Total No. of Questions: 3 *Total No. of Printed Pages:2*

Enrollment No.....

Faculty of Pharmacy
End Sem Examination Dec 2024
PY3CO02 Pharmaceutical Analysis -I

Programme: B. Pharm. Branch/Specialisation: Pharmacy

Duration: 3 Hrs. **Maximum Marks: 75**

Note: All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	PO	CO	PSO
Q.1	i.	Define pharmaceutical analysis.	**2**	1	1	1	
	ii.	What are primary and secondary standards?	**2**	1	1	1	
	iii.	Define neutralization reaction with curve.	**2**	1	1	1	
	iv.	Give two examples of strong acid.	**2**	1	1	1	
	v.	Write the principle of precipitation titration.	**2**	2	1	2	
	vi.	Define masking and demasking agents in complexometric titrations.	**2**	2, 3	1, 2	2, 5	
	vii.	Define the terms oxidation and reduction.	**2**	1	1	1, 2	
	viii.	Discuss iodimetry and iodometry.	**2**	1	1	1	
	ix.	Write the two applications of conductometry.	**2**	2	1	2, 3	
	x.	Write principle of polarography.	**2**	2	1	2, 3	
Q.2		Attempt any two:					
	i.	Defne impurities. Explain in detail about impurities in pharmaceutical analysis.	**10**	1	1	1	
	ii.	Define acid base. Enlist the types of acid & bases. Explain weak acid vs strong base titration.	**10**	2	1	2	
	iii.	(a) Explain in detail about errors.	**5**	2	1	2	
		(b) Write an exhaustive note on Non-Aqueous Titration.	**5**	2	1	2	
Q.3		Attempt any seven: Two questions from each section is compulsory.					
		Section - A					
	i.	Write a detailed note on Volhard's method.	**5**	3	1	2, 5	
	ii.	Explain basic principle and methods of diazotisation titration.	**5**	3	1	2, 5	
	iii.	Write a detailed note on Gravimetric Titration.	**5**	3	1	2, 5	
		Section - B					
	iv.	Explain redox titration with steps to write redox reaction with example.	**5**	3	1	2, 5	
	v.	Give the preparation and standardization of 0.5 N Sodium Thiosulphate.	**5**	1	1	1	
	vi.	Write about procedure and application of Cerimetry and Iodometry.	**5**	1	1	1	
		Section - C					
	vii.	Explain construction and working of Dropping Mercury Electrode (DME).	**5**	3	1, 2	3, 5	
	viii.	Explain the construction of electrochemical cell with will working of saturated calomel electrode.	**5**	3	1, 2	3, 5	
	ix.	Discuss the principle, instrumentation, and applications of conductometry.	**5**	2	1	2, 3	

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Marking Scheme

PY3CO02 Pharmaceutical Analysis -I

Q.1	i)	Define Pharmaceutical analysis.	2 Marks	**2**
	ii)	What are Primary and Secondary Standards?	1 Marks 1 Marks	**2**
	iii)	Define Neutralization reaction with Curve.	1 Marks 1 Marks	**2**
	iv)	Give two examples of Strong Acid.	2 Marks	**2**
	v)	Write the Principle of precipitation titration.	2 Marks	**2**
	vi)	Define masking and demasking agents in complexometric titrations.	1 Marks 1 Marks	**2**
	vii)	Define the terms oxidation and reduction.	1 Marks 1 Marks	**2**
	viii)	Discuss Iodimetry and Iodometry.	1Marks 1 Marks	**2**
	ix)	Write the two applications of conductometry.	2 Marks	**2**
	x)	Write principle of Polarography.	2 Marks	**2**

Q.2 Attempt any two:

	i.	Defne Impurities.	2 Marks	**10**
		Explain in details about impurities in Pharmaceutical Analysis	8 Marks	
	ii.	Define Acid base.	2 Marks	**10**
		Enlist the types of Acid & Bases	3 Marks	
		Explain Weak Acid VS Strong Base titration	5 Marks	
	iii.	(a) Explain in details about errors	5 Marks	**5**
		(b) Definition	2 Marks	**5**
		Principle Non-Aqueous Titration	3 Marks	

Q.3 Attempt any seven: Two questions from each section is compulsory.

Section - A

	i.	Definition	1 Marks	**5**
		Principle	2 Marks	
		Volhard's Method	2 Marks	

	ii.	Explain basic principle	2 Marks	**5**
		methods of diazotisation titration	3 Marks	
	iii.	Definition	2 Marks	**5**
		Principle Gravimetric Titration	3 Marks	

Section - B

	iv.	Explain redox titration with steps to	2 Marks	**5**
		write redox reaction with example	3 Marks	
	v.	Give the preparation and	2 Marks	**5**
		standardization of 0.5 N Sodium Thiosulphate	3 Marks	
	vi.	Write about procedure and	2 Marks	**5**
		application of Cerimetry and Iodometry.	3 Marks	

Section - C

	vii.	Explain construction and working of Dropping Mercury Electrode (DME).		**5**
	viii.	Explain the construction	2 Marks	**5**
		working of saturated calomel electrode.	3 Marks	
	ix.	Discuss the principle, instrumentation, and	2 Marks	**5**
		applications of conductometry.	3 Marks	

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