

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

**B.PHARM. DEGREE EXAMINATION – JANUARY 2020
Fourth Semester**

PHYSICAL PHARMACEUTICS II

Time : Three hours

Maximum: 75 marks

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

1. Describe the methods for the preparation of lyophobic colloids?
2. Explain non-Newtonian types of flow with rheograms, mechanisms and suitable examples.
3. Describe any two methods to determine the weight distribution of particles in a powder?

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

4. What are the single point and multipoint viscometers? Write the principle of working of any one?
5. Describe Newton's Law of flow.
6. Compare and contrast the properties of flocculated and deflocculated suspensions?
7. What are various types of emulsions? Describe two methods for the evaluation of emulsion stability.
8. Describe the formulation of emulsions by HLB method.
9. Enumerate various derived properties of powder? Explain any two.
10. Deduce an equation for determining the specific reaction rate constant for a first order reaction.
11. Describe the stabilization methods of drugs against hydrolysis.
12. A multisulpha preparation is exposed to 40°C and the intensity of color was measured. The initial absorbance of the solution at 500 nm was 1.245. After 90 days the absorbance was found to be 1.235. Estimate the reaction rate assuming that color fading is zero order?

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

13. Protective colloids.
14. Micro and multiple emulsions.
15. Role of polymers in suspensions.
16. Heckel equation
17. Angle of repose
18. Instability in emulsions.
19. Rate and order of a reaction.
20. Prevention methods for photolytic degradation of drugs.
21. Second order rate equation.
22. Plastic and elastic deformation.
