

Exam Date & Time: 09-Sep-2021 (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-MPH202T]**

**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 capsule and tablet dosage forms on the absorption of drugs. (10)
- 2) With a labelled diagram, explain the construction and working of rotating paddle apparatus for dissolution testing of drug products. (10)
- 3) Discuss the application of pharmacokinetics in the formulation of modified release drug products. (10)
- 4) a) How will you determine the Absorption rate constant of a drug? Explain with suitable graph and equations. (10)  
b) How  $K_{max}$  and  $V_{max}$  can be estimated graphically?
- 5) Discuss various methods by which BA BE can be assessed. (10)

### SECTION - B

**Answer all the questions.**

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

- 6) Explain the limitations of pH partition hypothesis? (5)
- 7) Discuss rotating bottle method of dissolution testing. (5)
- 8) What are the causes of nonlinear pharmacokinetics of a drug? Explain with suitable graphs. (5)
- 9) What is BCS? What are its uses? Explain. (5)
- 10) Write briefly on PK and PD of biotechnology drugs. (5)

-----End-----