Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Ph. - SEMESTER–I • EXAMINATION – WINTER - 2023

Subject Code: BP102TP **Date: 19/01/2024**

Subject Name: Pharmaceutical Analysis-I

Time: 10:30 AM to 1:30 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 error. Explain the methods of minimization of error.	**06**
	(b)	Explain the terms. 1) Accuracy 2) Primary standards 3) Molarity 4) Indicator 5) Normality	**05**
	(c)	Describe preparation and standardisation of cerric ammonium sulphate.	**05**
Q.2	**(a)**	Explain 1) Common ion effect 2) Ionization product of water	**06**
	(b)	What is buffer solution? Derive Henderson- Hasselbach equation for pH of buffer solution.	**05**
	(c)	Attempt the following questions. 1) Acetic anhydride is used in preparation of standard perchloric acid. 2) Water is differentiating solvent for HCL and CH3COOH	**05**
Q.3	**(a)**	Describe PM Indicator in details.	**06**
	(b)	Define ligand. Explain different type of complexometric titration.	**05**
	(c)	Explain following questions. 1) Co precipitation and post precipitation. 2) Diazotisation titration	**05**
Q.4	**(a)**	Explain various steps involved in gravimetric analysis.	**06**
	(b)	Write short note on end point detection in redox titration.	**05**
	(c)	Write detail note on volhard method of argentometric titration.	**05**
Q.5	**(a)**	Explain principle of conductometric titration and conductivity cell.	**06**
	(b)	Explain method for determining end point by potentiometric titration	**05**
	(c)	Explain following terms. 1) Pulse polarography 2) Ilkovic equation 3) Nerst equation 4) Aprotic solvent 5) Amphiprotic solvent	**05**
Q. 6	**(a)**	Write the factor affecting limiting current and diffusion current.	**06**
	(b)	Explain source of impurities in medicinal agent.	**05**
	(c)	Write assay principle of calcium gluconate.	**05**
Q.7	**(a)**	Write in detail about glass membrane electrode	**06**
	(b)	Differentiate Iodimetry and Iodometry titration.	**05**
	(c)	Explain theory of acid-base indicator	**05**

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