**R13**

SET - 1

**II B. Pharmacy I Semester Supplementary Examinations, May - 2019**
**PHYSICAL PHARMACY-II**

Time: 3 hours                                                                               Max. Marks: 70

Note: 1. Question paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is Compulsory
3. Answer any **THREE** Questions from **Part-B**

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## PART –A

1.  a)  State and explain Ficks first law.                                                      (4M)

    b)  Explain hydrolytic degradation of compounds and preventive measures.      (4M)

    c)  Describe angle of repose method to determine flow property of powder.       (4M)

    d)  Define the terms surface tension, HLB, micellar solubilization                 (3M)

    e)  Write a note on non Newtonian fluids.                                              (3M)

    f)  Describe any two methods to prepare lyophobic colloids.                         (4M)

## PART -B

2.  a)  Describe the factors influencing solubility of liquids in liquids.              (8M)

    b)  Explain the mechanism of distribution of solutes in immiscible solvents.     (8M)

3.  a)  Derive an equation for first order rate constant and half life.                 (8M)

    b)  Write a note on accelerated stability studies.                                       (8M)

4.  a)  Describe any one method to determine surface tension of solution.            (8M)

    b)  Write a note surface free energy of liquid interfaces.                              (8M)

5.  a)  Explain one method to determine surface area of powders.                      (8M)

    b)  Write a note on derived properties of powders.                                      (8M)

6.  a)  Define viscosity and explain the factors influencing viscosity of system.    (8M)

    b)  Describe the method to measure thixotropic coefficient.                          (8M)

7.  a)  Define miscellar solubilization and describe the factors influencing miscellar   (8M)
        solubilization.

    b)  Explain any two optical properties of colloids.                                      (8M)