

GUJARAT TECHNOLOGICAL UNIVERSITY
Pharm D – 3st Year • EXAMINATION – WINTER - 2023

Subject Code:838802**Date:12/01/2024****Subject Name: Pharmaceutical Analysis****Time: 10:30 AM to 1:30 PM****Total Marks: 70****Instructions:**

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

Q.1	(a) What is ICH? Give an overview of all the ICH guidelines	06
	(b) What is Validation? How is it different from calibration? Discuss with examples	04
	(c) Discuss different principles of separation in chromatography	04
Q.2	(a) Discuss applications and working of HPLC.	06
	(b) Describe the working and uses of HPTLC	04
	(c) Write a note on – Detectors used in GC	04
Q.3	(a) What is electrophoresis? What are its different types? Mention its applications.	06
	(b) Write a note on Potentiometric analysis and its applications.	04
	(c) Discuss the terms: DME, Indicator Electrodes.	04
Q.4	(a) Discuss the instrumentation, advantages and Pharma applications of Amperometric titrations.	06
	(b) Discuss Beers-Lamberts Law	04
	(c) Discuss the terms: Hyperchromic shift, Bathochromic shift	04
Q.5	(a) Discuss Instrumentation and working of IR spectrophotometer.	06
	(b) Write a note on Atomic Absorption Spectrometry.	04
	(c) Write a note on NMR	04
Q. 6	(a) Discuss the terms: Quenching, Luminescence, Fragmentation in MS	06
	(b) Write a note on X-Ray Diffraction.	04
	(c) Write a note on Polarimetry	04
Q.7	(a) What are the different thermal methods of analysis? Discuss DSC and DTA.	06
	(b) Discuss the detectors used in UV-Visible spectrophotometer.	04
	(c) Write a note on Flame photometry	04
