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

PARUL UNIVERSITY

FACULTY OF PHARMACY

B.Pharm Winter 2019-20 Examination

Semester: 3 **Date: 23/11/2019**
Subject Code: 08101203 **Time: 2:00 pm to 5:00 pm**
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. What is Micromeritics? Enlist the determination methods of particle size and particle size distribution. Describe any two methods in detail.
2. What are colloids? Write down its applications in pharmacy. Describe types of colloids in detail.
3. What is surface tension? Describe any two methods in detail for determination of surface tension.

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

1. Describe the binding forces exist between molecules.
2. Enlist the methods for determination of surface area. Explain adsorption method for determination of surface area in detail.
3. Describe the pharmacopeial specification and method for determination of angle of repose.
4. What is suspension? Explain theory of sedimentation in detail.
5. What is emulsion? Describe different types of emulsion.
6. Describe the phase rule.
7. Define Complex Compounds. Describe any one method for analysis of complexation.
8. Explain Non- Newtonian system with suitable examples.
9. Discuss the Electrical properties of Interface.

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

1. Explain brief about Protective colloids.
2. Explain the sedimentation of flocculated particles.
3. What is thixotropy? How it improves the stability of suspension.
4. Explain briefly about HLB scale.
5. Differentiate Ideal and Non-ideal solutions.
6. What is Polymorphism? Give the two examples of Polymorphism.
7. What is surface active agent? Give the two examples of nonionic surface active agents.
8. Explain briefly about physical stability of emulsion.
9. What is deflocculated suspension? Explain the mechanism of deflocculation.
10. Write down any two applications of complexation.