

GUJARAT TECHNOLOGICAL UNIVERSITY
PHARM.D YEAR-3 EXAMINATION – SUMMER-2023

Subject Code: 838802**Date: 05\07\2023****Subject Name: Pharmaceutical Analysis****Time: 02:30 PM TO 05:30 PM****Total Marks: 70****Instructions:**

1. Attempt any five questions.
1. Make suitable assumptions wherever necessary.
2. Figures to the right indicate full marks.

Q.1	(a) Note on detectors of IR spectroscopy.	06
	(b) Explain theory and applications of column chromatography.	04
	(c) Give introductory note on X ray diffraction.	04
Q.2	(a) Describe theory, instrumentation and applications of gas chromatography.	06
	(b) Explain instrumentation and applications of amperometric titrations.	04
	(c) Write introductory note on ISO 9000.	04
Q.3	(a) Write note on fragmentation ion and applications of mass spectroscopy.	06
	(b) Write introductory note and applications of NMR.	04
	(c) Write note on ICH guidelines. Enlist quality guidelines details.	04
Q.4	(a) Classify chromatographic methods. Differentiate between HPLC and HPTLC.	06
	(b) Enlist different derivatisation techniques in GC. Discuss any two.	04
	(c) Explain DME (Dropping Mercury Electrode).	04
Q.5	(a) Write short note on instrumentation and applications of UV Spectroscopy.	06
	(b) Write short note on conductometric titration.	04
	(c) Explain instrumentation of AAS.	04
Q.6	(a) Define : indicator electrode, reference electrode, bathochromic shift, R _f value, normal phase HPLC and reverse phase HPLC	06
	(b) Give instrumentation of DSC.	04
	(c) Give introductory note on a) GLP and b) TQM.	04
Q.7	(a) Explain instrumentation and applications of flame photometry.	06
	(b) Give brief note on development techniques in paper chromatography.	04
	(c) Explain gel affinity chromatography.	04
