Seat No: _____ Enrollment No: _____

PARUL UNIVERSITY

FACULTY OF PHARMACY

B.Pharm. Winter 2018-19 Examination

Semester: 3 **Date: 12/12/2018**
Subject Code: 08101203 **Time: 10.00 To 1.00**
Subject Name: Physical Pharmaceutics **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. Describe with examples different types of solvents. Write in detail about solubility of solids in liquids.
2. Describe the kinetic properties of colloids.
3. Define polymorphism. Write in detail about importance and applications of polymorphism.

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

1. Describe various ways of quantifying the flow of powders.
2. Draw the flow curves for Newtonian and Non-Newtonian types of flow. Give example for each type of flow.
3. Classify different types of complexes. Write in detail about organic molecular complexes.
4. What are ideal and non-ideal solutions? Describe Raoult's law and its deviations.
5. Describe the rheological behavior of suspensions.
6. Classify and describe the types of emulsions with suitable examples.
7. What is HLB? Draw neat and labelled HLB scale. Describe methods to estimate HLB.
8. Write about liquid crystals and supercritical fluids.
9. Describe different graphic presentations of size distribution data in powder.

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

1. Write two applications of micromeritics in production of dosage forms.
2. Define chelates. Give two applications of chelates.
3. Define thixotropy.Write two applications of thixotropy.
4. What is Brownian movement? Which formulations exhibit this movement?
5. Define suspensions. Write two applications of suspensions
6. Describe the term phase inversion with suitable example.
7. Define pseudopolymorphism with examples.
8. Define (i) angle of repose (ii) Carr's index
9. Give principle of pH titration method for analysis of complexes.
10. Write two factors affecting surface tension of liquids.