Roll No .....

PY - 104

B.Pharmacy I Semester

Examination, June 2015

Pharmaceutical Chemistry - I (Physical)

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What are catalysts? Give examples.
   b) Define Hund's Rule.
   c) Define Valence Bond Theory.
   d) Discuss the classifications of Solids with examples.

   OR

   Discuss the theories of Catalyst with their applications.

2. a) Define Gibb's Phase Rule.
   b) Define Law of Chemical Equilibrium.
   c) Write short note on effect of Temperature on rate and rate constant.

   d) Define Freundlich and Langmuir adsorption isotherm.

   OR

   Discuss the time dependent Schrodinger equation.

3. a) What are Liquid Crystals? Give examples.
   b) What are Slater type orbital's.
   c) Discuss Bonding and Non bonding interactions.
   d) Define First Law of Thermodynamics and its Significance.

   OR

   Define Le Chatelier's Principle and mention its significance.

4. a) Define Grahams law of diffusion.
   b) Define Avogadro's Law.
   c) Enlist three advantage of Second law of Thermodynamics.
   d) Describe different types of System with examples.

   OR

   Describe VSEPR theory and describe its applications.

5. a) Define concept of absolute entropy.
   b) What are Acid Base catalysts?
   c) Enlist the factor affecting Equilibrium concentration.
   d) Describe in detail the effect of Solvent polarity and Viscosity on rates of reactions.

   OR

   Explain Raoult's Law with its applications.

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