

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

**B.PHARM. DEGREE EXAMINATION – August 2018**  
**Fourth Year**

**INDUSTRIAL PHARMACY AND BIOPHARMACEUTICS**

Time : Three hours

Maximum: 70 marks

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

1. Define Microencapsulation. Mention the importance of Microencapsulation in pharmacy. Explain any two methods used to prepare Microencapsulation and write note on evaluation of Microencapsulation. (2+3+6+4)
2. a) Discuss the protocols followed in the preformulation studies. (10)  
b) Write a note on biological half life. (5)
3. Explain about types, formulation, defects and manufacturing of tablets in large scale production.

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

4. Hard gelatin capsules.
5. Compartment models and its significance.
6. Discuss different types of prolonged acting pharmaceutical with suitable examples.
7. How will you evaluate coated tablets?
8. Advantages of Liposomes and its significance.
9. Explain bioequivalency testing.
10. Selection and evaluation of pharmaceuticals packing materials.
11. Aseptic technique used for parental products.

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

12. Raw materials required for Liposomes.
13. Apparent volume of distribution.
14. Dissolution testing apparatus and its types.
15. Plasticizers.
16. Buccal and sub-lingual tablets.
17. Laminar flow bench and maintenance.