Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM - SEMESTER– 1 EXAMINATION – SUMMER -2019

Subject Code: 2210003 **Date: 04-06-2019**

Subject Name: Pharmaceutical Analysis-I

Time: 10:30 AM TO 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)**	Define: primary standard, Calibration, Normality, Molarity, titration, equivalence point	**06**
	(b)	Define Error. Classify error and explain various methods for minimization of errors.	**05**
	(c)	What is the concentration of acetic acid in a solution that is 0.1M in acetate ion and 2 $X10^{-6}$ M in hydrogen ion? (Ka= 1.8 X 10^{-5})	**05**
Q.2	**(a)**	Explain various types of neutralization curves in acid base titration.	**06**
	(b)	Explain hydrolysis of salt, and derive an equation for hydrolysis of salt of weak acid and strong base.	**05**
	(c)	Explain levelling and differentiating effect of solvent in non-aqueous titration	**05**
Q.3	**(a)**	Derive Henderson-Hasselbach equation.	**06**
	(b)	Explain neutralization theory of acid base indicator.	**05**
	(c)	Explain in detail common ion effect.	**05**
Q.4	**(a)**	Describe Iodometric and Iodimetric method.	**06**
	(b)	Write a detailed note on redox indicators.	**05**
	(c)	Explain different types of redox titration.	**05**
Q.5	**(a)**	Explain various steps involved in gravimetric analysis.	**06**
	(b)	Explain Volhard's method of precipitation.	**05**
	(c)	Differentiate co-precipitation and post-precipitation.	**05**
Q. 6	**(a)**	Define masking agent and demasking agent. Explain different types of complexometric titration.	**06**
	(b)	Explain the factors affecting precipitation reaction in Argentometric titration.	**05**
	(c)	Write a brief note on Kjeldahl method.	**05**
Q.7	**(a)**	Define ligand. List various requirements of metal ion indicator. Explain assay principle of magnesium sulphate.	**06**
	(b)	Write a brief note on Karl Fischer titration	**05**
	(c)	The solution contains 100ml 0.1 M HCl. What is the pH and pOH of the solution.	**05**