

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

[BPHARM 1022] OCTOBER 2022 Sub. Code: 4257
(AUGUST 2022 EXAM SESSION)

B.PHARMACY DEGREE COURSE (NON-SEMESTER EXAMINATIONS)
SECOND YEAR (Regulation 2009-2010)
PAPER II – PHARMACEUTICAL ANALYSIS AND 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) Describe the types of complexometric titration with suitable examples.
- b) Discuss in detail about diazotization titration.

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

1. Discuss about kjeldahl method for nitrogen estimation.
2. Write note on normal distribution curve.
3. Describe buffer mechanism with example.
4. Explain gay lussac stas method.

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

1. What is Nernst Equation?
2. Define saponification value.
3. What is iodometry? Give example.
4. What is gravimetric analysis?
5. List out types of solvents in non aqueous titration.

SECTION-B
(PHYSICAL CHEMISTRY)

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

1. a) State phase rule and explain the application of phase rule in one component system.
- b) Define order of reaction and derive the equation for second order reaction.

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

1. Explain the following
 - a) Enthalpy of solution
 - b) Enthalpy of precipitation.
2. Summarize the characteristics of catalyst.
3. Types of adsorption with example.
4. Explain partition coefficient with limitations.

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

1. Define degree of freedom.
2. Define bond energy. Give example.
3. Define adsorption isotherm.
4. What is plane polarized light?
5. Define rate of reaction.
