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) 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	**06**
	(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. 1. Masking and demasking agents. 2. Iodometry and Iodimetry	**05**
	(c)	Explain : (1) Common ion effect (2) Henderson-Hesselbach 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. (Ka is 1.82×10^{-5}). calculate the pH at 0ml , half equivalence point, at equivalence point and 35 ml	**05**
	(c)	Give a detailed account on Sampling techniques.	**05**
Q. 6	(a)	Explain theory of acid–base indicators	**06**
	(b)	Differentiate between 1) Quality Control and Quality Assurance 2) Differentiating Solvents and Levelling Solvents	**05**
	(c)	Define Validation. Enlist validation parameters. Explain Accuracy and precision in detail using suitable examples	**05**

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. Ka is 1.8 X 10-5.	**05**
	(c)	Explain pM indicators	**05**

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