

Third Year B.Pharm Degree Supplementary Examinations - August 2015

PHARMACEUTICS - V
(Biopharmaceutics and Pharmacokinetics)

Time: 3 Hours

Total Marks: 100

- Answer all Questions.
- Write equations wherever necessary.

Essay

(3x10=30)

1. Explain the various mechanisms of renal clearance of drugs. What are the factors affecting renal clearance.
2. What are the various pharmacokinetic and pharmacodynamic parameters. Describe the kinetics of one compartment open model IV infusion and determination of various pharmacokinetic parameters.
3. What is meant by Michaelis Menton kinetics. Explain Michaelis Menton equation. Describe any two methods for determination of Michaelis constant assuming one compartment kinetics and IV bolus administration

Short notes

(14x5=70)

4. Carrier mediated drug absorption
5. Rate determining steps in the absorption of orally administered drugs.
6. Describe blood brain barrier
7. Explain binding of drugs to human serum albumin
8. Glutathione conjugation
9. Extraction ratio and hepatic clearance
10. Determination of first order absorption rate constant by the method of residuals in one compartment model.
11. Explain parallel compartment modeling
12. What are the criteria for depending on urine data for pharmacokinetic analysis
13. Different methods for assessment of bioavailability
14. Design of single dose bioequivalence study
15. Pharmaceutical factors affecting drug absorption
16. Biopharmaceutical classification of drugs
17. Significant drug interactions in drug distribution with two examples.
