

Code No: B1107/R10

Set No.1

**I B.Pharmacy I Semester Supplementary Examinations, May 2017
PHYSICAL PHARMACY-I**

Time: 3 hours

Max Marks: 75

**Answer any FIVE Questions
All Questions carry equal marks**

1. (a) Explain the postulates of kinetic molecular theory.
(b) Explain the Ideal gas equation with its applications. [8+7]
2. What is cube lattice? Mention its types and their characteristics and significance. [15]
3. Explain First Law Of THERMODYNAMICS and Add a note on its Limitations. [15]
4. (a) Explain the HESS LAW OF CONSTANT HEAT SUMMATION. [10+5]
(b) What is THERMOCHEMISTRY and Write its Applications
5. Write the pharmaceutical application of the following.
(a) Refractive index & Molar refraction.
(b) Dielectric Constant. [7+8]
6. (a) Explain how Dielectric constant helps in selection of a solvent for the solubility of the drugs.
(b) What are different Physico Chemical properties? Define them and explain their applications. [8+7]
7. (a) Define Molarity, Molality and Mole fraction. Explain their advantages and disadvantages.
(b) An aqueous solution of glycerine 7% by weight is prepared and its solution density is 1.0149 gm/cc at 20°C. The molecular weight of glycerine is 92.0473 and density is 1.2609 gms/cc at 20°C. Calculate the following: (i) Molarity (ii) Molality (iii) Percent by volume of glycerine [7+8]
8. (a) Explain the term Azeotropic solutions. Explain the influence of third substance on the azeotropic solutions.
(b) Explain Dalton's law with applications. [7+8]
