

I B.Pharmacy I Semester Supplementary Examinations, Aug. 2015
PHYSICAL PHARMACY-I

Time: 3 hours

Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks

1. Explain how real gases show ideal behaviour at extremely low pressures. Write about its significance. [15]
2. (a) What are Miller indices? Illustrate their use and applications.
(b) Explain the term 'pseudomorphism' with suitable examples. [8+7]
3. Define thermodynamic equilibrium. Explain the criteria for equilibrium. [15]
4. What the clausius equation says and derive the equation based on the clausius statement. [15]
5. (a) Define dipole moment. Explain correlation with the insecticidal activity.
(b) Describe the principle, construction and working of Abbe's refractometer. [7+8]
6. (a) Explain Dielectric constant and Optical rotation.
(b) Explain Dipole moment and write its uses in pharmacy. [7+8]
7. (a) Derive an expression for calculation of molecular weight of non-volatile solute by freezing point depression method.
(b) A sample of camphor used in the RAST camphor method has a melting point of 176.5°C . the melting point of a solution containing 0.522gm of camphor and 0.0386gm of unknown substance was 158.8°C . find the molecular weight of the unknown substance. Kf of camphor is 37.7. [7+8]
8. (a) Explain the phenomenon 'Osmosis'. Write their applications indetail.
(b) Explain the experimental method for the determination of molecular mass of a solute using vapour pressure method. [7+8]
