

**Second B.Pharm (Ayurveda) Degree Supplementary Examinations  
April 2019****Physical Pharmacy****Time: 3 Hours****Total Marks: 100**

- Answer all questions.

**Essays:****(2x10=20)**

1. Define dissolution. Explain the factors influencing the drug dissolution. Describe type II dissolution apparatus.
2. Mention the fundamental properties of powders. Explain the principle and method involved in the determination of particle size in a powder using Andreasen apparatus.

**Answer briefly:****(10x5=50)**

3. Differentiate between first order and zero order with suitable example.
4. Describe the influence of temperature on the rate of a reaction.
5. Derive an equation to evaluate the dissolution of a solid particle in a solvent.
6. Briefly explain the assembly of different diffusion apparatus.
7. Explain modified pH – Partition theory.
8. Importance of Stoke's law of sedimentation in suspension.
9. Explain the plastic and pseudo plastic flow with example.
10. What is Microencapsulation. What are its pharmaceutical applications.
11. Explain the formation of electrical double layer with a neat labelled diagram.
12. What do you understand by ideal and real solutions. Describe upper consolute temperature and lower consolute temperature with suitable examples.

**Short notes:****(10x3=30)**

13. Suspension. List three advantages of suspension.
14. Gold number.
15. Plug flow.
16. Angle of repose. Mention the relationship between angle of repose and power flow.
17. Surface active agents.
18. Higuchi's equation and explain the terms.
19. Interactions of colloids.
20. Henry's law.
21. Pharmacopoeial specifications for the storage conditions for pharmaceuticals.
22. Complex reactions.

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