P. RAMI REDDY MEMORIAL COLLEGE OF PHARMACY

(AUTONOMOUS)

Awarding University: JNTU Anantapur, Anantapuramu. Approved by PCI, New Delhi & Govt. of A.P.
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Code: 25BP102T **R25**

B.Pharm I Year I Semester (R25) Regular Examinations March 2026

PHARMACEUTICAL ANALYSIS

(B.Pharmacy)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1		Answer the following: (10 X 02 = 20 Marks)			
	(a)	Explain why volumetric analysis is preferred over gravimetric analysis in routine pharmaceutical analysis.	C112.1	II	2M
	(b)	What id Precision and accuracy in assay?	C112.1	III	2M
	(c)	Why is methyl orange preferred for strong acid–weak base titration.	C112.2	II	2M
	(d)	Why does the neutralization curve show a sharp rise in strong acid–strong base titration?	C112.2	II	2M
	(e)	State the principle of Mohr's method and the indicator used in Mohr's method.	C112.3	I	2M
	(f)	Differentiate between co-precipitation and post-precipitation.	C112.3	II	2M
	(g)	Differentiate between oxidation and reduction reactions.	C112.4	II	2M
	(h)	Explain why redox titrations are sensitive to pH changes.	C112.4	I	2M
	(i)	State any two applications of conductometry.	C112.5	I	2M
	(j)	Mention two methods to determine the end point in potentiometric titration.	C112.5	I	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2	(a)	Write the principle of acid–base titration.	C112.1	I	5M
	(b)	Explain methods of minimizing errors in analytical procedures.	C112.1	I	5M
		OR			
3		Explain the preparation and standardization of Sodium hydroxide solution with suitable equations.	C112.1	II	10M
4		Describe the estimation of Ephedrine hydrochloride by non-aqueous titration, including principle, reaction, solvent, and indicator used.	C112.2	II	10M
		OR			
5		Classify acid–base titrations and explain each type with examples and reaction equations.	C112.2	I	10M

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6	Explain the Modified Volhard's method and discuss how it differs from the direct Volhard's method.	C112.3	II	10M
	OR			
7	Describe the method of diazotization titration for the estimation of primary aromatic amines. Mention the role of temperature and indicator.	C112.3	I	10M
8	Explain the principle, reactions involved, indicators used, and applications of Cerimetry in pharmaceutical analysis.	C112.4	II	10M
9	Discuss the selection of indicators in different redox titrations and justify their suitability.	C112.4	I	10M
10	Explain the construction and working of: a) Silver–Silver Chloride electrode b) Calomel electrode Discuss their advantages and applications.	C112.5	II	10M
11	Discuss the pharmaceutical applications of potentiometry with suitable examples.	C112.5	I	10M

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