Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. PHARM. - SEMESTER – II • EXAMINATION – WINTER 2012

Subject code: 2920107 **Date: 10-01-2013**

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)	Discuss the fundamental theories controlling sample preparation techniques.	**06**
	(b)	Write the theoretical considerations in Flow Injection Analysis.	**05**
	(c)	How NMR is useful in Solid State Analysis.	**05**
Q.2	(a)	What is Tryptic Mapping? Discuss the general requirements for such analysis.	**06**
	(b)	Enlist the Quality Control methods for medicinal plants as per WHO guidelines. Describe its importance.	**05**
	(c)	Discuss the theoretical considerations and factors influencing retention in Ion Exchange Chromatography.	**05**
Q.3	(a)	What are impurities? Give types of impurities. Give general drug impurity profiling.	**06**
	(b)	Explain application of GC MS in toxicologic and forensic studies.	**05**
	(c)	Write a note on Amino Acid Sequence analysis.	**05**
Q.4	(a)	Explain basic concept of electrophoresis and factors affecting separation of proteins in gel electrophoresis.	**06**
	(b)	Write a note on physicochemical evaluation of crude drugs.	**05**
	(c)	Discuss the methods for Solid State Analysis at bulk level.	**05**
Q.5	(a)	Explain the role of Mass Spectrometry in Identification of Impurities.	**06**
	(b)	Write a note on: Counter Current Chromatography.	**05**
	(c)	Give the introduction to various modes of HPLC analysis for peptides and proteins.	**05**
Q.6	(a)	Discuss different standardization parameters used for evaluation of herbal drugs?	**06**
	(b)	Write a note on estimation of pesticide residues in plants.	**05**
	(c)	Discuss various extraction methods for systematic phytochemical analysis?	**05**
Q.7	(a)	Give principle and procedure involved in quantitative analysis of following drugs as per I.P. 2007: (4x4M = 16) 1) Cimetidine tablets. 3) Hydralazine HCl injection. 2) Phenobarbitone sodium injection. 4) Metformin HCl tablets.	**16**

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