

**QP CODE: 203008**

**Reg. No: .....**

**Second B. Pharm (Ayurveda) Degree Regular/Supplementary  
Examinations April 2022**

**Physical Pharmacy**

**Time: 3 Hours**

**Total Marks: 100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*

**Essays:**

**(2x10=20)**

1. Explain the properties of different Non-Newtonian systems with rheograms and examples.
2. Define surface tension. Explain any one method for determination of surface tension.

**Answer briefly:**

**(10x5=50)**

3. Define angle of repose and explain its method of determination.
4. Explain Ficks' laws of diffusion.
5. Electrical properties of colloids.
6. Explain the principle and working of Type II dissolution apparatus.
7. What is first order reaction and derive an equation.
8. Explain microencapsulation. What are its applications.
9. Explain the factors affecting solubility of drugs.
10. Classify the emulsion types and explain them.
11. What are surfactants. Classify them and explain their applications.
12. Explain any one method for determination of viscosity of a Non-Newtonian liquid

**Short notes:**

**(10x3=30)**

13. Ideal and real solutions.
14. Zeta potential and its significance.
15. Detergency.
16. Porosity of powder particles.
17. Thixotropy.
18. Higuchi's equation of dissolution.
19. Peptization and protection of colloids.
20. Critical Micellar Concentration.
21. Stoke's law.
22. Shelf life.

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