

MSc Sem.-2 Examination

409

Pharma Science

May-2025

Time : 2-30 Hours]

[Max. Marks : 70

Q1A	Explain the mechanism and modes of stress applied in size reduction.	7 Marks
Q1B	Explain the principle, construction and working of Fluid energy mill used in size reduction along with its advantages and disadvantages.	7 Marks
OR		
Q1A	Explain in detail theory of comminution.	7 Marks
Q1B	Give the principle, construction and working of Rotex screen used in size separation.	7 Marks
OR		
Q2A	Explain the principle, construction and working of Sigma blade mixer along with its advantages and disadvantages.	7 Marks
Q2B	Write a detailed note on different types of filter media and filter aids used in filtration.	7 Marks
OR		
Q2A	Explain the principle, construction and working of Twin shell blender along with its advantages and disadvantages.	7 Marks
Q2B	Give a brief note on theories of filtration.	7 Marks
OR		
Q3A	Explain Raoult's and Henry law in detail with suitable example.	7 Marks
Q3B	Give a brief note on general equipment for distillation.	7 Marks
OR		
Q3A	Explain the principle, construction and working of Vertical tube evaporator along with its advantages and disadvantages.	7 Marks
Q3B	What are the different factors influencing Evaporation?	7 Marks
OR		
Q4A	Explain equilibrium relationships in drying process of a wet solid.	7 Marks
Q4B	Explain the design of HVAC system.	7 Marks
OR		
Q4A	Explain the principle, construction and working of Tray dryer along with its advantages and disadvantages	7 Marks
Q4B	What are the factors affecting selection of drying equipment?	7 Marks
OR		
Q5	Answer the following questions (Any Seven)	14 Marks
I	What is the discharge chute in size reduction equipment?	2 Marks
II	What does nominal size of aperture mean?	2 Marks
III	Give the principle of Alpine airjet sieve.	2 Marks
IV	What are the causes due to which segregation may occur during mixing?	2 Marks
V	What is a convective mixing?	2 Marks
VI	What are different mechanisms of filtration?	2 Marks
VII	How does the surface area affect the rate of evaporation?	2 Marks
VII	How does the Florentine receiver work?	2 Marks
OR		
IX	What is the difference between distillate and distilland?	2 Marks
X	What is the drying rate curve?	2 Marks
XI	What is the difference between humidifiers and dehumidifiers?	2 Marks
XII	Give the difference between bound and unbound water.	2 Marks

BEST OF LUCK