

Exam Date & Time: 15-Jul-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

Advanced Biopharmaceutics and Pharmacokinetics [PCE-MIP201T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

Answer the following (10 marks x 5 = 50 marks)

- 1) With labelled diagrams, explain the construction, working and applications of basket and paddle apparatus for dissolution testing of drug products. (10)
- 2) Discuss the application of pharmacokinetics in the formulation development of extended release drug products. (10)
- 3) Explain the influence of polymorphism and dissociation constant on the absorption of drugs. (10)
- 4) What is Non-Linear Pharmacokinetics? Explain with suitable graphs and examples of drugs showing the same. (5 marks)
Discuss briefly on Michaelis-Menten Kinetics. How will it help in predicting the dose necessary to achieve a given steady-state concentration? (5 marks) (10)
- 5) What is the purpose of BA studies? List and explain each purpose. (5 marks)
Discuss on methods of assessing Bioavailability. (5 marks) (10)

SECTION - B

Answer all the questions.

Answer the following (5 marks x 5 = 25 marks)

- 6) Discuss the concept of levels of IVIVC. (5)
- 7) Explain the effect of capsule dosage form on the absorption of drugs. (5)
- 8) With suitable flow diagram and plasma level graphs, explain one compartment IV bolus administration of drug. (5)
- 9) What is the clinical significance of Bioequivalent studies? Discuss. (5)
- 10) Discuss on relationship between Pharmacokinetics and Pharmacodynamics. (5)

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