Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

Pharm D – 3rd Year • EXAMINATION – SUMMER - 2022

Subject Code:838802 Date: 03/06/2022

Subject Name: Pharmaceutical Analysis

Time:10:30AM TO 01:30PM 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)**	Explain Beer-Lambert's Law its Deviation and application.	**06**
	(b)	Discuss Fragmentation rule of mass spectroscopy.	**04**
	(c)	Enlist Detectors used in IR spectroscopy and explain any one in detail.	**04**
Q.2	**(a)**	Describe the principle and types of paper chromatography. Write the Advantages and limitation of paper chromatography.	**06**
	(b)	Draw a well-labelled diagram of spectrofluorimeter.	**04**
	(c)	Discuss the Factors affecting column efficiency.	**04**
Q.3	**(a)**	Compare HPLC and HPTLC and explain which one is better with suitable justification.	**06**
	(b)	Write short note on Good Laboratory Practice.	**04**
	(c)	Write a note on ISO 9000.	**04**
Q.4	**(a)**	Draw a well labeled diagram of DME. Explain the following terms: (i) Diffusion current (ii) Residual current.	**06**
	(b)	Write a note on Quenching of fluorescence and its types.	**04**
	(c)	What is the difference between DSC and DTA?	**04**
Q.5	**(a)**	Explain Various detectors used in Gas Chromatography.	**06**
	(b)	Describe the applications of conductometry.	**04**
	(c)	Enlist Detectors used in UV spectroscopy and explain any one in detail.	**04**
Q. 6	**(a)**	Draw a well labeled diagram of Mass spectrometer. Discuss Quadrupole Analyser.	**06**
	(b)	Explain the Principle involved in atomic Emission spectroscopy.	**04**
	(c)	Discuss the application of X-ray diffraction.	**04**
Q.7	**(a)**	Explain following terms: 1. Auxochromes 2. Bathochromic shift 3. Hyperchromic effect 4. Rf value 5. Validation 6. Retention time	**06**
	(b)	Write a Principle and application of Ion-exchange chromatography.	**04**
	(c)	Write a brief note on column chromatography.	**04**