

Printed Pages: 3

BOP-122

(Following Paper ID and Roll No. to be filled in your  
Answer Books)

**Paper ID : 150202**

Roll No. 

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**B. PHARM.**

**Theory Examination (Semester-II) 2015-16**

**PHARMACEUTICAL CHEMISTRY-III**  
**(Pharmaceutical Physical Chemistry)**

*Time : 3 Hours*

*Max. Marks : 100*

**Section-A**

1. **Attempt all parts. All parts carry equal marks. Write answer of each part in short.** (2×10=20)

- (a) Define the term atomic number.
- (b) Define the complex reactions.
- (c) Explain the term parachor.
- (d) Define the term polymorphism.
- (e) Explain the isolated system in thermodynamics.

- (f) Define the term heat of neutralization with suitable example.
- (g) Explain the Kohlrausch law.
- (h) Define the congruent melting point.
- (i) Give any two pharmaceutical applications of adsorption.
- (j) Define homogenous catalysis.

**Q2. Attempt any five questions from this section.**

**(10×5=50)**

- (a) Discuss the molecular hybridization with suitable examples.
- (b) Describe the process of acid base catalysis and enzyme catalysis.
- (c) Define Nernst's distribution law. Discuss its application in pharmaceutical sciences.
- (d) Define the term viscosity? Discuss any two methods for determination of viscosity.

- (e) Define the first law of thermodynamics. Discuss Joule-Thompson's effect.
- (f) Explain the term Entropy. Discuss the second law of thermodynamics.
- (g) Define Ostwald's dilution law. Discuss its limitations.
- (h) Discuss common ion effect. Give Debye-Huckel theory of strong electrolytes.

**Section-C**

**Attempt any two questions from this section.**

**(15×2=30)**

- 3. Define rate law. Explain the term half - life of a reaction. Discuss the reaction kinetics of first order reaction with suitable examples.
- 4. Define the term surface tension? Discuss various methods for determination of surface tension.
- 5. Define the term Enthalpy of a reaction. Differentiate between exothermic and endothermic reactions. Describe the mechanism of calorimeter.

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