

**February 2009**

**[KU 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) Explain the theory of redox titration.  
b) Write notes on standard oxidation potential.
2. a) Explain the basic concept of acid base titration.  
b) Write notes on common ion effect.  
c) Write the importance of acids and bases in pharmacy.

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

1. Masking and demasking agent.
2. Explain the kjeldahl method of nitrogen estimation.
3. How will you assay of oxygen.
4. What is redox potential? Write the application of parameter in pharmacy.
5. Write notes on Fajan's method?

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

1. Define buffer solution.
2. Mohrs method.
3. Define Iodometry.

**PART – II**  
**(PHYSICAL CHEMISTRY)**

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

1. a) State phase rule. Explain the various terms involved in it. Write its applications.  
b) Explain Hess's law of constant heat of summation.
2. a) State first law of Thermodynamics.  
b) Define the order of reaction. Explain various methods for determining the order of reaction.

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

1. Discuss briefly Langmuir's theory of adsorption and its application.
2. Write in detail about the bomb calorimeter used for the measurement of heat of reaction.
3. Write the factor affecting the rate of chemical reaction.
4. Explain the partition coefficient.
5. Write the relation between  $\Delta H$  and  $\Delta E$ .

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

1. Define Enthalpy.
2. Rate of reaction.
3. Vant hoff equation.

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