Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. PHARM. - SEMESTER – VIII EXAMINATION – OCTOBER 2012

Subject code: 280004 **Date: 30/10/2012**

Subject Name: Pharmaceutical Analysis - IV

Time: 02.30pm - 05.30pm **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)	Describe instrumentation for gas chromatography.	**06**
	(b)	Write advantages, disadvantages and applications of gas chromatography	**05**
	(c)	Describe the principle, technique and application of radio immuno assay (RIA).	**05**
Q.2	(a)	Describe the principle, technique and applications of affinity chromatography	**06**
	(b)	Detectors used in HPLC.	**05**
	(c)	Define GLP. Write a brief note on GLP(Good Laboratory Practice).	**05**
Q.3	(a)	Describe super critical fluid chromatography in detail.	**06**
	(b)	Define patent. Discuss steps involved in patent filling.	**05**
	(c)	Compare HPTLC and HPLC. Describe principle and applications of HPTLC.	**05**
Q.4	(a)	Explain Bragg's law in detail. The reflecting plane of a lithium fluoride analyzing crystal has *d* value of 2.021Å. Calculate the wavelength of the second order diffracted line which has a θ value of 50.2°. (sin 50.2 = 0.768).	**06**
	(b)	Describe generation of X-rays and discuss application of X-ray diffraction.	**05**
	(c)	What is ELISA? Describe ELISA in detail.	**05**
Q.5	(a)	What is intellectual property right (IPR)? Write a note of TRIPS and GATT.	**06**
	(b)	Discuss ISO 9001:2000 and Quality Management System	**05**
	(c)	Describe the principle, technique and application of adsorption chromatography.	**05**
Q. 6	(a)	Write a note on Size exclusion chromatography	**06**
	(b)	What is the basic difference between nephlometry and turbidimetry. Describe applications of nephlometry and turbidimetry.	**05**
	(c)	Write a note on radioactive decay.	**05**
Q.7	(a)	Write a note on validation parameters for analytical method development.	**06**
	(b)	Describe advantages, disadvantages and applications of raman spectroscopy.	**05**
	(c)	Write a note on ion-exchange chromatography.	**05**

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