

**Second B.Pharm (Ayurveda) Degree Supplementary Examinations,
April 2014**

Physical Pharmacy

Time: 3 Hours

Total Marks: 100

- Answer all questions.

Essays:

(2x10=20)

1. Define adsorption isotherm. Draw various types of absorption isotherms and explain its behavior
2. Discuss the factors influencing physical stability of suspensions

Answer briefly:

(10x5=50)

3. Factors influencing the dissolution of drugs
4. Fick's first law
5. Formation of electrical double layer with a neat labeled diagram
6. Working principle of Coulter- Counter with diagram
7. Describe the process of micellar solubilization and its applications in pharmacy
8. Rheological behavior of suspensions
9. Causes for the instability of emulsions
10. Draw the flow curves for Newtonian and non-Newtonian types of flow. Mention one example for each type of flow
11. Factors influencing rate of reaction
12. Two methods for the purification of colloids

Short notes:

(10x3=30)

13. State Henry's law for the solubility of gases in liquid
14. Define emulsion. Mention two advantages of emulsions with suitable examples
15. Role of polymers and surfactants in the formulation suspension
16. Two methods of mechanical dispersion for preparing lyophobic colloids
17. Plug flow and yield value
18. Define porosity. What are its applications in pharmacy
19. Concept of surface tension
20. Concept of half life in first order reaction
21. Mention the Hixson-Crowell cube root law and explain the terms. What is its importance in pharmacy
22. Define contact angle and mention its applications.
