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(2064)

14825

M. Pharmacy 2nd Semester Examination

Pharmacokinetics

MP-123

Time : 3 Hours **Max. Marks : 90**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

SECTION - A

1. Answer any seven questions: (7×5=35)

   (i) Explain the terms: Pharmacokinetics and Pharmacodynamics.

   (ii) What is compartment modeling?

   (iii) Define Order of kinetics.

   (iv) Explain absorption rate constant.

   (v) What is the influence of protein binding on the elimination Half-life of a drug?

   (vi) Why are reservoir made in the design of a controlled release formulations?

   (vii) What assumptions are made in the design of a dosage regimen?

   (viii) Define dose dependent kinetics. How it can be detected in a rate process?

   (ix) What are the advantages of administration of a drug by constant rate i.v. infusion?

SECTION - B

Answer any three questions: (3×10=30)

2. Explain the Michaelis-Menten equation in nonlinear pharmacokinetics.

3. Describe the merits and demerits of Wagner-Nelson method in computing Ka

4. What are the characteristics of specialized transport system?

5. Explain the different causes of Nonlinearity in Pharmacokinetics.

6. Explain the one- compartment open model i.v. bolus administration.

SECTION - C

Answer any one question: (1×25=25)

7. Describe the two compartment open model for i.v. bolus administration.

8. Describe the parameters that are adjusted in development of a dosage regimen. Enlist the steps involved in the individualization of dosage regimen.