[LR 1220]   **DECEMBER 2020**   **Sub. Code: 4257**
(AUGUST 2020 EXAM SESSION)
B. PHARMACY DEGREE EXAMINATION
SECOND YEAR – (Regulation from 2009-2010)
PAPER II – PHARMACEUTICAL ANALYSIS & PHYSICAL CHEMISTRY
Q.P. Code: 564257

Time: Three hours   **Answer ALL questions**   **Maximum: 100 Marks**

SECTION-A
(PHARMACEUTICAL ANALYSIS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Discuss about Complexometric titrations and elaborate briefly about its types.
   b) Discuss briefly on the theory of indicators in Neutralization titrations.

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

1. Discuss about the factors and their influence on the solubility of precipitate.
2. Discuss about various preparation techniques used in gravimetric analysis.
3. Brief out on Kjeldhal method of nitrogen estimation.
4. Write note on calibration of apparatus.

III. Short answers on: **(5 x 2 = 10)**

1. Standardization of Perchloric aci
2. Iodimetry and Iodometry.
3. Write a note on law of Mass action.
4. Werner's co-ordination numbe
5. Post-precipitation.

SECTION-B
(PHYSICAL CHEMISTRY)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Define Refractive index. Elaborate on the construction, principle of operation and applications of Refractometers.
   b) State phase rule and explain the application of phase rule in one component system.

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

1. State and explain Debye-Huckel theory.
2. State first law of Thermodynamics & Illustrate the relation between ΔH and ΔE.
3. State Lavoisier – Laplace law.
4. Define Catalyst. Explain the types of catalysts with examples.

III. Short answers on: **(5 x 2 = 10)**

1. Partition Coefficient.
2. Trouton's rule.
3. Third law of Thermodynamics.
4. Physical adsorption and chemical adsorption.
5. Factors affecting the rate of chemical reaction.

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