

B.Pharm. (CBCS Pattern) Semester-III
BP304T - Pharmaceutical Engineering

P. Pages : 3

Time : Three Hours



GUG/S/25/10887

Max. Marks : 75

Notes : 1. All questions are compulsory.

1. Multiple Choice Question – 20

- i) Following is not a mechanism of size reduction.
 - a) Impact
 - b) Cutting
 - c) Brushing
 - d) Elutriation
- ii) As per IP-1996 the pharmaceutical powder were classified into ----- types.
 - a) 3
 - b) 4
 - c) 5
 - d) 6
- iii) The main mechanism of double cone blender is -----
 - a) Diffusion mixing
 - b) Turbulent mixing
 - c) Shear
 - d) Molecular diffusion
- iv) Cyclone separator work on principle.
 - a) Centrifugation
 - b) Agitation
 - c) Vibration
 - d) Gyration
- v) The moisture inside the substance known as –
 - a) Bound moisture
 - b) Unbound moisture
 - c) Equilibrium moisture
 - d) Free moisture
- vi) The porous medium used to retain the solid is known as –
 - a) Filter cake
 - b) Filter media
 - c) Slurry
 - d) Filtrate
- vii) Which of the following equipment work on principle of filtration.
 - a) Bag filter
 - b) Cyclone separator
 - c) Fieve
 - d) Elutriator
- viii) Manometer is used to measure -----
 - a) Fluid flow
 - b) Fluid pressure
 - c) Temperature
 - d) Heat
- ix) As per IP-1996, fine powder should pass through sieve no –
 - a) 10
 - b) 22
 - c) 44
 - d) 85
- x) The liquid which is to be distilled is known as –
 - a) Distillate
 - b) Condensate
 - c) Distiland
 - d) Slurry

- xi) Which one of following is a liquid – liquid mixing device?
- | | |
|------------------------|-----------------------|
| a) Double cone blender | b) Twin shell blender |
| c) Ribbon blender | d) Paddle mixer |
- xii) Which distillation is called as “Evaporative distillation” or short path distillation?
- | | |
|---------------------------|----------------------------|
| a) Simple distillation | b) Vacuum distillation |
| c) Molecular distillation | d) Fractional distillation |
- xiii) ----- prevent the plugging of filter medium.
- | | |
|------------------------|----------------------|
| a) Pharmaceutical aids | b) Viscosity builder |
| c) Glidant | d) Filter aids |
- xiv) Which one of the following is a continuous type centrifuge?
- | | |
|--------------------------|----------------------|
| a) Super centrifuge | b) Perforated basket |
| c) Non-perforated basket | d) None of the above |
- xv) Size separation is also known as -----
- | | |
|------------|--------------|
| a) Sifting | b) Screening |
| c) Sieving | d) All |
- xvi) Which of the following does not influence filtration
- | | |
|----------------|------------|
| a) Temperature | b) Density |
| c) Viscosity | d) pH |
- xvii) Bernoulli's equation can not be applied when the flow is
- | | |
|---------------|--------------|
| a) Rotational | b) Turbulent |
| c) Unsteady | d) All |
- xviii) Silverman mixture is used for preparation of
- | | |
|-----------|---------------|
| a) Lotion | b) Emulsion |
| c) Elixir | d) Suspension |
- xix) Fluid energy mill work on principle of -----
- | | |
|------------|---------------|
| a) Impact | b) Attrition |
| c) Cutting | d) Both a & b |
- xx) Drying is essential after one of following unit operation.
- | | |
|--------------------|-------------------|
| a) Crystallization | b) Evaporation |
| c) Mixing | d) Size Reduction |

2. Long answer question solve **any two**.

**10x2
=20**

- a) Write a principle, construction, working of multiple effect evaporator and give its economy.
- b) Write principle, construction, working, merits and demerits of super centrifuge.
- c) Write in detail about perforated and Non-perforated basket centrifuge.

3. Short answer question solve **any seven**.

5x7
=35

- a) Explain the working of cyclone separator and its use.
- b) What is corrosion? Mention the factor that influencing rate of corrosion.
- c) Write construction and working of steam Jacketed Kettle.
- d) Describe the mechanism of liquid mixing
- e) Describe factor that influencing the selection of milling equipment for size reduction.
- f) Describe the principle and application of steam distillation.
- g) Write a factor affecting Rate of Evaporation.
- h) Short note on FBD.
- i) Explain simple manometer.
