

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER – VIII • EXAMINATION – WINTER – 2015

Subject Code: 280004

Date: 11/12/2015

Subject Name: Pharmaceutical Analysis - IV

Time: 2.30 PM to 5.30 PM

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) Explain Bragg's Law. Discuss applications of X-Ray diffraction. **06**
(b) What is gas chromatography? Explain different stationary phases used in gas chromatography. **05**
(c) Enlist various detectors used in Gas chromatography. Explain any one in detail. **05**
- Q.2** (a) Classify liquid chromatography. Explain various separation principles. **06**
(b) Write note on GC-MS. **05**
(c) Explain following terminologies in detail (Any two) **05**
1. Chromatographic Resolution 2. Size exclusion chromatography
3. Theoretical plates
- Q.3** (a) Discuss the instrumentation of HPLC. What is the importance of guard column? **06**
(b) Write comparison of HPLC vs GC. **05**
(c) What is normal phase and reversed phase chromatography. Discuss various stationary phases used in reversed phase chromatography. **05**
- Q.4** (a) What is Ion-exchange chromatography? Write brief note on it. **06**
(b) Discuss the applications of HPTLC. Write advantages and disadvantages of HPTLC. **05**
(c) Write brief note on Nephelometry. **05**
- Q.5** (a) Discuss basic principle of Raman spectroscopy in detail. Write applications of it. **06**
(b) Write brief note on GLP principles. **05**
(c) What is IPR? Explain various steps involved in filing patent. **05**
- Q.6** (a) What is analytical method validation? Explain various validation parameters as per ICH guideline. **06**
(b) Write note on ISO 9001:2000 quality system. **05**
(c) Write brief note on Isotopic dilution analysis. **05**
- Q.7** (a) What is radioactive decay? Explain how radioactivity is measured. **06**
(b) Write note on ELISA. **05**
(c) What is basic principle of affinity chromatography? Write brief note on it. **05**
