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

PARUL UNIVERSITY
FACULTY OF PHARMACY
Pharm. D. Examination, May-2018

Year: 3 **Date: 09/05/2018**
Subject Code: 08207302 **Time: 10:00am to 1:00pm**
Subject Name: Pharmaceutical Analysis **Total Marks: 70**

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

Q.1 Essay Type Questions. (any 2 out of 3) (15 Mark Each) **(30)**
1. Classify chromatographic techniques. Discuss Affinity chromatography in detail.
2. Enumerate and explain analytical method validation parameters as per ICH guideline.
3. Draw and explain Jablonski diagram. Discuss factors affecting fluorescence intensity.

Q.2 Short Essay Type Questions. (any 4 out of 5) (5 Mark Each) **(20)**
1. Enlist indicator electrodes. Give a brief note on glass electrode.
2. State Beer-lambert's law. Give deviations from Beer's law.
3. Explain principle of NMR spectroscopy.
4. Discuss principle of Polarography.
5. Give applications of Atomic absorption spectrometry.

Q.3 Short Answers. (2 Mark Each) **(20)**
1. Define: i) Resolution ii) Retention time
2. What is ORD?
3. State Bragg's law.
4. Comment: $\pi \rightarrow \pi^*$ transition require more energy than $\sigma \rightarrow \sigma^*$ transition.
5. What are DSC and DTA?
6. Explain: i)Molar conductance ii) RPME
7. Give applications of Flame photometry.
8. Classify molecular vibrations of IR spectroscopy.
9. Enlist Gas chromatographic detectors.
10. What is SDS- PAGE?