

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
M. Pharm. – SEMESTER – II • EXAMINATION – WINTER • 2014

Subject Code: 1921501

Date: 24-12-2014

Subject Name: Modern Pharmaceutical Analysis

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.**

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|-------------|-----|--|-----------|
| Q.1 | (a) | What is isoelectric focusing (IEF)? Describe principle and applications of IEF. Discuss gels used in IEF. | 10 |
| | (b) | Discuss the role of ion-exchange chromatography in amino acid analysis. | 06 |
| Q.2 | (a) | What is impurity? Classify the impurities encountered in pharmaceuticals. Discuss organic impurities obtained from synthetic process. | 08 |
| | (b) | Describe the concept of automated analysis. | 08 |
| Q.3 | (a) | What is pre-formulation study? Describe various methods of solubility determination. | 08 |
| | (b) | Discuss the analytical techniques used in pre-formulation study. | 08 |
| Q.4 | (a) | Discuss physical and chemical analysis of cosmetics. | 10 |
| | (b) | Describe quality control of radiopharmaceuticals. | 06 |
| Q.5 | (a) | What are the techniques used for analysis of solid oral dosage forms? Describe application of thermal methods in analysis of solid oral dosage form with examples. | 10 |
| | (b) | Describe analysis of herbal products with respect to volatile oils and extractable matter. | 06 |
| Q. 6 | (a) | Give characteristics of parenteral dosage forms. Describe their analysis during formulation and process development. | 08 |
| | (b) | Enlist and discuss in brief ICH guidelines in Pharmaceutical analysis. | 08 |
| Q.7 | | Write notes on the following (Any Two) | 16 |
| | (a) | Compendial testing | |
| | (b) | Methods of polymorphism study. | |
| | (c) | Tryptic mapping | |
