Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – III • EXAMINATION – WINTER • 2014

Subject Code: 230004 **Date: 24-12-2014**

Subject Name: Pharmaceutical Analysis - I

Time: 10:30 am - 01:30 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 are analytical errors? Write the steps to minimize the error.	**06**
	(b)	Explain with example: LOQ & LOD.	**05**
	(c)	Clearly differentiate accuracy & precision.	**05**
Q.2	**(a)**	Derive the ionic product of water.	**06**
	(b)	Write a detail note on Kjeldhal method to estimate nitrogen.	**05**
	(c)	Define pH. Clarify hydrogen ion activity coefficient.	**05**
Q.3	**(a)**	Define buffers. Write mechanism of buffer action.	**06**
	(b)	Derive Handerson-Hesselbach equation for buffers.	**05**
	(c)	Write application of buffers in pharmacy.	**05**
Q.4	**(a)**	Discuss nitroso reaction.	**06**
	(b)	Clearly differentiate with suitable examples: iodometry & iodimetry.	**05**
	(c)	Derive equivalent weights of $KMnO_4$ in different medium.	**05**
Q.5	**(a)**	Discuss the assay principle with reaction of magnesium salts by complexometry.	**06**
	(b)	Write a detail note on pM indicators.	**05**
	(c)	Explain masking and demasking in complexometry.	**05**
Q.6	**(a)**	What is hydrolysis? Derive equation for the determination of pH of a solution of weak base & strong acid.	**06**
	(b)	What is argentimetry? Describe Fajan's method	**05**
	(c)	Discuss the principle with reaction involved in Mohr's method.	**05**
Q.7	**(a)**	Clearly differentiate specificity and selectivity of the analytical data.	**06**
	(b)	Write a note on gravimetry.	**05**
	(c)	Discuss solvents useful in non aqueous titration.	**05**

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