q 3	Which are the modes observed in a ball mill for size reduction? a. Attrition and cutting b. Compression and impact c. Cutting and compression d. Impact and attrition	1	CO1
Q 4	Which one of the following indicates the nominal size of aperture? a. Area of mesh as percentage b. Distance between two adjacent wires c. Number of meshes per linear length d. Wire having specified diameter that gives suitable aperture	1	CO1
Q 5	Which of the following is not the process of size reduction? a. Comminution b. Pulverization c. Sedimentation d. Clarification	1	CO1
Q 6	In the heat interchanger, finned tubes are used for one of the following purposes. a. Increasing the surface area b. Introducing steam c. Introducing the cold fluid d. Reducing the size of apparatus	1	CO2
Q 7	Which is the factor that does not influence the rate of evaporation?	1	CO2

	a. Difference in vapour pressure		
	b. Melting points of solids		
	c. The surface area of the evaporator		
	a. d. The viscosity of the solution		
Q 8	The body which absorbs all radiations incident upon it, is called as	1	CO2
	a. Black body		
	b. White body		
	c. Opaque body		
	d. Transparent body		
Q9	Calendria consists of the number of	1	CO2
	a. Baffles		
	b. Jackets		
	c. Outlets		
	d. Elongated tubes		
Q 10	Which one of the following methods is known as differential distillation?	1	CO2
	a. Azeotropic Distillation		
	b. Molecular Distillation		
	c. Simple Distillation		
	d. Stream Distillation		
Q 11	In which type of mixer, the trough is stationary?	1	CO3
	a. Barrel mixer		
	b. Double cone blender		
	c. Ribbon mixer		
	d. Zigzag mixer		
Q 12	High vacuum is employed the process of	1	CO3
	a. Spray Drying		
	b. Freeze drying		
	c. Drum drying		
	d. Tray drying		
Q 13	List any two used of spray dryer.	1	CO3
Q 14	In dispensing, which one of the following terms is NOT used for mixing?	1	CO3
	a. Sizing		
	b. Spatulation		
	c. Trituration		
0.15	d. Tumbling		604
Q 15	If the amount of materials to be processed is huge and a low centrifugal effect is	1	CO4
	enough, then one of the following is economical to use		
	a. Large centrifuge operating at high speed.		
	b. Large centrifuge operating at low speed.		
	c. Small centrifuge operating at high speed.		
	d. Small centrifuge operating at low speed.		

Q 16	Which one of the following is not a mechanism of filtration?	1	CO4
	a. Entanglement		
	b. Impact		
	c. Impingement		
	d. Straining		
Q 17	Which one of the following forces greatly enhances the separation forces?	1	CO4
	a. Brownian forces		
	b. Centrifugal forces		
	c. Gravitational forcesd. Van der Waals forces		
Q 18	A severe form of corrosion that develops in highly localized areas of the metal surface	1	CO5
	is called as		
	a. Erosion		
	b. Galvanic corrosion		
	c. Pitting corrosion		
0.10	d. Stress corrosion		607
Q 19	Protection against IR rays can be achieved using glass containers.	1	CO5
	a. Amber colored		
	b. Green colored		
	c. Transparent		
Q 20	d. Yellow colored	1	CO5
Q 20	Galvanic corrosion is observed when an external electric current in the solution is passed between one of the following combinations.	1	COS
	a. Gold & platinum		
	b. Iron & hydrogen		
	c. Iron & iron		
	d. Zinc and copper		
	SECTION B (20 Marks)		
	(2Qx10M=20 Marks) Attempt 2 Question out of 3		
Q 1	a) Explain construction and working of cyclone separator.	5+5	CO1
~ ·	b) Discuss the importance of speed of rotation of balls in size reduction process	515	
	using ball mill.		
Q 2	Explain the mechanisms of heat transfer.	10	CO2
Q 3	a) Describe construction and working of freeze dryer.	5+5	CO3
	b) Explain construction and working of fluidized bed dryer.		
	SECTION-C (35 Marks) (7Qx5M=35 Marks)		
	Attempt 7 Question out of 9		
Q 1	Differentiate between laminar flow and turbulent flow of liquids.	5	CO1
Q 2	Explain Rittinger's theory of size reduction.	5	CO1
Q 3	Write short note on evaporating still.	5	CO2

Q 4	Discuss the principle of molecular distillation.	5	CO2
Q 5	Explain working of sigma blade mixer.	5	CO3
Q 6	Describe the working and uses of perforated basket centrifuge.	5	CO4
Q 7	How many types of filter mediums are there? Explain their uses.	5	CO4
Q 8	Describe advantages of glass-steel over steel and glass.	5	CO5
Q 9	Write a short note on the factors affecting corrosion.	5	CO5