

GUJARAT TECHNOLOGICAL UNIVERSITY**M. Pharm. - SEMESTER - I • EXAMINATION – SUMMER-2016****Subject Code: 910107****Date: 27/05/2016****Subject Name: Pharmaceutical Analysis - I****Time: 10:30 AM To 1:30 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) Describe the procedure for validation of IR Spectrophotometer. **06**
(b) How will you determine total the alkaloids of Rauwolfia? **05**
(c) Describe various Ion selective electrodes. Discuss their applications in brief? **05**
- Q.2** (a) Discuss the principle involved in analysis of cardiac glycosides. **06**
(b) What is Ninhydrin reagent? Describe its use in pharmaceutical analysis. **05**
(c) Write a note on the principles involved in the elemental analysis of potassium and calcium. **05**
- Q.3** (a) Write a detail note on particle size analysis. **06**
(b) What do you mean by analytical method validation? Discuss any two parameters of method validation. **05**
(c) Enumerate the various methods for determination of amine group. Discuss any one method **05**
- Q.4** (a) Discuss about quantitative determination of aldehyde and ketone groups. **06**
(b) Write a note on principles involved in the use of 3-methyl-2-benzothiazoline hydrazone (MBTH) and 2,4-dinitrophenylhydrazine in estimation of drugs **05**
(c) How will you estimate erythromycin in pharmaceutical dosage forms? **05**
- Q.5** (a) Give brief account on validation of GC instrument. **06**
(b) Describe the physicochemical and instrumental methods for analysis of Barbituric acid derivatives. **05**
(c) Discuss the principle involved in the analysis of glucocorticoids in pharmaceutical drug formulations. **05**
- Q. 6** (a) Give methods of estimation for Vitamin A **06**
(b) How will you calibrate UV-Visible spectrophotometer? **05**
(c) What is the use of N-naphthyl ethylene diamine and *p*-dimethylaminobenzaldehyde (PDAB) in pharmaceutical analysis? **05**
- Q.7** (a) Explain the working principle and use of X-ray diffraction techniques in drug analysis. **06**
(b) Write a note on the principle involved in the elemental analysis of Sodium. **05**
(c) Discuss the principle involved in the analysis of ascorbic acid in pharmaceutical drug formulations. **05**