Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – IV (OLD Syllabus) • EXAMINATION – SUMMER • 2015

Subject Code: 240004 **Date: 01-06-2015**

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)	Explain the terms: (i) Half wave potential (ii) Signal to noise ratio (iii) Stripping voltammetry	**06**
	(b)	Discuss the advantages and limitations of instrumental methods of analysis. Classify the different instrumental methods.	**05**
	(c)	Describe briefly the validation parameters for analytical method.	**05**
Q.2	(a)	Discuss the advantages and limitations of amperometric titrations.	**06**
	(b)	Discuss the principle behind polarography.	**05**
	(c)	Describe the construction and working of dropping mercury electrode.	**05**
Q.3	(a)	Define specific conductance, equivalent conductance and cell constant.	**06**
	(b)	Discuss the different types of conductimetric titration curves.	**05**
	(c)	Write a note on Kohlrausch law.	**05**
Q.4	(a)	Discuss the applications of differential thermal analysis.	**06**
	(b)	Explain the principle and instrumentation of thermogravimetry.	**05**
	(c)	Describe the principle and applications of thin-layer chromatography.	**05**
Q.5	(a)	Define the terms: (i) Retardation factor (ii) Theoretical plates (iii) Resolution (iv) Asymmetry factor	**06**
	(b)	What is chromatography? Explain the different chromatography techniques.	**05**
	(c)	Describe the principle and various development techniques in paper chromatography.	**05**
Q. 6	(a)	What is Nernst equation? Describe the various reference electrodes used in potentiometry.	**06**
	(b)	Discuss the different types of potentiometric titrations.	**05**
	(c)	Describe the construction and working of glass electrode.	**05**
Q. 7	(a)	Explain briefly the plate and rate theories of chromatographic separation.	**06**
	(b)	Describe with the help of a diagram, the construction of a polarimeter.	**05**
	(c)	Calculate the specific optical rotation of a one gram of substance dissolved in 50 ml of water, which read +2.676 ^{o} in a 20 cm polarimeter tube.	**05**

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