B. Pharm
2

Seat Number

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Sum-19

BP 302-T

Physical Pharmaceutics-I

(723302)

P. Pages : 2

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. Figure to right indicate full marks.
6. Draw well labelled diagram wherever necessary.

1. A) Choose the correct answer of following. **1x10=10**

i) If two solutions have same osmotic pressure they are known as ----
   a) Isobatic b) Isotonic
   c) Hypertonic d) Hypotonic

ii) One of the following form of solid shows higher solubility than others ----
   a) Stable b) Unstable
   c) Metastable d) All above

iii) Solubility of substance can be increased by using -------
   a) Cosolvent b) Surfactant
   c) Micronization d) All the above

iv) EDTA is an examples of ------
   a) Unidentate ligand b) Hexadentate ligand
   c) Tetradentate ligand d) Bidentate ligand

v) The substance which resist change in pH of solution is known as ------
   a) Buffer b) Co-solvent
   c) Surfactant d) Suspending agent.

vi) Liquefication of gases can be achieved ---------
   a) At high temperature
   b) At low pressure
   c) At constant temperature
   d) At low temperature and high pressure.

vii) Detergents have HLB value of --------
a) 2-3 b) 3-6
c) 13-15 d) 7-9

viii) Iodine forms complex when it is dissolved in -------
a) Toluene b) Alcohol
c) Hexane d) Carbon tetrachloride

ix) Snell's law is used to denote --------
a) Dielectric constant b) Refractive index
c) Optical Activity d) Dipole moment.

x) The substance which provides site of adsorption is called as ---------
a) Adsorbate b) Adsorbent
c) Wetting agent d) Detergent

B) Answer following question **2x5=10**

i) Explain common ion effect. **2**

ii) Explain salting out effect in short **2**

iii) What are eutectic mixture, write any examples of eutectic mixture. **2**

iv) Explain Dextrorotatory and levorotatory substance with examples. **2**

v) Enlist various methods to determine surface tension. **2**

2. Solve **any two** **2x10=20**

i) Define surface tension, write various method to determine it, explain in detail capillary rise method to determine surface tension. **10**

ii) Define complexes, classify them and explain methods of analysis of complexes. **10**

iii) Define buffers write their applications. Explain various methods of pH determine. **10**

3. Solve **any seven.** **7x5=35**

i) Write a note on Langmuir adsorption isotherm. **5**

ii) Write a note on applications of surface active agents based on their HLB values. **5**

iii) Explain monomolecular inductions complexes in details. **5**

iv) What is buffer capacity? How it is measured **5**

v) Explain solvation and association with their mechanisms. **5**

vi) Explain various factors influencing solubility of drug. **5**

vii) Describe diffusion principles in biological system. **5**

viii) What are crystalline solids? Explain various forms of crystals. **5**

ix) Define propellars classify them with examples. **5**

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