

**Second B.Pharm (Ayurveda) Degree Supplementary Examinations,
April 2016
Physical Pharmacy**

Time: 3 Hours

Total Marks: 100

- Answer all questions.

Essays:

(2x10=20)

1. Explain the term colloids. Discuss the optical and kinetic properties of colloids.
2. Define adsorption isotherm. Draw various types of adsorption isotherm and explain their behavior.

Answer briefly:

(10x5=50)

3. Differentiate between order and molecularity of a chemical reaction.
4. Describe Type I dissolution apparatus with a labelled diagram.
5. Explain steady state of diffusion.
6. Define Bulk density. How is it determined.
7. Give the working principle of Ostwald viscometer with a labelled diagram.
8. Describe methods for the purification of colloids.
9. Compare the characteristics of different types of suspension.
10. Explain viscoelasticity.
11. What are factors influencing solubility of gases in liquid.
12. Describe any two methods of determining the energy of activation.

Short notes:

(10x3=30)

13. Reason for instability of colloids.
14. Emulsion. Classify the same.
15. Wetting agents.
16. RHLB. Mention the disadvantages of HLB system.
17. Fick's first law and its applications.
18. Arrhenius equation and collision theory.
19. Raoult's law.
20. Gel.
21. Spreading coefficient.
22. Half life and shelf life for a first order reaction.
