

Total No. of printed pages = 3

PY 132509

Roll No. of candidate

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2023

B.Pharm 5th Semester (Old) End-Term Examination (Repeater)

PHARMACEUTICAL ANALYSIS - II

Full Marks – 100

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer Question No. 1 and any Six from the rest.

1. Answer the following : (MCQ/Fill in the blanks) (10 × 1 = 10)
- (i) Diazepam is Assay by which of the following method?
- (a) Acid base titration (b) Non aqueous titration
(c) Karl Fischer titration (d) None of the above
- (ii) What type of compound is commonly used as a complexing agent in complexometric titration
- (a) Strong acid (b) Strong base
(c) Chelating agent (d) Indicator solution
- (iii) What is the primary purpose of radioimmune assay?
- (a) To measure the concentration of specific antigens in a sample
(b) To treat autoimmune diseases
(c) To visualize internal organs using radioactive tracers
(d) To sterilized medical equipment
- (iv) What does conductometry primarily measure in a solution?
- (a) pH level
(b) Electrical conductivity
(c) Optical density
(d) Viscosity

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- (v) In polarography what is the primary function of the working electrode
- (a) To measure the electric potential of the solution
 - (b) To generate polarized light
 - (c) To oxidize or reduce analytes in the solution
 - (d) To measure the pH of the Solution
- (vi) All of the following are used as spraying reagent in TLC, EXCEPT
- (a) Calcium sulfate
 - (b) Iodine
 - (c) Sulfuric acid
 - (d) Ninhydrin
- (vii) Which of the following is used as a masking agent in complexometric titration?
- (a) Ammonium fluoride
 - (b) Dimercaprol
 - (c) Potassium iodide
 - (d) All of the above
- (viii) IN complexometric titration what is the titrant typically used to determine
- (a) Acidity of solution
 - (b) Concentration of a metal ion
 - (c) pH of the solution
 - (d) Viscosity of the solution
- (ix) What does the Nernst equations relate in electrochemistry
- (a) The rate of chemical reaction
 - (b) The concentration of reactant in a solution
 - (c) The standard reduction potential of an electrode
 - (d) Electrode potential to ion concentration
- (x) In acid base titration what is the purpose of the titrant
- (a) To measure the initial concentration of the analyte
 - (b) To neutralized the analyte solution
 - (c) To determine the end point of the titration
 - (d) To indicate the pH of the solution

2. (a) Describe the instrumentation and application of Karl-Fischer titration. (10)
(b) Explain the principle of Nernst equations. (5)
3. (a) Explain the principle and applications of thin layer chromatography. (10)
(b) Discuss the column chromatographic technique by using suitable diagram. (5)
4. (a) Explain the application pH meter in determining pH in acid base titration. (5)
(b) Describe the difference between turbidometry and nephelometry? Explain the functions of turbidometry with suitable diagram. (4+4+2=10)
5. Write short note on the following (5+5+5=15)
(a) Adsorption isotherm
(b) Polarography
(c) Kohlrausch law
6. (a) Write the theory involved in complexometric titration. Give examples of indicators involved in it. (2+5+2.5 = 5)
(b) Explain the principle, different methods, limitation and application of Radio-immune assay. (3+3+2+2+=10)
7. (a) Elaborate the scope and limitation of non-aqueous titration. Discuss the titration of basic and acidic substance in non-aqueous solvents (10)
(b) Discuss different types of EDTA titration. (5)
8. (a) What do you understand by masking and demasking agents? Give examples. (2.5+2.5=5)
(b) Write a short note on working principle, advantages and disadvantages of hydrogen and glass electrode. (10)
9. (a) Explain the basic principle involved in amperometry. Give an account on application of amperometry in pharmaceutical analysis. (5+5=10)
(b) Outline the difference between specific and molar conductance. (5)