

**35149 : Physical Pharmaceutics - I : T-3.1**

P. Pages : 1

Time : Three Hours

**AW - 2295**

Max. Marks : 60

- Notes :
1. All question carry equal marks.
  2. Answer **any five** questions.
  3. Illustrate your answer necessary with the help of neat sketches.
  4. Use of pen Blue/Black ink/refill only for writing the answer book.

- |    |    |  |    |
|----|----|--|----|
| 1. | a) | Write in brief on applications of thermodynamics in pharmacy.  | 6  |
|    | b) | Write the differences between amorphous and crystalline solids.  | 6  |
| 2. |    | State Nernst distribution law? Give it's limitations. How ionic dissociation and molecular association affect on partition of solute between immiscible liquid system. | 12 |
| 3. |    | Write about the solubility of weak electrolytes. Add note on foreign substance influence in mutual solubility of liquids.  | 12 |
| 4. |    | What is interfacial properties of suspended particles? Explain the different sedimentation parameters.   | 12 |
| 5. | a) | What are colloids? Classify different colloids with examples.  | 6  |
|    | b) | Discuss electrical properties of colloids.   | 6  |
| 6. |    | Discuss theories of emulsification in details.   | 12 |
| 7. |    | Write a note on <b>any two</b> .   | 12 |
|    | a) | Factors affecting on reaction rate.  |    |
|    | b) | Polymorphism.  |    |
|    | c) | Preservation of emulsion.  |    |
|    | d) | Wetting of particles.  |    |

\*\*\*\*\*

