August 2011

[KZ 4257] **Sub. Code : 4257**

SECOND B.PHARM. EXAMINATION

Paper II – PHARMACEUTICAL ANALYSIS AND PHYSICAL CHEMISTRY

Q.P. Code : 564257

Time : Three hours **Maximum: 100 Marks**

Answer ALL questions.

Answer Section A and B in SEPARATE Answer Book.

SECTION A
(PHARMACEUTICAL ANALYSIS)

I. LONG ESSAYS **(1 x 20 = 20)**

1. a) Discuss Mohr's and modified Volhard's methods for the determinations of halide ions.
   b) Write the assay of calcium gluconate by complexometry.

II. SHORT NOTES **(4 x 5 = 20)**

1. Write the principle and procedure involved in the estimation of carbon dioxide.
2. How will you assay Barium sulphate by gravimetry?
3. Explain the theories of acid-base indicator.
4. Write the mechanism of buffer and its application in medicine and pharmacy.

III. SHORT ANSWERS **(5 x 2 = 10)**

1. Define "Precision" and "Accuracy".
2. Write Henderson-Hasselbalch equation.
3. What are the requirements of a primary standard?
4. Define the terms "Ligand" and "Sequestering agents" give example.
5. What are co-precipitation and post precipitation?

SECTION – B
(PHYSICAL CHEMISTRY)

IV. LONG ESSAYS **(1 x 20 = 20)**

1. a) Explain different methods to determine order of reaction.
   b) What is Nernst distribution law? Explain its applications.

V. SHORT NOTES **(4 x 5 = 20)**

1. Write the Debye-Huckel's theory.
2. Explain mechanism of catalysis.
3. Discuss graphically the Freundlich and Langmuir's isotherms.
4. Explain phase diagram of one component system. What are the applications of this in pharmacy?

VI. SHORT ANSWERS **(5 x 2 = 10)**

1. What are real and ideal solutions?
2. Define molar heat capacity.
3. What is Trouton's rule? Mention its applications.
4. What is degree of freedom? Give two examples.
5. What is plane polarized light? How is it achieved?

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