

**GUJARAT TECHNOLOGICAL UNIVERSITY****B. Pharm. - SEMESTER– VIII • EXAMINATION – Summer-2016****Subject Code: 280004****Date: 04/05/2016****Subject Name: Pharmaceutical Analysis IV****Time: 10:30 AM to 1:30 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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|-------------|-----|---|-----------|
| <b>Q.1</b>  | (a) | What is Analytical Method Validation? Write in detail about any three validation parameters as per ICH guideline. | <b>06</b> |
|             | (b) | Explain isotope dilution analysis in radiochemical methods.   | <b>05</b> |
|             | (c) | Write a note on principle, technique and applications of ELISA.   | <b>05</b> |
| <b>Q.2</b>  | (a) | Explain Bragg's law and Give applications of X-ray diffraction  | <b>06</b> |
|             | (b) | Write a note on detectors used in gas chromatography  | <b>05</b> |
|             | (c) | Write in short about ISO 9001:2000.   | <b>05</b> |
| <b>Q.3</b>  | (a) | Write advantages, disadvantages and applications of gas chromatography.   | <b>06</b> |
|             | (b) | Write a brief note on Nephelometry and Turbidimetry with its applications.  | <b>05</b> |
|             | (c) | Write a note on radio-immuno assay (RIA)  | <b>05</b> |
| <b>Q.4</b>  | (a) | Explain in brief Hyphenated technique of chromatography.  | <b>06</b> |
|             | (b) | Describe generation and characteristic of X-rays.   | <b>05</b> |
|             | (c) | Write a short note on Good Laboratory Practice (GLP).   | <b>05</b> |
| <b>Q.5</b>  | (a) | Explain the principle, instrumentation and applications of super critical fluid Chromatography.                   | <b>06</b> |
|             | (b) | Give details of ion-exchange chromatography.  | <b>05</b> |
|             | (c) | Define the following terms in HPLC : Resolution, Capacity factor, Theoretical Plates and peak asymmetry factor?   | <b>05</b> |
| <b>Q. 6</b> | (a) | Describe advantage, disadvantage and applications of HPTLC.   | <b>06</b> |
|             | (b) | What is patent? Write a note on steps involved in patent filling in India.  | <b>05</b> |
|             | (c) | How Raman spectra recorded? Discuss applications of raman spectroscopy  | <b>05</b> |
| <b>Q.7</b>  | (a) | Give brief account on GATT and TRIPS  | <b>06</b> |
|             | (b) | Write a short note on affinity chromatography.  | <b>05</b> |
|             | (c) | Give units of radioactivity. Write a note on applications of radionuclides?                                       | <b>05</b> |

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