B. Pharm. Third Semester (New Course)

Pharmaceutical Engineering : BP 304 T

P. Pages : 3 | AV - 2379

Time : Three Hours | Max. Marks : 75

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Notes : 1. Answer **all** questions.
2. Illustrate your answer necessary with the help of neat sketches.
3. Use of pen Blue/Black ink/refill only for writing the answer book.

1. (MCQ) Multiple Choice Questions. **20**

i) Fluid Static deals with
a) Fluid at rest b) Fluid in motion
c) Both a & b d) None

ii) Reynold's number can be expressed by which of following formula.
a) $Re = Du\rho / n$ b) $Re = 2Du\rho / n$
c) $Re = 3Du\rho / n$ d) $Re = Du\rho / 2n$

iii) Pitot tube also known as.
a) Variable head meter b) Insertion meter
c) Area meter d) None

iv) If mixture of liquid is obtained by the use of stirrer, is known as
a) Forced convection b) Natural convection
c) Both d) None

v) If compound exist in more than one crystalline form, is known as
a) Polymorphs b) Isomorphs
c) Amorphous d) None

vi) In evaporation process final product or residue will be
a) Solid b) Concentrated liquid
c) Aqueous liquid d) None

vii) Evaporation pan is not suitable for heat sensitive material because of
a) Long duration of exposure b) Short duration of exposure
c) Both d) None

viii) FMC is expressed as.
a) FMC = Total water content – EMC.
b) FMC = Total water content + EMC.
c) FMC = Total water content – EMC/100
d) FMC = Total water content + EMC/100

ix) Meta filter is also known as
a) Cartridge Filter b) Edge Filter
c) Both d) None

x) Centrifugation is mainly used to separate.
   a) Two immiscible liquids b) A solid from liquid
   c) Both d) None

xi) Triple roller mill work on the principle of
   a) Agitation b) Shearing
   c) Both d) None

xii) Which of the following mixer is used to mix semisolics.
   a) Triple roller mill b) Colloidal mill
   c) Sigma mixer d) All of above

xiii) 'Poly disperse' means
   a) Consist of different size of particles.
   b) Consist of same size of particles.
   c) Both
   d) None

xiv) Dry Corrosion means.
   a) Direct attack of dry gases on metals.
   b) Direct attack of aqueous media on metals.
   c) Both
   d) None

xv) Rotary drum filter is a.
   a) Continuous filter b) Batch filter
   c) Both d) None

xvi) The condensed liquid in distillation process is known as
   a) Distillate b) Distilland
   c) Both d) None

xvii) When drying takes place
   a) When environment is unsaturated
   b) When environment is saturated
   c) When environment is supersaturated
   d) None.

xviii) Blood plasma can be dried by using
   a) Freeze dryer b) Spray dryer
   c) Drum dryer d) None

xix) Ideal solutions are also known as
   a) Real solution b) Perfect solution
   c) Both d) None

xx) In crystallization mechanism the initially formed crystal is known as
   a) Embryo b) Nuclei
   c) Cluster d) All the above

2. Long Answer types questions. (Solve **any two**) **20**

a) Give the types of Manometers. Explain the working, principle and construction of venturi meter with neat sketch.

b) Describe the construction, working, advantages and disadvantages of a multipass heater.

c) Give the principle of filtration process. Explain construction, working advantages and disadvantages of Rotary drum filter.

3. Short answer type question. (Solve **any seven**) **35**

a) What is Reynold's experiment and its significance.

b) Explain various factor affecting selection of a size reduction mill.

c) Give the factor affecting rate of filtration.

d) Describe continuous centrifuges. Give their advantages.

e) Describe the principle and application of steam distillation.

f) Describe construction and working of film. Evaporator of any one type.

g) Describe the working of agitated batch crystallizer.

h) Explain the function of drum dryer & its uses.

i) What is Corrosion? Mention the factor that influence rate of corrosion.

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