

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.

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|-------------|------------|--|-----------|
| 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 |
