VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)

B.PHARM. DEGREE EXAMINATION – July 2019
Second Year

PHYSICAL PHARMACEUTICS

Time   : Three hours   Maximum: 70 marks

I. Write essays on any **TWO** questions: **(2 x 15 = 30)**

1. a) Discuss in detail about Optical Properties of colloidal Dispersions.
   b) Discuss in detail about Kinetics Properties of colloidal Dispersions.
2. a) Discuss about the formulation and evaluation of pharmaceutical suspensions.
   b) Describe the formulation of emulsions with preparation methods
3. a) Define first order reaction with an example. Derive the rate equation for the same.
   b) Discuss the methods to determine order of a reaction.

II. Write short essays on any **SIX** questions**:**   **(6 x 5 = 30)**

4. Discuss in detail about refractive index of substances.
5. What are the different types of colloids dispersion with examples?
6. What are the various physical instabilities in emulsions?
7. Explain in detail about capillary rise method to determine surface tension of liquids.
8. What are complexes? Classify them with examples and applications of Complexation.
9. Write in detail about interfacial properties of suspended particles.
10. Discuss in detail about various densities of powders.
11. Elaborate in detail about any one method of determining the size of particles.

III. Write short notes on any **FIVE** questions: **(5 x 2 = 10)**

12. Define the terms Zeta potential and Nenest potential.
13. List the methods to determine surface tension of liquids.
14. Classify the types of adsorption isotherms.
15. Draw the HLB scale.
16. Write short notes on inclusion complexes.
17. Define the term specific surface area.

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