

**VINAYAKA MISSION'S RESEARCH FOUNDATION
(DEEMED TO BE UNIVERSITY), SALEM**

**B.PHARM. DEGREE EXAMINATION – JULY 2019
Fourth Semester**

PHYSICAL PHARMACEUTICS II

Time : Three hours

Maximum: 75 marks

I. Write essays on any **TWO** questions: (2 x 10 = 20)

1. Classify different types of colloids giving their salient features and examples.
2. Define thixotropy. Draw different types of thixotropic curves and explain the mechanisms for their behavior with suitable examples.
3. Enumerate the derived properties of powder? How are they evaluated?

II. Write short answers on any **SEVEN** questions: (7 x 5 = 35)

4. Differentiate between Newtonian and non-Newtonian systems with suitable examples.
5. Write the working principle of cub and bob viscometer.
6. Discuss various theories of emulsification.
7. What is controlled flocculation? Explain various methods of flocculation in suspensions.
8. What is meant by instability in emulsion systems? Explain any two instability markers?
9. Write the working principle of coulter – counter.
10. Compare the kinetics of first and pseudo first order reactions with suitable examples.
11. Discuss the accelerated stability testing of drugs?
12. The half life of a drug that decomposes by first order is 55 days. Calculate K and shelf life (t_{90%})?

III. Write short notes on : (10 x 2 = 20)

13. Gold number.
14. Purification of colloids.
15. Free energy curves in suspensions.
16. Methods of identification of types of emulsions.
17. Stokes' equation.
18. Phase inversion.
19. Molecularity and order of a reaction.
20. Prevention methods against oxidative decomposition of drugs.
21. Zero order rate equation.
22. Surface area determination.