

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm - SEMESTER-VIII • EXAMINATION – SUMMER -2021

Subject Code: 280004**Date: 05/08/2021****Subject Name: Pharmaceutical Analysis IV****Time:10:30AM TO 01:30PM****Total Marks: 80****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 Principle of Gas Chromatography? Discuss in Brief Stationary Phase used in GLC. **06**
- (b) Explain : Super critical fluid chromatography, Size exclusion chromatography **05**
- (c) What is Nephelometry and turbidimetry? Write Instrumentation and application of Nephelometry. **05**
- Q.2** (a) What is theoretical plate? Discuss the Classification of HPLC methods. **06**
- (b) Write Brief note on : Bragg's Law **05**
- (c) Explain terms: GC-MS, LC-MS **05**
- Q.3** (a) Discuss the stationary phases and application of partition chromatography. **06**
- (b) Enlist Detectors used in Gas chromatography. Explain any two in detail. **05**
- (c) Discuss the Principles of Raman Spectroscopy. **05**
- Q.4** (a) Write X-Ray Diffraction techniques in detail. **06**
- (b) Explain : Ion exchange chromatography, Affinity chromatography **05**
- (c) What is the use of Guard column in chromatography? Discuss any two detectors used in HPLC analysis. **05**
- Q.5** (a) What are patents? Discuss various steps in filing patents. **06**
- (b) Discuss comparison of HPLC and HPTLC **05**
- (c) Explain elements of ISO 9000. Discuss the advantages of Implementing ISO in an organization. **05**
- Q. 6** (a) Write note on Principle and Instrumentation of HPTLC analysis. **06**
- (b) What is radioactive decay? Discuss methods used to measure radioactivity. **05**
- (c) Write note on Isotopic dilution method. **05**
- Q.7** (a) What is analytical method validation? Explain Precision and Robustness in detail. **06**
- (b) What are immunochemical methods? Explain ELISA in detail. **05**
- (c) Write brief note on GLP. **05**
