

**UKA TARSADIA UNIVERSITY**

M.Pharm. (PA) (1<sup>st</sup> Semester)

**Subject:** 040060102 - Pharmaceutical Analysis - I

Time : **2.30 pm to 5.30 pm**

Duration: 3 Hours

Date : **21/05/2014**

Max. Marks: 70

**Instructions:**

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks allocated to that question.
5. Draw diagrams/figures whenever necessary.

**Section 1**

Q.1 a) Explain the terms: Validation, Cumulative particle size distribution, Diffraction 06

**OR**

- a) Explain the principle involved in any two methods for quantitative determination of the hydroxyl group. 06
- b) Describe detailed procedure for calibration of UV-Visible spectrophotometer. 05

Q.2 a) What is ion selective electrode? Explain the principle and working of any one ion selective electrode. 06

**OR**

- a) Describe the role of instrumental methods in development of medicines. 06
- b) Describe the applications of XRD in pharmaceutical analysis, with example. 06

Q.3 Write detailed notes on following. (Any Two) 12

1. Calibration of IR spectrophotometer
2. Low angle laser light scattering
3. Quantitative determination of the amino group

**Section 2**

Q.4 a) Explain the use of following reagents in pharmaceutical analysis. 06

1. PDAB
2. 2,6-Dichloro quinone chlorimide
3. Folin - Ciocalteu reagent

**OR**

- a) Discuss assay method for vitamin A as per Indian Pharmacopoeia. 06
  - b) Describe the general identification tests for following. 05
1. Alkaloids
  2. Glycosides

- Q.5 Discuss the role of following analytical techniques in elemental analysis. 12
1. Atomic absorption spectroscopy
  2. Gravimetric analysis
- Q.6 Write specific identification test and assay method for any three of 12  
following compounds.
1. Morphin
  2. Penicillin
  3. Digoxin
  4. Vitamin C