

2012 Scheme

QP CODE: 314006

Reg. No:

Third Year B.Pharm Degree Supplementary Examinations March 2024 Pharmaceutics - IV

(Biopharmaceutics and Pharmacokinetics)

Time: 3 Hours

Total Marks: 100

- *Answer all questions to the point neatly and legibly* • *Do not leave any blank pages between answers* • *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together* • *Leave sufficient space between answers*
- *Write chemical structures/equations wherever necessary.*

Essays

(3x10=30)

1. Define Dissolution. Explain in detail the various dissolution test apparatus.
2. Explain the factors influencing drug absorption in gastrointestinal tract.
3. Illustrate one compartment open model and two compartment open model following intravenous bolus administration in Pharmacokinetics.

Short notes

(14x5=70)

4. Biopharmaceutical classification system of drugs.
5. Explain the methods for measurement of bioavailability.
6. Explain causes for non-linearity in non-linear pharmacokinetics with respect to absorption, distribution, metabolism and excretion.
7. Factors affecting elimination.
8. Explain the Pharmacokinetic parameters determined from plasma-drug concentration time profile.
9. Derive an expression for estimation of K_m and V_{max} .
10. Derive an expression for first-order kinetics with half-life.
11. Explain loading and maintenance dosing.
12. What is volume of distribution (V_d). Explain its significance.
13. How are body tissues classified on the basis of perfusion rate.
14. Explain non-compartmental analysis and give the advantages and disadvantages.
15. Explain the physiologic barriers to distribution of drugs.
16. Describe the permeability and binding of drugs to different tissues with examples.
17. Add a note on biliary excretion.
