

S.Y.B.PHARM. SEMESTER-III (2011 COURSE) : SUMMER - 2018

SUBJECT: PHYSICAL PHARMACY- I

Day: **Monday**
Date: **30/04/2018**

S-2018-3954

Time: **02.00 PM TO 05.00 PM**
Max Marks: **80**

N.B:

- 1) **Q. No 1 and 5 are COMPULSORY.** Out of remaining attempt **ANY TWO** Questions from each section.
- 2) Answers to both the sections should be written in **SEPARATE** answer book.
- 3) Figures to the right indicate **FULL** marks.

SECTION-I

- Q.1** Answer **ANY FIVE** of the following: **(10)**
- a) Explain the term 'Component'.
 - b) Differentiate between ideal & real solutions.
 - c) What is Joule Thompson effect?
 - d) State rules for drawing ternary phase diagram.
 - e) Give wrong assumptions of ideal gas law.
- Q.2** a) Explain in detail methods used for liquefaction of gases. **(08)**
b) Discuss kinetic molecular theory. **(07)**
- Q.3** a) What do you mean by critical constants? Explain different methods used for determination critical constants. **(08)**
b) Explain in detail one component three phase system. **(07)**
- Q.4** Write short notes on **ANY THREE** of the following: **(15)**
- a) Compressibility factor
 - b) Raoult's law & its deviation
 - c) Phenol – water system
 - d) Colligative properties

SECTION-II

- Q.5** Answer **ANY FIVE** of the following: **(10)**
- a) What is half life of a reaction?
 - b) Define molality & mole fraction.
 - c) What are advantages of conductometric titrations?
 - d) Enlist methods of decomposition of medicinal agents with examples.
 - e) Define equivalent & specific conductance.
 - f) What is common ion effect?
- Q.6** a) Explain in detail accelerated stability studies. **(08)**
b) Give detailed account of solute- solvent interactions. **(07)**
- Q.7** a) Derive an expression for rate constant of second order reaction. **(08)**
b) Write a note on reaction theories. **(07)**
- Q.8** Write short notes on **ANY THREE** of the following: **(15)**
- a) Effect of pH and solvents on solubility of weak electrolyte
 - b) Determination of energy of activation
 - c) Nernst distribution law
 - d) Debye Huckel theory

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