Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – VIII • EXAMINATION – SUMMER • 2014

Subject Code: 280004 **Date: 27-05-2014**

Subject Name: Pharmaceutical Analysis-IV

Time: 10:30 am - 01:30 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)**	Discuss in detail theory of Raman scattering. Enlist applications of Raman spectroscopy.	**06**
	(b)	Give Bragg's law. Enlist the X-ray diffraction Techniques and discuss in detail Bragg X - ray spectrometer method.	**05**
	(c)	Write a note on ISO9001:2000	**05**
Q.2	**(a)**	Explain the following terms in light of Gas Chromatography: (i) Retention Volume (ii) Corrected Retention Volume (iii) Adjusted Retention Volume (iv) Specific Retention Volume	**06**
	(b)	Describe sample injectors used in GC	**05**
	(c)	Write a note on interaction of X - rays with matter	**05**
Q.3	**(a)**	Enlist the detectors used in GC and discuss construction and working of any one.	**06**
	(b)	Give principle of ion-exchange chromatography.	**05**
	(c)	What are the different instruments used for measurement of radioactivity? Give a brief account of them.	**05**
Q.4	**(a)**	Draw a labelled diagram of HPLC instrument. Explain any one detector used in HPLC.	**06**
	(b)	Write an explanatory note on size exclusion chromatography.	**05**
	(c)	Explain in brief GATT and TRIPS.	**05**
Q.5	**(a)**	Discuss the principle of HPTLC. Give a detailed comparison of HPTLC with HPLC.	**06**
	(b)	Give an account of applications of HPLC.	**05**
	(c)	What are different types of immunoassays? Write a note on Radio Immuno assay.	**05**
Q. 6	**(a)**	What is Good Laboratory Practices? Enlist responsibilities of Management and Responsibilities of Personnel.	**06**
	(b)	Describe steps involved in filing patents.	**05**
	(c)	Write an explanatory note on Analytical Method Validation.	**05**
Q.7	**(a)**	Describe columns and column packing materials used in GC. How is GC column conditioning done?	**06**
	(b)	Give principle and applications of Supercritical Fluid Chromatography.	**05**
	(c)	Write a short note on Nephalometry and Turbidimetry.	**05**

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