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(2063)

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B. 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

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

1. (i) What is the difference between facilitated absorption and active absorption?

   (ii) Briefly explain the role of plasma proteins in drug distribution.

   (iii) Explain the terms MAT, MDT and MRT.

   (iv) What is bioavailability and how is it determined?

   (v) What is meant by MM kinetics and how does it dictate drug action in the body.

   (vi) What is the purpose of Phase - I reactions in drug metabolism. Give few examples of these reactions.

   (vii) What is meant by inulin clearance and creatinine clearance? What is their significance?

(viii) What are pharmaceutical equivalents and therapeutic equivalents? Give few examples for each.

(ix) Briefly explain the influence of genetic factors on drug action.

SECTION - B

Answer any three questions: **(10×3=30)**

2. Enlist the parameters of a drug molecule that make it suitable for formulation in transdermal drug delivery system. Briefly explain the pharmacokinetic advantages of this dosage form.

3. What is meant by bioavailability and bioequivalence? Enumerate the dosage forms/ categories of drugs that are exempted from bioequivalence determinations.

4. What is hepatic extraction ratio? Enumerate the factors influencing it and its clinical relevance.

5. Briefly explain the pharmacokinetic basis of sustained release oral formulations How are these formulations better than multiple dosing method?

Answer any one question: **(25×1=25)**

6. Discuss the method used for adjusting dose/ dosing interval in uremic patients.

7. Explain the reasons for non-linear behavior of drugs and the methods used for evaluating such pharmacokinetic behavior.