

Roll No.

www.allsubjects4you.com

Total No. of Questions : 10]

[Total No. of Pages : 02

B.Pharmacy (Sem. - 2nd)

PHARMACEUTICAL CHEMISTRY - II (Physical Chemistry)

SUBJECT CODE : PHM - 1.2.3 (2K9 Batch)

Paper ID : [D0150]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 80

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Three** questions from Section - C.

Section - A

Q1)

(15 × 2 = 30)

- a) Name any five physical properties of liquids which are helpful in deciding the chemical constitution of liquids.
- b) Give one definition of second law of thermodynamics.
- c) What is kinetic gas equation?
- d) What happens to the surface tension of a liquid at its critical temperature?
- e) Define equivalent conductance.
- f) What are ideal and real gases?
- g) What is enzyme catalysis? Give example.
- h) What is Lambert-Beer law?
- i) Define the term Gibb's free energy.
- j) Why is it necessary to platinize the electrode of a conductivity cell before it is used for conduction measurement?
- k) What is refractive index?
- l) Absolute temperature scale.
- m) Define colligative property. Give examples.
- n) Explain the term viscosity and viscosity coefficient.
- o) Define dipole moment with example.

J-275

www.allsubjects4you.com

P.T.O.

- Q2)** What are the postulates of Kinetic theory of Gases?
- Q3)** What is Parachor ? Give one example to show its use in molecular structure determination.
- Q4)** Write short note on Debey-Hukel theory of electrolyte conductance.
- Q5)** Discuss third law of thermodynamics with its significance.
- Q6)** Calculate the molar refraction of acetic acid (CH_3COOH) at temperature at which its density is 1.046 g/cm^3 . The experimentally observed value of refractions index at this temperature is 1.3715 (Molecular mass of acetic acid = 60).

Section - C

(3 × 10 = 30)

- Q7)** Name and state the law governing the distribution of a solute between two immiscible liquids. Discuss the application of this law in the process of solvent extraction.
- Q8)** Explain what you understand by “reaction order” and “overall reaction order”. How would you establish that reaction is first order?
- Q9)** Solve the Schrodinger wave equation for a particle in a one dimensional box and find the expression for the energy.
- Q10)** Discuss in detail the Jablenski diagram.

www.alisubjects4you.com

