THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0921] **SEPTEMBER 2021** **Sub. Code: 4257**
(FEBRUARY 2021 EXAM SESSION)

B. PHARMACY DEGREE EXAMINATION
SECOND YEAR – (NON-SEMESTER)
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) Illustrate briefly on Neutralization curves and the choice of indicators in acid base titrations.
   b) Explain briefly about Argentometric titrations and its various types.

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

1. Write a note on the types of Solvents used in non-aqueous titrations.
2. Discuss briefly about Masking and Demasking agent with examples.
3. Discuss about Nernst equation.
4. Brief out on oxygen flask combustion method.

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

1. Common ion effect.
2. Solubility product.
3. Co-precipitation.
4. Universal indicators.
5. Significant figure.

SECTION-B
(PHYSICAL CHEMISTRY)

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

1. a) Define Colligative properties. Describe elaborately about the types of Colligative properties.
   b) What is Adsorption? Explain briefly about Langmuir adsorption isotherm.

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

1. Write a note on Joule – Thomson effect.
2. Derive Vant-hoff equation and mention its use.
3. Enumerate the theory and mechanism of Catalysis.
4. Describe briefly theories involved in reaction kinetics.

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

1. Second law of Thermodynamics.
2. Define the terms phase, component and degree of freedom.
3. Bomb calorimeter.
4. Factors influencing adsorption.
5. Refractive index.

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