

GUJARAT TECHNOLOGICAL UNIVERSITY
M. Pharm. – SEMESTER – I • EXAMINATION – SUMMER 2013

Subject Code: 910107**Date: 15-05-2013****Subject Name: Pharmaceutical Analysis - I****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) How will you calibrate and validate the following instruments **08**
1. IR spectrophotometer
2. GC.
- (b) Classify ion selective electrodes and discuss their application with example. **08**
- Q.2** (a) Discuss the principle and procedure for quantitative analysis of following **08**
groups. 1) Aldehyde 2) Amine with specific examples.
- (b) Explain the principle and procedure for analysis of pharmaceutical dosage **08**
forms containing 1) Vitamin B₁₂ and 2) Vitamin C.
- Q.3** (a) Explain the analytical methods for determination of calcium and bromide. **08**
- (b) Discuss the use of following reagents in pharmaceutical analysis with **08**
specific example. 1) *p*-dimethyaminobenzaldehyde 2) 2,4-dinitrophenylhydrazine 3) 2,6-dichloroquinone chlorimide.
- Q.4** (a) What is the importance of particle size analysis ? Explain the instrumental **08**
methods used for particle size determination.
- (b) Explain the methods used for analysis of cinchona and rouwolfia alkaloids. **08**
- Q.5** (a) Explain the application of instrumental methods of analysis in drug **08**
industry with suitable example.
- (b) What is X-ray diffraction? Describe its application in pharmacy. **08**
- Q. 6** (a) Explain the assay principle and procedure used for analysis of progesterone **08**
and cholesterol.
- (b) What do you mean by analytical method development? Describe analytical **08**
method development with suitable example.
- Q.7** Write short-notes on (any three) **16**
A. Analysis of sulphonamide formulations.
B. Basic principle of penicillin assay.
C. Assay of Digitoxin.
D. Drug analysis by Folin-Ciocalteau reagent
