

Question Paper

Exam Date & Time: 13-May-2023 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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

Advanced Biopharmaceutics and Pharmacokinetics [PCE-MIP201T -S2]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Explain the influence of polymorphism and particle size on the absorption of drugs. (10)
- 2) Using suitable diagrams, explain the construction, working and applications of basket and reciprocating cylinder apparatus for dissolution testing of drug products. (10)
- 3) Discuss the effect of pharmacokinetics on pharmacodynamics of drug using suitable graphs and equations. (10)
- 4) Discuss on Pharmacokinetics of a drug when it is administered by oral route of administration. (Assume it follows one compartment open model). - 4 marks
How the PK parameters for these is estimated? Explain briefly. - 6 marks (10)
- 5) Discuss on Biopharmaceutics classification system with examples. How will it help in projecting IVIVC? Explain.(6 marks) (10)
List and explain the applications of Biopharmaceutical Drug Disposition Classification System (BDDCS).(4 marks)

SECTION - B

Answer all the questions.

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

- 6) Write about the concept and limitations of pH partition hypothesis. (5)
- 7) Write about the levels of in vitro in vivo correlation and their significance. (5)
- 8) How will you estimate K_{max} and V_{max} ? Explain. (5)
- 9) Write briefly on Clinical significance of Bioequivalence studies. (5)
- 10) Write notes on Targeted drug delivery systems and its implications on Pharmacokinetics. (5)

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