

February 2010

[KW 740]

Sub. Code: 4231

**SECOND B.PHARM. DEGREE EXAMINATION
(Regulation 2004)**

Candidates Admitted from 2004-05

Paper II – PHARM ANALYSIS AND PHYSICAL CHEMISTRY

Q.P. Code : 564231

Time : Three hours

Maximum : 90 marks

Answer Part I and Part II Separately

PART – I

(PHARMACEUTICAL ANALYSIS)

I. Essay Questions : Answer any ONE question. (1 x 20 = 20)

1. **a)** Describe the determination of errors and methods to minimize the errors.
- b)** Explain the various concepts of Acid-base titrations.
2. **a)** Explain the different types of complexometric titrations by using various titratants with suitable examples.
- b)** Explain in detail about the following:
 - i)** Diazotisation
 - ii)** Kjeldhal's method of nitrogen determination.

II. Write Short Notes : Answer any FOUR questions (4 x 5 = 20)

1. Enumerate various types of indicators used in precipitation titrations.
2. Define co-precipitation and post precipitation. Give notes on various step involved in gravimetric analysis.
3. Write about the preparation and standardization of 0.1 M potassium permanganate with principle and reaction.
4. Scope and limitations of various titrants used in non-aqueous titrations.
5. Give the detail note on calibration of analytical equipments.

III. Short Answers: Answer any TWO questions (2 x 2.5 = 5)

1. Define common ion and common ion effect.
2. Redox potential.
3. Define iodimetry and iodometry.

PART – II
(PHYSICAL CHEMISTRY)

I. Essay Questions : **Answer any ONE question.** **(1 x 20 = 20)**

1. **a)** Define rate of reaction. Clarify with examples and derive the equation for first order reaction.
b) Explain Hess's law of constant heat of summation.
2. **a)** Describe briefly about first law of thermodynamics.
b) Explain about **i)** Partition co-efficient **ii)** Activation energy

II. Write Short Notes : **Answer any FOUR questions** **(4 x 5 = 20)**

1. Describe Carnot's cycle.
2. Give note on Joule-Thomson effect.
3. Determine the molecular mass from elevation of boiling point.
4. Give note on Langmuir's isotherms.
5. Write note on Henry's law for solubility of gas in liquid.

III. Short Answers: **Answer any TWO questions** **(2 x 2.5 = 5)**

1. Degree of freedom.
2. Raoult's law.
3. Define chemisorptions.
