Printed Pages: 3   BOP-122

(Following Paper ID and Roll No. to be filled in your Answer Books)	
Paper ID : 150202	**Roll No.** □□□□□□□□□□

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.

Section-B

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.

(2)

(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.

(3)