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## M. Pharmacy (Sem.-1) PHARMACEUTICS AND BIOPHARMACEUTICS

Subject Code : PHCEU-131 Paper ID : [E1322]

Time: 3 Hrs. Max. Marks: 80

## **INSTRUCTIONS TO CANDIDATES:**

- 1. Attempt any FIVE questions out of SIX questions.
- 2. Each question carries SIXTEEN marks.
- 1. (A) Distinguish between the pharmacokinetics of a drug as observed from urinary data after oral and rapid IV injection in a one compartment open model. Draw representative plasma concentration Vs time profiles and explain various pharmacokinetic parameters.
  - (B) Discuss different methods used for finding area under the curve for bioavailability purposes.
- 2. (A) Comment on pharmacokinetic pharmacodynamic correlation methodologies.
  - (B) What is meant by MRT, MDT and MAT? Explain the equations for calculating them.
- 3. Enumerate the factors influencing protein binding. Discuss the methods used for experimentally studying drug-protein binding giving their advantages and limitations. How does protein binding influence drug pharmacokinetics?
- 4. Mention different bioavailability designs. Discuss each design giving their advantages and limitations.
- 5. What is biopharmaceutics? Mention the conditions when biopharmaceutical studies are mandatory. Briefly comment on the study protocol followed while conducting biopharmaceutical studies.
- 6. Write short notes on:
  - (A) AUMC
  - (B) Vm and Km
  - (C) Influence of age on drug pharmacokinetics
  - (D) IVIVC

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