Seat No: _____ **Enrollment No: _____**

PARUL UNIVERSITY
FACULTY OF PHARMACY
B.Pharm. Winter 2019 Examination,

Semester: 8 **Date: 21/10/2019**
Subject Code: 08101452 **Time: 10:00 am to 01:00pm**
Subject Name: Pharmaceutical Analysis-IV **Total Marks: 75**

Instructions:
1. Figures to the right indicate full marks.
2. Make suitable assumptions wherever necessary.

Q.1 Essay type Questions. (Any 2 out of 3) (10 marks each) **(20)**

1. Explain the basic principle of chromatography. Classify different chromatographic techniques with basic principle for each techniques. What are the applications of Thin layer chromatography?
2. Explain detail instrumentation of Gas chromatography. Write a difference between GSC and GLC.
3. Write the detail applications of HPLC. Compare HPLC with other chromatographic techniques.

Q.2 Short Essay type Questions. (Any 7 out of 9) (5 marks each) **(35)**

1. Explain in detail the factors affecting Atomic spectroscopy?
2. Explain the applications, advantages and limitation of fluorescence spectroscopy.
3. What is the basic principle of Turbidimetry? Give the basic difference between Turbidimetry and Nephalometry.
4. Explain the retention mechanism in column chromatography.
5. Write a note on Super critical fluid chromatography.
6. Write the detail instrumentation of HPTLC.
7. How the X – rays are generated? Explain Bragg's law of X – ray diffraction.
8. Explain in brief about RIA and ELISA.
9. Explain the Pharmacopeial applications of column chromatography.

Q.3 Answer in short. (2 marks each) **(20)**

1. What is the basic difference between Fluorescence and Phosphorescence?
2. Explain in brief the principle of Raman Spectroscopy.
3. Explain the term, 'HETP'.
4. List out the different types of paper chromatography.
5. Give an overview of GC-MS.
6. Write the difference between normal phase and reverse phase HPLC.
7. Comment on: "Fluorescence spectroscopy is more suitable for dilute samples".
8. Explain Affinity chromatography in brief.
9. Explain the basic principle of Atomic emission spectroscopy.
10. Give an overview of LC/MS.