B.Pharm. - IInd Year (CBCS Pattern) Sem-IV

BP403T - Physical Pharmaceutics -II

P. Pages : 3 **GUG/W/22/11987**

Time : Three Hours * 2 3 7 6 * Max. Marks : 75

Notes : 1. All questions are compulsory.
2. Diagrams and Chemical equation should be given wherever necessary.

1. Multiple Choice Questions. **20x1 =20**

i) When distance between particles are large, the particle experience attractive force and aggregates are formed. This is known as ----------
a) Primary minimum b) Potential barrier
c) Secondary minimum d) interparticle distance

ii) The continuous collisions between the colloidal particles and molecules of dispersion medium produce zigzag movement of colloidal particles which is known as
a) Brownian movement b) Tyndal effect
c) Diffusion d) Sedimentation

iii) The Gold number is less then protective action will be
a) More b) Less
c) Half d) Zero

iv) The molecular weight of dispersed solid in a colloidal system can be determined using an instrument
a) Ultracentrifuge b) Ultrafilters
c) Ultramicroscope d) Zeta meter

v) Kinematic viscosity is the ratio of dynamic viscosity to the
a) Density of the fluid b) plastic viscosity
c) volume of liquid to flow d) specific gravity of fluid

vi) In general, Newtonian fluids are expressed in terms of viscosity. A corresponding expression in non-Newtonian fluids is
a) Apparent b) dynamic
c) intrinsic d) kinematic

vii) One poise=.... centipoise
a) 0.01 poise b) 0.1 poise c) 1 d) 100

viii) The unit of stress is
a) Nm b) Nm^{-2} c) Ns d) Ns^{-2}

ix) The value of Poisson ratio ranges from
a) 0.1 to 0.5 b) 0.001 to 0.01 c) 1 to 5 d) 2 to 4

x) The ratio of the sedimentation volume in case of flocculated suspension to the sedimentation volume in case of deflocculated suspension is called

a) Sedimentation volume b) degree of flocculation
c) Emulsification volume d) Phase volume ratio

xi) According to stokes equation, the sedimentation rate is inversely proportional to

a) diameter of the practice b) density of the particle
c) viscosity of medium d) all of the above

xii) When an emulsion is exposed to ultraviolet radiations. If the continuous florescence is observed under microscope, then it is -------- type emulsion.

a) w/o b) o/w c) micro-emulsion d) Nano emulsion

xiii) For a stable emulsion , the phase volume ration is generally about

a) 26/74 b) 52/48 c) 74/26 d) 74/100

xiv) The powder having low bulk density or large bulk volume is known as

a) Light powder b) Light powder
c) bulk powder d) Granular powder

xv) 1 nm is equal to

a) 10^{-3} meter b) 10^{-9} meter c) 10^{-10} meter d) 10^{-12} meter

xvi) Coulter counter method is also known as

a) Electrical stream sensing zone method
b) conductivity method
c) Both
d) Anderson pipette method

xvii) When rate is independent of the reactant concentration, then it is called

a) Zero order reaction b) Pseudo zero order reaction
c) First order reaction d) second order reaction

xviii) The unit of activation energy is

a) kJ/mol b) J c) N/m d) mm

xix) For a zero order degradation

a) a plot of concentration vs time yields a straight line
b) a plot of the logarithm of concentration vs time yields a straight line
c) a plot of 1/ concentration vs time yields a straight line
d) a plot of concentration vs logarithm of time yields a curve line

xx) According to ICH Guidelines on stability testing what is the protocol for accelerated conditions for solid orals.

a) 40º C/ 65% relative humidity b) 30º C/ 65% relative humidity
c) 40º C/ 75% relative humidity d) 40º C/ 60% relative humidity

2. Solve **any two**. **10x2 =20**

a) Define Specific surface. Explain air permeability technique for determination of surface area of powdered sample.

b) Discuss the optical properties of Colloids.

c) Explain non Newtonian type of flow with rheograms, mechanisms and suitable examples.

3. Solve **any seven.** **5x7 =35**

a) Explain flow properties of powder?

b) Describe method for determination of order of reaction.

c) Write detailed note on oxidative degradation & its preventive measures.

d) Write detailed note on type of deformation.

e) Give the working principle of cub and bob viscometer with a labeled diagram.

f) Define colloids and Describe method of preparing lyophobic colloids.

g) Explain different causes of instability in emulsion.

h) Differentiate between flocculated and deflocculated suspension.

i) Describe methods for measurement of thixotropy.

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