

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – VI • EXAMINATION – WINTER • 2016

Subject Code: 2260003**Date: 22-10-2016****Subject Name: Pharmaceutical Analysis - IV****Time: 02.30 pm To 05.30 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) Derive Bragg's law. Give importance of X-ray diffraction. | 06 |
| | (b) Give Principle of Gas Chromatography. | 05 |
| | (c) What is Nuclear Chemistry? Write a note on Neutron Activation Analysis. | 05 |
| Q.2 | (a) Explain various Scattering Spectroscopy techniques with their applications. | 06 |
| | (b) Describe generation and characteristic of X-rays. | 05 |
| | (c) Give Principle and Applications of ion-exchange Chromatography. | 05 |
| Q.3 | (a) What is Intellectual Property Right (IPR)? Write a note on GATT and TRIPS. | 06 |
| | (b) Write a note on ISO 9001:2000. | 05 |
| | (c) Write a note on Basic issues of GLP. | 05 |
| Q.4 | (a) Give Instrumentation and applications of HPTLC. | 06 |
| | (b) Write a note on detectors used in Gas Chromatography. | 05 |
| | (c) Write a note on Isotope dilution analysis. | 05 |
| Q.5 | (a) Give instrumentation of HPLC with labeled diagram. | 06 |
| | (b) Give brief introduction of LC-MS and LC-MS/MS. | 05 |
| | (c) Give Pharmaceutical Applications of HPLC. | 05 |
| Q.6 | (a) Enumerate Analytical Method Validation parameters as per ICH guidelines. Explain any two in detail. | 06 |
| | (b) Write a note on Supercritical Fluid Chromatography. | 05 |
| | (c) Write a note on Radio Immuno Assay (RIA). | 05 |
| Q.7 | (a) Explain. HETP, Peak asymmetry factor, Retention volume, Resolution. | 06 |
| | (b) Write a note on Stationary Phase and Mobile Phase used in HPLC. | 05 |
| | (c) Describe steps involved in filing of patent. | 05 |
