

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

**M.PHARM. DEGREE EXAMINATION – July 2019  
Second Semester**

**BRANCH: PHARMACEUTICS**

**ADVANCED BIOPHARMACEUTICS AND PHARMACOKINETICS**

Time : Three hours

Maximum: 75 marks

**(Draw neat labeled diagrams wherever necessary  
your answer should be specific to the questions asked)**

**SECTION –A**

I. Answer any **THREE** questions: **(3 x 15 = 45)**

1. Explain in detail about one compartment open model of IV Bolus and derive suitable equations to assess Pharmacokinetic parameters.
2. Explain the Physiological and Physiochemical factors affecting Drug Absorption.
3. Explain in detail about various methods of assessing bioavailability of drugs.
4. Write in detail about pharmacokinetic consideration in designing of modified drug release system and targeted drug delivery system.

**SECTION –B**

II. Answer any **THREE** questions: **(3 x 10 = 30)**

5. Define bioequivalence and list the various methods involved in determination of bioequivalence.
6. Define non-linear pharmacokinetics? Explain Michaelis- Menten equation with respect to the estimation of  $K_{max}$  and  $V_{max}$ .
7. Write in detail about cytochrome p450 based drug interaction and drug interactions linked to transporters.
8. Explain the testing performance of drug product in vitro-in vivo correlation.

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