Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. PHARM. - SEMESTER – IV • EXAMINATION – WINTER 2012

Subject code: 240004 **Date: 01/01/2013**

Subject Name: Pharmaceutical Analysis-II

Time: 02.30 pm - 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.**

Q.1	(a)	Define and classify chromatography. Enlist the theories of chromatography. Describe any one in detail.	**06**
	(b)	Explain the following terms: (i) Retention time (ii) Retention volume (iii) Dead volume (iv)Resolution (v) Band width	**05**
	(c)	Write a brief note on column chromatography.	**05**
Q.2	(a)	How do you validate an instrumental analytical method? What are the advantages of validation?	**06**
	(b)	Describe the factors affecting conductance.	**05**
	(c)	Describe the applications of conductometry.	**05**
Q.3	(a)	What is calorimetry? Describe in detail thermogravimetric analysis.	**06**
	(b)	What is the difference between DSC and DTA?	**05**
	(c)	What are the applications of DSC?	**05**
Q.4	(a)	Draw a neat and labelled diagram of polarimeter. Describe the applications of polarimetry.	**06**
	(b)	What is standard electrode potential? Write the classification of electroanalytical methods.	**05**
	(c)	Write a note on electrodes used in potentiometry.	**05**
Q.5	(a)	Draw a well labeled diagram of DME. Explain the following terms: (i) Diffusion current (ii) Half wave potential.	**06**
	(b)	Write an explanatory note on pulse polarography.	**05**
	(c)	Write a brief note on amperometric titrations.	**05**
Q. 6	(a)	Describe in detail the various forms of TLC.	**06**
	(b)	What is band broadening? Explain the factors causing band broadening.	**05**
	(c)	Describe the factors affecting diffusion current.	**05**
Q. 7	(a)	Explain the following terms: (i) Specific conductance (ii) Equivalent conductance (iii) Kohlraush law	**06**
	(b)	Describe the process used to calibrate a glass electrode.	**05**
	(c)	How is a pH meter useful to pharmacist?	**05**

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