

BP304T - Pharmaceutical Engineering

Time : Three Hours



Max. Marks : 75

Notes : 1. All question are compulsory.

1x20

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- 1) If every particle of fluid follows same path, then flow is said to be ----
 - a) Laminar flow
 - b) Turbulent flow
 - c) Fluid flow
 - d) Both a & b
- 2) The Fluid energy mill is also known as -----
 - a) Micronizer
 - b) Jet mill
 - c) Pulverizer
 - d) All of the above
- 3) Most commonly used size separating instrument in laboratory scale is -----
 - a) Cyclone separator
 - b) Sedimentation tank
 - c) Sieve shaker
 - d) None of these
- 4) Flash distillation is also known as -----
 - a) Short path distillation
 - b) Evaporative distillation
 - c) Vacuum distillation
 - d) Equilibrium distillation
- 5) Bernoulli 's equation can be derived from the conservation of -----
 - a) Energy
 - b) Mass
 - c) Angular momentum
 - d) None of these
- 6) Which of the following is also known as roller dryer?
 - a) Tray dryer
 - b) Drum dryer
 - c) Freeze dryer
 - d) Fluidized bed dryer
- 7) The Silverson mixer is used for preparation of -----
 - a) Lotion
 - b) Emulsion
 - c) Elixirs
 - d) Suspension
- 8) Movement of particle can be enhanced during size separation by one of the following modes. -----
 - a) Agitation
 - b) Attrition
 - c) Gravitation
 - d) All of the above
- 9) Differential manometer is used to measure -----
 - a) Pressure in pipe
 - b) Atmospheric Pressure
 - c) Difference of pressure between two points
 - d) None of these
- 10) In air separator centrifugal force for circulation of air is supplied by
 - a) Applying vacuum
 - b) Atomizing air
 - c) Pumping
 - d) Rotating blades
- 11) The total amount of radiation emitted by black body is explained by
 - a) Stefan-Boltzmann law
 - b) Fourier's law
 - c) Radiation
 - d) Scattering

- 12) Feed is preheated in the one of the following evaporator -----
 - a) Climbing film evaporator
 - b) Pan evaporator
 - c) Vacuum evaporator
 - d) All of these
- 13) The product obtained from the condensation of vapours is known as -----
 - a) Distillate
 - b) Slurry
 - c) Distilland
 - d) None of these
- 14) The process of separation of insoluble particles from suspension or slurry is called ---
 - a) Filtration
 - b) Sieving
 - c) Distillation
 - d) Drying
- 15) Which centrifuge is used when deposited solids provide high resistance to the flow of liquid?
 - a) Perforated basket centrifuge
 - b) Non Perforated basket centrifuge
 - c) Super centrifuge
 - d) Semi continuous centrifuge
- 16) Addition of ----- produce amber colored glass.
 - a) Iron oxide
 - b) Zinc oxide
 - c) Magnesium oxide
 - d) All of these
- 17) Corrosion can be prevented by -----
 - a) Use of corrosion inhibitors
 - b) Coating and lining
 - c) By changing the environment
 - d) All of the above
- 18) Which of the following is also called uniform attack corrosion -----
 - a) General corrosion
 - b) Localized corrosion
 - c) Structural corrosion
 - d) All of the above
- 19) To convey lightweight material quickly from one place to another which of the following conveyors is used -----
 - a) Pneumatic conveyor
 - b) Belt conveyor
 - c) Screw conveyor
 - d) All of these
- 20) Borosilicate glass is also known as -----
 - a) Type I
 - b) Type II
 - c) Type III
 - d) Type IV

2. Solve any two. **20**

- a) Enlist flow rate measuring devices. Explain Reynolds number & its significance.
- b) Describe in detail mechanism of heat flow through conduction.
- c) Define size separation. Explain cyclone and air separator.

3. Solve any seven. **35**

- a) Explain cyclone separator.
- b) Explain principle, procedure & application of distillation under reduced pressure.
- c) Draw the neat sketch of the sigma blade blender and give its working.
- d) Give principle construction and working of climbing film evaporator.
- e) Give difference between evaporation and distillation.
- f) Describe semi continuous centrifuge and give their advantages.
- g) Write a note on double cone blender.
- h) Explain plate and frame press filter.
- i) Explain theories of corrosion.
- j) Discuss the construction, working. advantages and disadvantages of spray dryer.
