

Date: 29/11/12

Exam no. \_\_\_\_\_

**Maliba Pharmacy College**  
**Uka Tarsadia University**  
**Mid-Semester Examination**  
**M. Pharm. (Pharmaceutical Analysis) (1<sup>st</sup> Semester)**  
**040060102: Pharmaceutical Analysis-I**

**Duration: 3 hours**

**Maximum marks: 70**

**Instructions:**

1. Attempt all questions
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks allocated to that question.
4. Draw diagrams/figures wherever necessary.

**Q.1] Answer the following:**

**[14 x 1 = 14]**

- 1) What is Prospective validation?
- 2) Define: Calibration.
- 3) What do you mean by sieve diameter?
- 4) Name the reagents for estimation of hydroxyl group by acetylation method.
- 5) Which instrumental techniques are used to identify polymorph?
- 6) What is ISE?
- 7) What is hot stage microscopy?
- 8) Write any one identification test for riboflavin.
- 9) What is the use of ninhydrin reagent?
- 10) Which spectroscopic method is used for determination of sodium and potassium?
- 11) Write any one general identification test for alkaloids.
- 12) What is XRD?
- 13) What is the use of MBTH in pharmaceutical analysis?
- 14) Name the reagent used in calibration of UV-Visible spectrophotometer for control of wavelengths.

**Q.2 Answer in brief: (any eight)**

**[8 x 2 = 16]**

- 1) Classify ISE.
- 2) Explain the principle of any one method used for quantitative estimation of carbonyl compounds.
- 3) Why particle size is reported as equivalent sphere diameter?
- 4) Write the assay principle for sulphonamides.
- 5) Explain Stoke's law.
- 6) Explain principle for quantitative estimation of esters.
- 7) Enlist content of a validation protocol.
- 8) Write assay principle for ergot alkaloids.
- 9) How will you assay aneurine hydrochloride tablets?
- 10) What is FC reagent? Write its use in pharmaceutical analysis.

**Q.3] Answer in detail: (any eight)**

**[8 x 5 = 40]**

- 1) Explain the procedure for calibration of IR Spectrophotometer.
- 2) Discuss the applications of instrumental methods for drug metabolism and pharmacokinetics study with suitable examples.
- 3) Discuss qualification of HPLC systems.
- 4) Explain the principle and procedure involved in quantitative estimation of amines.
- 5) What is Bragg's law? Write applications of XRD.
- 6) Discuss the role of chromatographic methods in analysis of drugs and dosage forms with suitable examples.
- 7) Describe the principle and procedure involved in the use of 2, 4 DNP in pharmaceutical analysis.
- 8) Describe the principle and procedure involved in the use of 2, 3, 5 triphenyl tetrazolium salt in pharmaceutical analysis.
- 9) Describe the methods for determination of sulphur.
- 10) Describe the methods for identification and assay of steroids and their dosage forms.