

16450(D) - 0 DEC 2015

B. Pharmacy (Ayur.) 8th Semester Examination
Pharmacokinetics and Biopharmaceutics (NS)
BPA-824

Time : 3 Hours

Max. Marks : 70

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

Note : Question 1 is compulsory and candidate are required to attempt any five Question out of remaining six.

1. (a) Define dose dependent kinetics.
- (b) Define absolute and relative bioavailability.
- (c) What are the merits and demerits of Wagner-Nelson method in computing K_a ?
- (d) In compartment modeling what does the term open means?
- (e) Differentiate between one compartment model and two compartment model.
- (f) Draw the plasma drug concentration vs time plot following oral and IV administration of drug obeying one compartment model.
- (g) How are ionic, ionizable drugs absorbed?
- (h) What are the reasons for instability of drug in GIT?
- (i) Absolute and relative bioavailability.
- (j) Determination of K_a using urinary excretion data is not suitable for rapidly absorbed drugs. Why? (2×10=20)

2. What is biopharmaceutics? Enumerate factors that need to be considered during biopharmaceutical studies.
3. Describe the method of calculating various pharmacokinetic parameters from urinary excretion data after the oral administration of a drug (one compartment model).
4. What are in-vitro methods for calculation of bioavailability?
5. Write a note on chemical equivalence and bioequivalence?
6. Discuss about the Sigma Minus method for determination of elimination rate constant.
7. Discuss the one compartment open model applicable in case of I.V. Bolus injection. Explain various pharmacokinetic parameters and their calculations using that model.

(5×10=50)