Graphic Era HILL UNIVERSITY

Sessional I (Odd) Semester Examination September 2025

Roll no.....

Name of the Course: B. Pharm
Semester: III
Name of the Paper: Pharmaceutical Engineering
Paper Code: BP 304 T
Time: 1.5hour **Maximum Marks: 30**

Note:

(i) This question paper contains three sections
(iI) All the sections are compulsory

Section-A

MULTIPLE CHOICE QUESTION **10 X 1 = 10 MARKS**

S.NO.	QUESTIONS	Cos
1.	Size reduction is also known as: a) Comminution b) Pulverization c) Diminution d) All of the above	CO-1
2.	The working of Fluid energy mill is based on principle of a) Impact b) Attrition c) Cutting d) Both a & b	
3.	Which method is commonly used for size separation from a Suspension? a) Mechanical Sieve Shaker. b) Air Separator. c) Bag Filter d) Elutriation.	
4.	The principal behind the working of Mechanical Sieve Shaker is ---- a) Oscillation and Vibration. b) Gyration & Oscillation. c) Vibration and Gyration. d) Centrifugal Force.	
5.	Most simple and most frequently used method for size separation is. ----- a) Sieve Shaker. b) Cyclone Air Separator. c) Air Separator. d) Elutriation.	
6.	In Azeotropic distillation _____ remains low: a) Heat b) Volatility c) Relativity Volatility d) None of these	CO-2
7.	Rate of evaporation is_____: a) Directly proportional to temperature of liquid b) Inversely proportional to temperature of liquid c) Independent of temperature of liquid d) Directly proportional to humidity of surrounding air	

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8.	Which of the following is a characteristic of a horizontal tube evaporator? a) Agitation is provided only by bubbles leaving the evaporator as vapor b) The tube bundle is arranged vertically, with the solution inside the tubes condensing outside c) To handle viscous solution a pump is used to force liquid upwards d) Also called short vertical tube evaporator	
9.	In the fractionating column of fraction distillation, as we go higher in the column the…..? a) Temperature becomes lower b) Temperature becomes higher c) minimum absorption occurs d) Sublimation risk increases	
10.	Unit of the rate of heat transfer is a) Joule b) Newton c) Pascal d) Watt	

Section B

Short Questions: Attempt any two **2x5 = 10**

S.NO.	QUESTIONS	CO's
1.	Explain the Reynolds classic experiment elucidating different types of flow patterns, when a liquid flows through a close channel.	CO 1
2.	Describe all the energy losses, when fluid flows through the pipe.	CO 1
3.	Explain with the relevant procedure the separation of an azeotropic mixture.	CO 2

Section C

Long questions: Attempt any one **1x10 = 10**

S.NO.	QUESTIONS	CO's
1.	Derive Bernoulli's equation stating the assumptions along with its applications in pharmaceutical.	CO 1
2.	Classify evaporators. Describe construction and working of film evaporators.	CO 2