Seat Number

* 3 8 2 6 *

W-19

BP 302 T
Physical Pharmaceutics-I
(723302)

P. Pages : 3

Time : Three Hours **Max. Marks : 75**

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All question are compulsory.
5. Draw neat & well labelled diagram where necessary.

1. Multiple choice question. **20**

i) The solubility of substance depend on the
   a) Solvent used b) Temperature
   c) Pressure d) All of the above

ii) The mass transfer of molecule in a substance from higher concentration to lower concentration.
   a) Diffusion b) Osmosis
   c) Active transport d) Passive transport.

iii) The solubility curve is a curve drown between
   a) Solubility and temperature b) Solubility and pressure
   c) Solubility and mole fraction d) None of the above

iv) Diffusion is measure by
   a) Franz cell b) Voltameter
   c) Rotating basket apparatus d) Paddle apparatus

v) HLB scale was introduced by
   a) Griffin b) Brunauer
   c) Emmett d) Teller

vi) Surfactants with HLB value more than 16 Indicates.
   a) Wetting agents b) Detergents
   c) Spreading agents d) Solubilizing agents

vii) Which of the following is unidentate ligand
   a) Ammonia b) Oxalate ion
   c) EDTA d) Ethylene diamine

viii) Ligands with multiple binding sites are
a) Unidentate b) Bidentate
c) Polydentate d) Hexadentate

ix) In tern pH, H is Indicates
a) Hydrogen b) Helium
c) Hemoglobin d) Half

x) Tonicity of the solution can be determined by
a) Colorimetric method b) Hemolytic method
c) Colligative method d) Both b and c

xi) Stalagmometer is used to determine
a) Viscosity b) Particle size
c) Solubility d) Surface tension

xii) Cetrimide is example of
a) Anionic surfactants b) Cationic surfactants
c) Non-Ionic surfactants d) Ampholytic surfactants.

xiii) Which of the following organic solvents is used to form complex of Iodine
a) Toluene b) Aniline
c) Hexane d) Cyclohexane

xiv) The solubility of gas with rising temperature
a) Increase b) Decrease
c) Remain constant d) None of the above

xv) The solution which obey the Raoult's law is
a) Ideal solution b) Real solution
c) Binary solution d) Supersaturated solution

xvi) Dielectric constant of solvent is measure of
a) Ionization b) Polarity
c) Conductivity d) Viscosity

xvii) Velocity of light is maximum in
a) Diamond b) Water
c) Vacuum d) Glass

xviii) The Refractive Index of a material depends upon
a) Wavelength of light b) Temperature
c) Nature of material d) All the above

xix) Which of the following refractometer is used for determination of refractive index.
a) Abbe's b) Pulfrich
c) V block d) All of the above

xx) Interfacial tension are ---------- than surface tension.
a) Less b) More
c) Double d) Equal to

2. Attempt **any two.** **20**

i) Define complexation classify detail with example.

ii) Explain in detail methods for determining surface as well as interfacial tension.

iii) Explain different methods used for determining pH.

3. Attempt **any seven.** **35**

i) Explain in detail Raoult's Law.

ii) Define solubility. Explain factor affecting solubility.

iii) Define optical Rotation. Explain how to measure optical Rotation.

iv) Define surfactant classify with them.

v) Explain in detail spreading co-efficient.

vi) Explain measurement of Tonicity

vii) Write a short note on methods of polymorphs.

viii) Write a short note on HLB scale.

ix) Explain application of Buffer.

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