# (2012 Scheme)

## Time: 3 Hours

- Answer all Questions.
- Write equations wherever necessary.

#### Essay

- 1. Enumerate the various physical and chemical stability problems in pharmaceutical dosage forms and the methods to overcome the same
- 2. Explain the theories of emulsification
- 3. Explain Newtonian and non-Newtonian systems and explain one method to determine the viscosity of non-Newtonian systems.

### Short notes

- 4. Zeta potential
- 5. HLB classification
- 6. Ficks laws of diffusion.
- 7. Adsorption method in determining surface area of powders
- 8. Types of colloids
- 9. Applications of complexes in pharmacy
- 10. Spreading coefficient.
- 11. Methods to determine order of reactions.
- 12. Selection of emulsifying agents
- 13.I.P. dissolution apparatus.
- 14. Stability problems of emulsion
- 15. Factors affecting dissolution
- 16. Stability in colloidal systems.
- 17. Coulter counter

\*\*\*\*\*

### Reg.No: .....

# Total Marks: 100

#### (14x5=70)

(3x10=30)