

**Second Year B.Pharm Degree Supplementary Examinations
December 2018****Pharmaceutics – II
(2010 Scheme)****Time: 3 Hours****Total Marks: 100**

- Answer all Questions.
- Write equations wherever necessary.

Essays**(3x10=30)**

1. Describe the formation of 'electric double layer' at solid-liquid interface with neat labelled diagram.
2. Explain the different theories of emulsification.
3. Explain the particle size analysis by 'sedimentation' method

Short notes**(14x5=70)**

4. Describe the I.P dissolution apparatus
5. Explain the laws of diffusion.
6. Derive an equation to calculate spreading coefficient.
7. Define following terms: surface tension, critical micelle concentration, HLB, adsorption isotherm, surface free energy
8. 'Sedimentation volume' for suspension.
9. Define and classify 'colloidal dispersion'. Explain Brownian movement.
10. Explain the flow behavior of 'pseudo-plastic system' with rheogram. Give an example.
11. Explain the working principle of 'cone and plate' viscometer with a labelled diagram.
12. Mention any five limitations of accelerated stability study.
13. Derive an equation to show that the half-life is independent of the concentration, in a first order reaction.
14. Describe the various ways of determination of flow properties of powders.
15. Explain different graphic presentations of size distribution data in a powder.
16. Describe the application of drug complexation.
17. Define 'complexes' and classify them.
