Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – IV • EXAMINATION – WINTER • 2016

Subject Code: 240004 Date: 22-10-2016

Subject Name: Pharmaceutical Analysis - II

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)	Define chromatography. And give suitable classification of various chromatographic techniques.	**06**
	(b)	Write short note on column chromatography.	**05**
	(c)	Discuss the various development techniques of paper chromatography	**05**
Q.2	(a)	Define conductance. Describe the applications of conductometry.	**06**
	(b)	Enlist the types of conductometric titrations. And explain conductometric titration curve for weak acid against strong base with suitable example.	**05**
	(c)	Describe factors affecting conductance.	**05**
Q.3	(a)	Describe the working of DME. And discuss the advantages and disadvantages of DME.	**06**
	(b)	Define: 1. Polarography. 2. Limiting current. 3. Diffusion current. 4. Migration current. 5. Residual current.	**05**
	(c)	Discuss the applications of polarography.	**05**
Q.4	(a)	Discuss the various types of potentiometric titrations. And discuss any one in detail.	**06**
	(b)	Write working principle of glass electrode. Write the disadvantage of use of glass electrode.	**05**
	(c)	Enlist characteristics of an ideal reference electrode used in potentiometry. And discuss various reference electrodes.	**05**
Q.5	(a)	Define thermogravimetry and classify them, discuss factors affecting thermogravimetric curve.	**06**
	(b)	Write short note on TGA	**05**
	(c)	What is difference between DSC and DTA? Write applications of both.	**05**

Q. 6	(a)	Define polarimetry.Explain working principle of polarimeter.	**06**
	(b)	Distinguish the following pairs: 1. Stationary phase and mobile phase. 2. Diffusion current and residual current.	**05**
	(c)	Write short note on amperometric titrations	**05**
Q.7	(a)	Describe the principle of paper chromatography and discuss its applications.	**06**
	(b)	What is S/N ratio? explain sources of noise in instrumental analysis	**05**
	(c)	Describe the validation of instrumental analytical methods.	**05**

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