

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-I Regular / Remedial Examination January/February 2011

Subject code: 910107

Subject Name: Pharmaceutical Analysis I

Date: 31 /01 /2011

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) Enumerate methods involved in elemental analysis of sodium and potassium along with its principles. **06**
- (b) Write about use of N, 1-naphthyl ethylene diamine and ninhydrin in pharmaceutical analysis. **05**
- (c) Enumerate the principles involved in the analysis of cholesterol in pharmaceutical drug formulations. **05**
- Q.2** (a) Write a note on analysis of excipients in solid state emphasizing on particle size analysis and X ray diffraction technique. **06**
- (b) Write a note on methods and principles involved in estimation of Chloramphenicol in pharmaceutical drug formulations. **05**
- (c) Enumerate the use of 2,6 – dichloro quinone chlorimide and 2,4 – dinitrophenyl hydrazine in pharmaceutical analysis with appropriate examples **05**
- Q.3** (a) Write a note on the principles involved in the elemental analysis of sulphur and calcium. **06**
- (b) How can you estimate the drugs using 3-methyl-2-benzothiazoline hydrazone and Folin Ciocalteu reagent. **05**
- (c) How will you estimate barbituric acid derivatives in pharmaceutical dosage forms **05**
- Q.4** (a) Explain in brief the methods and its principles involved in elemental analysis of chlorine and phosphorus. **06**
- (b) Write a note on principles involved in the use of 3-methyl-2-benzothiazoline hydrazone and p-dimethylamino benzaldehyde in estimation of drugs. **05**
- (c) How will you estimation penicillin in pharmaceutical dosage forms. **05**
- Q.5** (a) What is analytical method validation? Enlist different parameters and discuss any two in detail. **06**
- (b) Describe the key steps in the development of an analytical method. **05**
- (c) Enlist parameters to be studied for calibration of HPLC instrument and discuss any three. **05**
- Q. 6** (a) What is an Ion Selective Electrode? Which are its different types? Discuss any two. **06**
- (b) Which different methods are used for the quantitative determination of hydroxyl groups? Discuss one method used specifically for the phenolic hydroxyl group. **05**
- (c) Describe methods useful for estimation of aldehydes and ketones. **05**
- Q.7** (a) Discuss a method for determining the total alkaloids of ergot. **06**
- (b) Write a note on the methods for the estimation of Vitamin A. **05**
- (c) Define glycosides? Describe a method for their estimation. **05**

\*\*\*\*\*