B. Pharm. (CBCS Pattern) Semester-IV

BP403T - Physical Pharmaceutics-II

P. Pages : 3 **GUG/S/25/11987**

Time : Three Hours * 1 7 9 3 * Max. Marks : 75

Notes : 1. Illustrate your answers wherever necessary with the help of neat sketches.
2. All questions are compulsory.

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

1) Which of the following colloids is difficult to prepare?
   a) Association b) Hydrophilic
   c) Hydrophobic d) Lyophilic

2) In Stoke's relationship a parameter that greatly changes the velocity of settling is ----
   a) Density of liquid b) Density of particles
   c) Radius of particle d) Viscosity of medium.

3) Dry Gum method is also known as-
   a) Continental method b) English method
   c) Bottle method d) Forbe's method

4) The unit of strain is
   a) N b) Nm^{-2}
   c) Nm^{2} d) Dimensionless

5) Dilatant flow are also known as-
   a) Shear thin b) Shear thick
   c) Elastic deform d) Plastic deform

6) The term rheology was invented by-
   a) Bingham b) Newton
   c) Watson d) Michael

7) The ratio of stress to strain is called ----
   a) Shear strain b) Young modulus
   c) Stoke law d) Elastic modulus

8) The protective ability of colloids is measured as ---
   a) Zeta potential b) Gold number
   c) Streaming potential d) None of the above

9) In flocculated suspension, the rate of sedimentation is ---
   a) Low b) More
   c) Zero d) 50%

10) Fluidity is the reciprocal of -------.
   a) Density b) Volume
   c) Viscosity d) Surface tension

11) Falling sphere viscometer based on which law ------
   a) Poiseuille law b) Stoke law
   c) Diffusion law d) Ficks law

12) Chemical kinetic is the study of the -------
   a) Rate of chemical Reaction b) Particle size
   c) Rheological Property d) Interfacial tension

13) Kinematic viscosity is the ratio of dynamic viscosity to the
   a) Density of fluid b) Plastic viscosity
   c) Volume of liquid to flow d) Specific gravity of fluids.

14) Helium pycnometer is used to determine -----
   a) Size b) True density
   c) Particle interaction d) Surface area

15) For an ideal suspension, the sedimentation volume should be ---
   a) 1 b) Less than 1
   c) More than 1 d) Zero

16) The unit of viscosity is ------
   a) $N \sec m^{-2}$ b) $N \sec^2 m^2$
   c) $Ns ec^{-1} m^{-1}$ d) Newton

17) If the gold number is less than the protective action will be ----
   a) More b) Less
   c) Half d) Zero

18) When the size of particle is less than 1nm then it is called ----
   a) Molecular dispersion b) Colloidal dispersion
   c) Suspension d) Emulsion

19) In Negative thixotropy increase in viscosity curve moves ---
   a) Upward b) Right
   c) Downward d) None

20) Accelerated stability testing is done to -------
   a) Predict Sheff of formulation b) Predict dissociation constant
   c) Predict diffusion constant d) Determine activation energy

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

a) Explain non Newtonian system in detail.

b) Explain kinetics properties of colloids.

c) Explain the methods for determining particle size and flow properties of powders.

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

a) Difference between lyophilic, lyophobic and association colloids.

b) Enlist viscometer based on single point and multiple point determination. Explain working and principle of cub and bob viscometer.

c) Define suspension. Explain interfacial properties of solids.

d) Explain the chemical factors that affect the rate of reaction.

e) Explain First Order reaction in detail.

f) Add a note on formulation of flocculated and deflocculated suspensions.

g) Explain physical stability of emulsion.

h) Explain various methods for determining particle surface area.

i) Explain stability of colloids.

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