

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

(LQ 4257)

FEBRUARY 2020

Sub. Code: 4257

**B.PHARM. DEGREE 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. Elaborate on: (1 x 20 = 20)

1. a) What is the underlying principle of Complexometric titration? Explain different types of Complexometric titration with suitable example.
- b) What is masking and demasking agents with reference to complexometric titration. Give specific examples to justify your statements.

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

1. Solvent used in non-aqueous titration.
2. Fajans method.
3. Kjeldahl method of nitrogen estimation.
4. Saponification value.

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

1. Gasometry.
2. Redox indicator.
3. Neutralization curve.
4. Organic precipitant.
5. Precision.

SECTION-B

(PHYSICAL CHEMISTRY)

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

1. a) Define Debye-Huckel theory. What are the different types of solution give examples.
- b) Explain about Raoult's Law and its limitations.

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

1. Joule-Thomson effect.
2. Bomb calorimeter.
3. Freundlich Adsorption Isotherm.
4. Refractometry.

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

1. Order of reaction.
2. Biocatalyst.
3. First Law of Thermodynamics.
4. Exothermic reaction.
5. Partition coefficient.
