Seat No: _____ Enrollment No:_____

PARUL UNIVERSITY
FACULTY OF PHARMACY
B.Pharm. Winter 2018-19 Examination

Semester: 3 **Date: 11/12/2018**
Subject Code: 08101202 **Time: 10:00 am to 1:00 pm**
Subject Name: Pharmaceutical Analysis-I **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. Define Error. Give its classification and different ways to minimize it.
2. Write a brief note on:
    1. Common ion effect
    2. Hendersen-Hesselbach equation
3. Differentiate between:
    1. Quality control and Quality assurance
    2. Differentiating solvents and Levelling solvents

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

1. Explain pM indicators.
2. Explain terms:
   1. Primary standard substance 2. Back titration
3. What is Karl Fischer titration? Give composition and reaction mechanism of Karl Fischer Reagent.
4. Discuss the terms solubility product and importance of solubility product principle in analysis.
5. What is buffer? Explain the properties of pharmaceutical buffers.
6. Explain in detail kjeldahls method.
7. Explain preparation and standardization of 0.1 N Perchloric acid.
8. Explain theories of acid – base indicator.
9. Write a brife note on iodometric titration.

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

1. Discuss the principle with reaction involved in Mohr's method.
2. Justify following sentences:
   1. Nitrobenzene is added in the assay of ammonium chloride by volhard's method.
   2. Mohr's method is carried out at neutral PH.
3. Define following terms:
   1. Calibration 2. Buffer capacity 3. Stoichiometric end point 4. Molarity
4. Explain masking and demasking agent in complexometry.
5. Derive the ionic product of water.
6. Justify following sentences:
   1. Complexometric titration is carried out at basic PH.
   2. KI is added in the preparation of Iodine solution.
7. 1. Why starch indicator is added towards the end point?
   2. Why standardization of $KMnO_4$ is required?
8. Give the principle and reaction for Diazotization reaction.
9. Describe any four factors affecting precipitation reaction.
10. Comment: Water is a differentiating solvent for CH_3COOH.