

B.Pharm II Year I Semester (R09) Supplementary Examinations November 2017

**PHYSICAL PHARMACY – I**

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain in detail chemical nature of molecule factors influencing on binding forces between molecules.  
(b) Discuss the postulates of kinetic molecular theory.
- 2 (a) What are the limitations of thermodynamics? State and explain the first law of thermodynamics.  
(b) What is free energy? Give its applications and significance.
- 3 (a) Define dipole moment and give its applications.  
(b) Define optical activity and explain method of determination of optical activity.
- 4 (a) Briefly explain the methods of expression of concentration.  
(b) State Raoult's law and discuss the positive & negative deviations of the law.
- 5 (a) Discuss the Arrhenius theory of electrolytic dissociation.  
(b) Describe the relationship between degree of dissociation and Van't Hoff factor.
- 6 (a) Explain Bronsted-Lowry acid base theory and give its applications.  
(b) Define pH and describe Sorenson's pH scale. Give the applications of pH in pharmacy.
- 7 (a) Derive Henderson Hasselbalch equation for weak acid and its salt.  
(b) Discuss the freezing point method of adjusting tonicity of solutions.
- 8 (a) Discuss electrometric method of determination of pH.  
(b) Explain working of Galvanic cell with neat diagram.

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