Code No. 1182

FACULTY

B. Pharmacy 3/4 I Semester (Suppl.) Examination, April 2018

Subject : Physical Pharmacy I

Time : 3 Hrs **Max. Marks: 70**

Note: Answer all questions. All questions carry equal marks.

1 (a) Explain the postulates of the kinetic molecular theory. (4)
(b) Explain the methods to achieve liquefaction of ases. (6)
(c) Write abt polymorphism and its applications in pharmacy. (4)

OR

(d) State ibbs phase rule. Explain the phases diaram of phenol water system. (7)
(e) Write a note on refractive index and molar refraction with applications. (7)

2 (a) State and explain first and second law of thermodynamics with applications. (8)
(b) Define: (i) Specific heat (ii) Latent heat (iii) Enthalpy (iv) Entropy (6)

OR

(c) Define and explain Hess's law of constant summation. Write its applications. (7)
(d) Explain ibbs free enery and its function and applications. (7)

3 (a) What are colliative properties? Explain freezin point depression as a colliative property and its applications. (8)
(b) Discuss the modern theory of stron electrolytes. (6)

OR

(c) Write a note on Sorensen's pH scale. (4)
(d) Derive the equation for determination of acidity and basicity constant and write its use. (7)
(e) Define Molarity, molality and normality. (3)

4 (a) What are the methods for adjustment of tonicity and pH. Explain cryoscopic method and sodium chloride equivalent method for adjustin isotonicity. (10)
(b) Write Van Slyke's equation for buffer capacity and maximum buffer capacity and its applications. (4)

OR

(c) Derive Henderson Hasselbalch buffer equation for a weak acid and its salt. (7)
(d) Explain is isotonic, hypertonic and hypotonic solutions? Explain its importance. (4)
(e) Write a note on physioloical buffers. (3)

5 (a) Explain different types of electrodes. (10)
(b) Write the applications of redox potentials in pharmacy. (4)

OR

(c) Draw and explain Daniel cell. (6)
(d) What is catalysis? Write types of catalysts, catalytic reactions, mechanism and applications of catalytic reactions. (8)

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