Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – I • EXAMINATION – WINTER 2013

Subject Code: 2210003 **Date: 03-01-2014**

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)	What is validation? Discuss the different validation parameters of analytical methods.	**06**
	(b)	Discuss the importance of quality control and quality assurance in formulation analysis.	**05**
	(c)	Explain types, calibration and cleaning of different glasswares.	**05**
Q.2	(a)	Explain theories of acid-base indicators.	**06**
	(b)	Discuss hydrolysis of salts and ionic products of water.	**05**
	(c)	Describe Law of mass action in detail.	**05**
Q.3	(a)	Describe diazotization nitrite titration.	**06**
	(b)	Explain in detail about Iodometry and Iodimetry titration.	**05**
	(c)	Justify the following comments. 1. Starch indicator should be added near the end point in iodine titration. 2. Potassium permanganate is not a primary standard compound. 3. Nitrobenzene is added in the estimation of chloride by Volhard's method. 4. Phenolphthalein is colorless below pH 8.3 and above pH 12. 5. EDTA is used as titrant in complexometry.	**05**
Q.4	(a)	Write a note on Fajan's method of argentometric titration.	**06**
	(b)	Discuss levelling and differentiating effect of the solvent in non-aqueous titration.	**05**
	(c)	What is non-aqueous titration? Explain types of non-aqueous solvents.	**05**
Q.5	(a)	Discuss masking and demasking agent.	**06**
	(b)	Explain complexometric titration and give classification of ligands.	**05**
	(c)	Write a note on Kjeldahl method.	**05**
Q. 6	(a)	What is gravimetric analysis? Discuss steps involved in gravimetric analysis.	**06**
	(b)	Explain co-precipitation and post-precipitation.	**05**
	(c)	Write a note on Karl-fisher titration.	**05**
Q. 7	(a)	Calculate pH of 0.1M acetic acid solution when pka is 4.76.	**06**
	(b)	The Ksp of AgCl is 1.0×10^{-10}. Calculate molar solubility of AgCl.	**05**
	(c)	0.2 M solution of acetic acid is ionized. Calculate the dissociation constant Ka.	**05**

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