

Pharmaceutical Engineering_BP304T
Question Bank

Unit 1

2 Marks

1. Draw diagram of venturi meter/orifice meter.
2. Enlist various energy losses.
3. Define fluid statics and fluid dynamics.
4. What is significance of size reduction? Explain factors affecting it.
5. Define size reduction. Enlist advantages and disadvantages of size reduction.
6. Give importance of size reduction in pharmacy.
7. Enlist modes of size reduction.
8. Why ball mill is operated at moderate speed?
9. Draw well labelled of hammer mill/ ball mill/ fluid energy mill.
10. Give objective of size reduction.
11. Elaborate terms in the Darcy's equation.

5 Marks

1. Explain Bernoulli's theorem and write its application.
2. Write about Reynolds's experiment and its significance.
3. Write a note on energy losses.
4. Write a note on Venturi meter/Orifice meter.
5. Write a short note on simple/U tube manometer.
6. Write a short note on ball mill.
7. Explain factors affecting size reduction.
8. Write a note on hammer mill.
9. Define size reduction with its importance in pharmacy.
10. Explain in detail edge runner mill/end runner mill.
11. Explain in detail principal, construction and working of sieve shaker.
12. Write note on cyclone separator.
13. Write note on air separator.
14. Write note on elutriation tank.

10 Marks

1. Define size reduction. Discuss factors influencing size reduction. Add a note on fluid energy mill.
2. Define size reduction. Discuss factors influencing on size reduction. Add note on Ball Mill.

Unit 2

2 Marks

1. What are different modes of heat transfer?
2. Define heat transfer. State the modes of heat transfer.
3. Define. i) Conduction ii) Convection ii) Radiation
4. State Fourier's law of heat transfer.
5. Write applications of heat transfer
6. What are the factors affecting rate of evaporation?
7. Define black body and grey body.
8. What is Stephan Boltzmann's law?

5 Marks

1. Write note on shell and tube heat exchanger.
2. Write a short note double-pipe heat interchanger.
3. Explain construction and working of film evaporator.
4. Define evaporation. Enlist factors affecting rate of evaporation.
5. Explain construction and working of multiple effect evaporators.
6. Explain in detail principal, construction and working of horizontal tube evaporator.

10 Marks

1. Give application of distillation. Explain principal, construction, working and application along with neat labelled diagram of steam distillation.
2. Write principle construction working advantage of fractional distillation Explain it's Application in pharmacy detail.
3. Define evaporation, classify evaporators, and write principle, construction, working and uses of climbing film evaporator.
4. Write a detail note on multiple effect evaporators. Explain about economy of it.

Unit 3

2 Marks

1. What do you mean by bound water and unbound water?
2. Draw neat labelled diagram of fluidized bed dryer.
3. Differentiate between drying and evaporation?
4. Define drying. Give its applications.
5. Give the classification of dryers.
6. Give difference between drying and evaporation.

5 Marks

1. Explain principle of freeze drying.
2. Define drying. Discuss mechanism and theory of drying.
3. Write a note on fluidized bed dryer.
4. Write construction working and uses of drum dryer.
5. Explain Construction & working of spray dryer.

10 Marks

1. Define Bound moisture & unbound moisture. Discuss in detail mechanism & theory of drying.
2. Classify the dryer Explain in detail Fluidized bed dryer and Application of dryer in Pharma Industry.
3. Define drying. Discuss its mechanism and explain in detail about spray dryer.

Unit 4

2 Marks

1. What is the principle of centrifugation?
2. Define filter media and give applications.
3. Define filter aids with examples.
4. Define filter media and filter aids

5 Marks

1. Define filtration. Explain factors affecting filtration rate.
2. Explain construction & working of plate & frame filter
3. Classify filter & write in short Drum filter.
4. Write about Perforated basket centrifuge.

10 Marks

1. What is centrifugation? Classify the centrifuge. Add note on perforated basket centrifuge with it's uses in pharmacy.

Unit 5

2 Marks

1. Enlist any four method of combating corrosion.

5 Marks

1. Explain in detail factor influencing on corrosion.

10 Marks

1. Define corrosion. Explain various factors inflicting corrosion. Add note on various methods of combating corrosion.