

Total No. of Questions : 6]

SEAT No. :

**P1444**

**[5049]-401**

[Total No. of Pages :2

**S.Y.B.Pharmacy**

**PHYSICAL PHARMACEUTICS-II  
(2013 Pattern) (Semester-IV)**

*Time : 3 Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *All questions are compulsory.*
- 2) *Answers to the two sections should be written in separate books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right indicate full marks.*

**SECTION-I**

**Q1)** Define rheology and elaborate different types of flow in liquids. **[10]**

OR

Describe various methods for the particle size determination.

**Q2)** Attempt any five of the following: **[15]**

- a) Explain specific surface area.
- b) Distinguish between molecularity and order a reaction.
- c) State briefly concept of Association colloids: Micelles.
- d) Give classification of viscometers.
- e) Explain the significance of CMC.
- f) What is the effect of temperature on rate of a reaction.
- g) Write about the optical properties of colloids.

**Q3)** Write notes on any Two of the following: **[10]**

- a) Spreading coefficient
- b) Lyophilic sols are more stable than lyophobic sols.
- c) Cup and bob viscometer
- d) Arrhenius equation

**P.T.O.**

## SECTION-II

**Q4)** Elaborate on hydrolysis and oxidation degradation pathways of drug degradation. **[10]**

OR

Explain the concept of electrical double layer and define Nernst and Zeta potential.

**Q5)** Attempt any five of the following: **[15]**

- a) Distinguish between true density and bulk density.
- b) Distinguish between Anti thixotropy and Rheopexy.
- c) Justify: Half life of a zero order reaction is dependent on initial concentration of reactant while that of a first order reaction is independent on initial concentration of reactant.
- d) Explain surface tension and interfacial tension.
- e) Elaborate the steps in purification of colloids.
- f) What is Andreason pipette used for?
- g) Write a note on stabilization of colloids.

**Q6)** Write notes on any two of the following: **[10]**

- a) Optical microscopy, sieve analysis
- b) Thixotropy
- c) Accelerated stability studies.
- d) Surfactant classification and HLB scale

