

First Year M.Pharm Degree Examinations (Supplementary)- November 2012
(Pharmaceutics)

Paper II - Biopharmaceutics and Pharmacokinetics

Time: 3 hrs

Maximum Marks: 100

- Answer all questions
- Draw diagrams wherever necessary

Essays:

(2x20 =40)

1. Draw the plasma concentration-time profile of drugs exhibiting one and two compartment model systems of drug disposition intravascularly. Describe methods to estimate A, B, alpha (a), beta (B).
2. What processes of drug ADME are known to show nonlinearity. Explain with suitable examples. Mention the various methods of estimating Michaelis-Menten parameters.

Short Essays:

(6x10=60)

3. Explain the biopharmaceutical classification system (BCS) and mention its applications.
4. Explain the methods of adjusting dose and dosage regimen in patients with renal and hepatic disease.
5. Discuss the physicochemical factors affecting drug absorption.
6. Explain the software relevance for pharmacokinetic studies.
7. Compare single dose with multiple dose bioavailability studies. Discuss the merits and demerits of using healthy subjects as volunteers for bioavailability studies.
8. Discuss the role of polymer solubility, partition coefficient and thickness of diffusion layer on controlled release of drugs.
