# 2010 Scheme

**QP CODE: 203006**                                        Reg. No: ……………………..

## Second Year B.Pharm Degree Supplementary Examinations July 2025

## Pharmaceutics – II

**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*
- *Write equations wherever necessary.*

**Essays**                                                                       **(3x10=30)**

1. Explain the concept of adsorption at liquid interfaces. Discuss the role of surfactants in reducing surface tension and the factors that influence the adsorption process at liquid-air interfaces.
2. Compare and contrast techniques like optical microscopy, sieving, and sedimentation measurement in terms of their principles, advantages, and limitations.
3. Explain different types of non-Newtonian systems with suitable examples. Discuss how they behave under shear stress, compared to Newtonian systems.

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

4. What are the factors affecting dissolution rate of a drug.
5. Discuss the working principle of a Cup and Bob viscometer. How is viscosity measured using this technique.
6. What is HLB. Classify surface active agents based on HLB.
7. What is accelerated stability testing, and how is it used in determining the shelf-life of pharmaceutical products.
8. Explain the laws of diffusion.
9. Explain the general characteristics of colloidal dispersions and how they differ from true solutions.
10. Discuss the various stability problems of emulsions.
11. What is the significance of flocculation and deflocculation in suspensions. Discuss how these phenomena influence the stability and settling characteristics of suspensions.
12. Discuss the different theories of emulsification.
13. How does the packing arrangement of particles affect the bulk density and porosity of powders.
14. What are the different types of interactions involved in protein-drug binding. Explain with examples.
15. Write a note on spreading coefficient.
16. Discuss how the order of a reaction can be determined experimentally using the method of half-life and concentration data.
17. Explain the BET adsorption method for determining the surface area of powders.

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