

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

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

BIOPHARMACEUTICS AND PHARMACOKINETICS

Time : Three hours

Maximum: 75 marks

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

1. Enlist various factors influencing drug absorption through GIT. Explain in brief about physicochemical factors.
2. What is elimination? Discuss in brief about the pathways of drug metabolism with suitable examples.
3. a) Explain the concept of compartment model?
b) What are the characteristics of drugs with relevant graphs that show non-linear pharmacokinetics?

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

4. Compare and contrast active and passive transport of drugs?
5. Write the clinical significance of protein binding of drugs.
6. Explain the kinetics of protein binding of drugs.
7. Explain invitro- invivo correlations.
8. Discuss the calculation of pharmacokinetic parameters from plasma concentration time data.
9. Enlist various study designs used in bioequivalent studies. Discuss about latin square design.
10. How do you calculate loading and maintenance doses?
11. Explain the dose effect kinetics using michaelis- menten equation?
12. Explain any one invitro drug dissolution model.

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

13. Apparent volume of distribution.
14. Polymorphism in drug absorption.
15. Enterohepatic recycling of drugs.
16. USP type I dissolution apparatus.
17. Compartment and model in pharmacokinetics.
18. Ion- pain transport of drugs.
19. Concept of clearance.
20. Salivary excretion of drugs.
21. Blood brain barrier.
22. First pass metabolism.