Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER – 4- EXAMINATION –WINTER - 2018

Subject Code: 240004 **Date: 06/12/2018**

Subject Name: Pharmaceutical Analysis - II

Time:02:30 PM TO 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)**	Explain the following terms in brief: 1. Validation 2. Accuracy 3. Signal to Noise ratio 4. Cell constant 5. Supporting analyte 6. Cell potential	**06**
	(b)	Write detailed note on Kohlrausch's law along with applications.	**05**
	(c)	Explain applications of potentiometry in pharmaceuticals. Enlist the methods to detect the end point in potentiometry.	**05**
Q.2	**(a)**	Write the advantages and disadvantages of Instrumental methods of Analysis. Write brief note on different types of instrumental noise.	**06**
	(b)	Differentiate the following pairs: 1. Stationary Phase and Mobile phase 2. Equivalent conductance and specific conductance	**05**
	(c)	Explain Van Deemter equation. Discuss the factors affecting chromatographic peak broadening.	**05**
Q.3	**(a)**	Write note on classification of chromatographic techniques. Enlist the theories of chromatography. Describe any one in detail.	**06**
	(b)	Write a short note on Amperometric titrations.	**05**
	(c)	What is standard electrode potential? Describe in detail classification of electroanlaytical methods.	**05**
Q.4	**(a)**	Discuss in detail different components of polarogram.	**06**
	(b)	Write detailed note on dropping mercury electrode with well labeled diagram.	**05**
	(c)	Describe the factors affecting diffusion current in detail.	**05**
Q.5	**(a)**	What is calorimetry? Write note on principle and applications of DSC in detail.	**06**
	(b)	Write detailed note on instrumentation of polarimetry.	**05**
	(c)	Define optical activity and specific rotation. Explain in detail about qualitative and quantitative applications of polarimetry.	**05**
Q. 6	**(a)**	What is indicator and reference electrode?. Describe construction, working, advantages, disadvantages of glass electrode in detail.	**06**
	(b)	Write a short note on Thin layer chromatography.	**05**
	(c)	Define the following terms 1. Stripping Voltametry 2. Asymmetric factor 3. Resolution 1. Retention time 5. Conductance	**05**
Q.7	**(a)**	Describe principle, advantages, disadvantages, applications of paper chromatography alongwith its various development techniques.	**06**
	(b)	Describe the factors affecting conductance in detail.	**05**
	(c)	Discuss in detail principle, instrumentation and applications of thermogravimetric analysis.	**05**

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