QP Code: 423006 **Reg. No……**

Fourth Semester B.Pharm Degree Regular/Supplementary Examinations December 2024
Physical Pharmaceutics II

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***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***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Define orders of a reaction. Deduce an equation for the rate constant and half life of first order reaction.
2. Define Rheology. Explain Non-Newtonian systems with example.

Short Notes **(7x5=35)**

3. Explain the influence of temperature on stability of pharmaceutical dosage forms.
4. Explain different theories of emulsification.
5. Explain the principle and procedure involved in the determination of viscosity by capillary viscometer.
6. Write a note on deformation of solids with suitable example.
7. Explain the factors affecting sedimentation of dispersed particles in suspension.
8. What are surfactants and classify them with suitable examples.
9. Differentiate the characteristics of different types of Colloids.

Answer Briefly **(10x2=20)**

10. Define shelf life and half-life.
11. Calculate the half-life for the first order reaction whose rate constant is 1.052x10-3 Sec-1.
12. What is Kinematic viscosity and mention its unit
13. What are shear thinning systems: give example.
14. Write the difference between flocculation and coalescence.
15. What are detergents.
16. Define Surface free energy.
17. Name any two methods for purification of colloids.
18. Define Gold Number.
19. Define adsorption isotherm.

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