

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – I • EXAMINATION – SUMMER • 2014

Subject Code: 2210003

Date: 19-06-2014

Subject Name: Pharmaceutical Analysis -I

Time: 02:30 pm - 05:30 pm

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Give Comment on (Any Three) **06**
- 1) In the titration of 0.1M HCl with 0.1 M NH_4OH , Methyl Orange can be use as an indicator.
 - 2) Nitrobenzene is used in Volhard's Method
 - 3) Acetic acid is a leveling solvent as well as differentiating solvent.
 - 4) Pyridine is used in the Karl Fischer titration
- (b) Write a detailed note on Kjeldahl's method **05**
- (c) Enlist types of Co-precipitation and add a note on common source of co-precipitation. **05**
- Q.2** (a) Enlist different types of EDTA titration and explain any two of them using suitable examples **06**
- (b) Differentiate following with suitable examples. **05**
1. Masking and demasking agents.
 2. Iodometry and Iodimetry
- (c) Explain : (1) Common ion effect (2) Henderson-Hasselbach equation **05**
- Q.3** (a) Write note on solvent, titrant and indicator used for weak acid & weak base substance in non-aqueous titration. **06**
- (b) Enlist the end point detection methods in precipitation titration. Explain Fajan's method in detail **05**
- (c) Describe Diazotization titration in detail. **05**
- Q.4** (a) How will you determine halogen by Mohr's method? **06**
- (b) How Internal redox Indicator works? Explain in detail. **05**
- (c) Define error. Classify the error and how will you minimize the error? **05**
- Q.5** (a) What is hydrolysis? Derive the equation to find out the pH of aqueous Solution of CH_3COONa **06**
- (b) 30 ml of 0.1M CH_3COOH is titrated with 0.1M NaOH. Calculate the pH of the solution when volume of NaOH is added. **05**
- (K_a is 1.82×10^{-5}). calculate the pH at 0ml, half equivalence point, at equivalence point and 35 ml
- (c) Give a detailed account on Sampling techniques. **05**
- Q. 6** (a) Explain theory of acid–base indicators **06**
- (b) Differentiate between **05**
- 1) Quality Control and Quality Assurance
 - 2) Differentiating Solvents and Levelling Solvents
- (c) Define Validation. Enlist validation parameters. Explain Accuracy and precision in detail using suitable examples **05**

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| Q.7 | (a) | Explain Terms : 1) Calibration 2)Buffer Capacity 3)Ligand
4) Normality | 06 |
| | (b) | Calculate pH and degree of hydrolysis in 0.1 M Sodium acetate
solution. K_a is 1.8×10^{-5} . | 05 |
| | (c) | Explain pM indicators | 05 |
