

Paper Id: 

150302
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**B. PHARM**  
**(SEM-III) THEORY EXAMINATION 2019-20**  
**PHYSICAL PHARMACEUTICS-I**

*Time: 3 Hours**Total Marks: 75***Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

- 1. Attempt *all* questions in brief. **10 x 2 = 20****
- a. Enlist limitations of distribution law.
  - b. Define salvation and association.
  - c. Define real solution.
  - d. Define diffusion.
  - e. What are chelate compounds?
  - f. State Raoult's Law.
  - g. What is vapor pressure?
  - h. Define HLB scale.
  - i. What are surface and interfacial tensions?
  - j. Define Sorensen's pH scale.

**SECTION B**

- 2. Attempt any *two* parts of the following: **2 x 10 = 20****
- a. Describe solubility of liquid in liquids.
  - b. Describe determination and applications of dipole moment and dissociation constant.
  - c. Describe classification of complexation.

**SECTION C**

- 3. Attempt any *five* parts of the following: **5 x 7 = 35****
- a. Describe pharmaceutical and biological buffers.
  - b. Define buffered isotonic solution. Describe methods of adjustment tonicity.
  - c. Discuss protein binding.
  - d. Explain solubilization and detergency.
  - e. Describe sublimation critical point and eutectic mixtures.
  - f. Discuss critical solution temperature and applications.
  - g. Write short notes on liquid crystals and glassy states.