

**PARUL UNIVERSITY**  
**FACULTY OF PHARMACY**  
**B.Pharm. Summer 2018-19 Examinations**

**Semester: 3****Subject Code: 08101203****Subject Name: Physical Pharmaceutics****Date: 24/04/2019****Time: 10:00 am to 01:00pm****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. Enlist the methods for determination of particle size. Write down coulter counter method and optical microscopy method in detail.
2. Describe solubility of liquids in liquids in detail.
3. What are colloids? Describe types of colloids with detail applications of colloids in pharmacy.

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

1. Describe Newtonian and Non-Newtonian type systems with suitable examples.
2. Explain air permeability method in detail with diagram.
3. Discuss the Electrical properties of Interface.
4. What is suspension? Explain theory of sedimentation in detail.
5. Discuss Thermo Gravimetric Analysis (TGA) and Differential Scanning Calorimetry (DSC).
6. Define Complex Compounds. Describe the methods of identifying complexes.
7. Give the physical instability in emulsion.
8. Enumerate method for determination of surface tension. Describe Capillary Rise method in detail.
9. Describe flow properties in detail.

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

1. What is flocculated suspension? Explain the mechanism of flocculation.
2. Describe types of emulsions briefly.
3. Write down any two applications of complexation.
4. Give the principle of Andreasen apparatus.
5. What are HLB and RHLB?
6. Define Ideal and Non-ideal solutions.
7. Explain briefly about Phase Rule.
8. What is Thixotropy? How it improves the stability of suspension.
9. What is Polymorphism? Give the two examples of Polymorphism.
10. Explain brief about Protective colloids.