Third Year B.Pharm Degree Examinations - August 2015

PHARMACEUTICS - V
(Biopharmaceutics and Pharmacokinetics)
(2012 Scheme)

Time: 3 Hours   **Total Marks: 100**

- Answer all Questions.
- Write equations wherever necessary.

Essay   **(3x10=30)**

1. Explain the mechanism of renal clearance, and dosage adjustment in renal failure"

2. Discuss in detail on the pharmacokinetics of one compartment open model extravascular administration and derive the equation to determine the various kinetic parameters.

3. Explain the rate of excretion and sigma minus method for determining the elimination rate constant (KE)from urinary excretion data

Short notes   **(14x5=70)**

4. How drug pKa and gastro intestinal pH affect drug absorption

5. Physiological barriers to distribution of drugs

6. Explain reductive reaction for biotransformation of drugs

7. Various non-renal routes of excretion

8. Explain the causes of non-linearity in pharmacokinetics

9. Binding of drugs to the blood components

10. Determine the elimination rate constant KE for a drug administered as IV infusion

11. How does the polymorphic form and salt form of a drug affects its absorption

12. Explain the limitations of pH partition hypothesis

13. Passive diffusion and carrier mediated transport of drug absorption across the GI membrane

14. Explain the metabolism of drugs by conjugation with glutathione

15. Invitro-invivo correlation

16. How do you determine bioavailability using the pharmacokinetic method

17. Explain the significance of protein binding

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