Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER –1 EXAMINATION – SUMMER-2024

Subject Code: BP102TP Date: 10/06/2024

Subject Name: Pharmaceutical Analysis I

Time: 02.30 p.m. to 5.30 p.m. 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)**	Mention the sources and types of error. Explain in detail about methods of minimizing errors	**06**
	(b)	Explain principle and application of conductometric titration	**05**
	(c)	Give comments: 1. Mohr's titration is carried out in acidic media. 2. Acetic acid is added in preparation of perchloric acid	**05**
Q.2	**(a)**	Define standardization and explain primary and secondary standards.	**06**
	(b)	Write a note on masking and demasking of complexometric titration	**05**
	(c)	What is hydrolysis? Explain the hydrolysis of salts obtained from weak acid and strong base.	**05**
Q.3	**(a)**	Define precipitation titration. Explain Volhard's method used for detection of end point for estimation of halides.	**06**
	(b)	Define pharmacopoeia. Explain official monograph for pharmaceutical substance	**05**
	(c)	Discuss about pM indicator	**05**
Q.4	**(a)**	Explain following terminology 1. Accuracy, 2. Precision, 3. Molarity, 4. Normality, 5. Co precipitation	**06**
	(b)	Write in detail about solvents used in non-aqueous titration	**05**
	(c)	Describe the construction, reaction, advantages and disadvantages of standard hydrogen electrode	**05**
Q.5	**(a)**	Write in detail about basic Principles, methods and applications of diazotization titration	**06**
	(b)	Enumerate different indicator electrodes and explain any one in detail	**05**
	(c)	Explain about neutralization curve.	**05**
Q. 6	**(a)**	What is buffer solution? Derive Henderson Hasselbach equation for finding pH of buffer solution?	**06**
	(b)	What is gravimetric analysis? Explain advantage, disadvantage and application of gravimetric analysis.	**05**
	(c)	Explain in detail about Iodometry titration. Mention how it differs from Iodimetry titration.	**05**
Q.7	**(a)**	Enlist different types of redox titration. Discuss in detail about cerimetry titration	**06**
	(b)	Describe the principle of polarography.	**05**
	(c)	Discuss half wave potential and its applications	**05**

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