

Q.P. Code: 405326

Reg. no.:

Fourth Year Pharm D Degree Supplementary Examinations, February 2015

Biopharmaceutics & Pharmacokinetics

Time: 3 Hours

Total Marks: 70

- Answer all questions
- Draw diagrams wherever necessary

Essay:

(3x10=30)

1. Enumerate the factors affecting absorption of drugs in biological systems
2. Discuss two compartment model with reference to i.v bolus
3. After administration of a single 100 mg intravenous bolus dose, the following plasma concentrations were obtained

Time (hrs)	0	1	3	6	9	12	18	24
Concentration ($\mu\text{g/L}$)	55	37	24	13	7.1	3.8	1.6	0.93

Calculate the MRT, if the terminal rate for decline of the plasma drug concentration is 0.1hr^{-1} .

Short notes:

(8x5=40)

4. Applications of bioequivalency testing
5. Factors affecting bioavailability
6. Briefly discuss the pharmacokinetic model
7. Elimination rate constant
8. Plasma level-time curve
9. Detection of non-linearity
10. Comparison between plasma protein and tissue drug binding
11. First order kinetics
