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

M.PHARM. DEGREE EXAMINATION – JANUARY 2021
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. a. Explain the concept and significance of drug absorption. What do you understand by sink condition?

   b. How is it maintained and responsible for complete passive absorption of drugs from the GIT?

2. a. Give an account on Michaelis – Mention equation. What criteria is necessary for obtaining valid urinary excreation data?

   b. Compare sigma minus and rate excreation method.

3. a. Write notes on design and evaluation of bioequivalence studies.

   b. Discus the factors affecting on drug dissolution process.

4. What are compartment models? Discuss the various types of compartment models and important application and limitations of compartment models.

5. a. Explain the terms C_{max}, t_{max} and AUC and explain how they can be determined.

   b. Pharmacokinetics of biotechnology drugs.

[P.T.O]

SECTION –B

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

6. What are the various mechanisms for drug - drug interactions in the GIT and extent of absorption of a drug from various regions of GIT?

7. a. Discuss the different methods for measurement of Bioavailability.

   b. Give a brief account on invitro – invivo correlation.

8. a. Explain Zero order and First order absorption Models.

   b. Discuss various types of compartment models.

9. a. Discuss the regulatory requirements for conduction of bioequivalence study.

   b. Write the Neat protocol for bioequivalence study.

10. What do you mean by pharmacokinetic drug interaction and what is it's Significance in combination therapy?

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