(LH 4257) **AUGUST 2015** **Sub. Code: 4257**

B.PHARM. EXAMINATION
SECOND YEAR
PAPER II – PHARMACEUTICAL ANALYSIS & PHYSICAL CHEMISTRY

Q.P. Code: 564257

Time: Three hours **Maximum: 100 marks**

Answer All Questions
SECTION-A
(Pharmaceutical Analysis)

I. Essay: **(2 x 10 = 20)**
1. a) Write in detail about the acid base concepts and buffer solutions with examples.
   b) Explain the determination of carbonates and bicarbonates in a mixture.

II. Short notes: **(4 x 5 = 20)**

1. Write a note on common ion effect.
2. Explain the various methods of end point detection in complexometric titration.
3. Write note on nitrogen estimation by Kjeldhal method.
4. Explain with reactions the principle involved in Mohr's method.

III. Short answers: **(5 x 2 = 10)**
1. Define accuracy.
2. What is Nernst equation?
3. What is Iodimetry and Iodometry?
4. What is solvent leveling effect?
5. Define acid value and mention its importance.

SECTION-B
(Physical Chemistry)

I. Essay: **(2 x 10 = 20)**
1. Define Colligative properties? List the various types of Colligative properties. Explain in detail the determination of the elevation of Boiling point and Osmotic Pressure.

II. Short notes: **(4 x 5 = 20)**
1. State and explain Joule-Thomson effect**.**
2. Describe the various factors affecting adsorption.
3. Define catalyst and explain the characteristics of catalysts.
4. Explain how will you determine the heat of combustion using Bomb calorimeter.

III. Short answers: **(5 x 2 = 10)**
1. Define ideal solution.
2. List the various factors affecting rate of chemical reaction.
3. State Lavoisier-Laplace law.
4. Define plane polarized light.
5. State Troutons rule.

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