Roll No

MPY-201(PCS)

M. Pharmacy II Semester

Examination, May 2019

Biopharmaceutics and Pharmacokinetics

(Adv. Pharmaceutics-I)

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Discuss Wagner-Nelson method for determination of absorption rate constant.

   b) Discuss Sigma-Minus method for determination of elimination rate constant.

2. What is non compartment kinetics and discuss concept of statistical moment theory? Explain its importance in determination of MRT, MAT and MDT.

3. a) What is Linear Pharmacokinetics? How it is recognised? Give reasons for non linearity in pharmacokinetics.

   b) What is Michaelis-Menten kinetics? Discuss the method for determination of Km and Vm.

4. a) Discuss physiological pharmacokinetic model give application and limitation.

   b) Discuss first-order absorption kinetics in Multiple Dosing.

5. a) Define Bioavailability and Bioequivalence. Discuss various study design involved in determination of Bioequivalence.

   b) Give detailed account on In-vitro dissolution and In-vivo bioavailability correlation.

6. a) What is Peeling technique? Estimate absorption rate constant assuming first order kinetics given by oral route.

   b) Give calculation of loading and maintenance dose.

7. Discuss in detail
   a) Factors affecting plasma concentration and toxicity
   b) Therapeutic index and therapeutic window

8. Write notes on any three
   a) Volume of distribution
   b) Dose adjustment in Hepatic Failure
   c) Circadian rhythm
   d) Therapeutic concentration Range & Toxicity

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