

**Third Year B.Pharm Degree Supplementary Examinations
November 2018**

**Pharmaceutics - V
(Biopharmaceutics and Pharmacokinetics)
(2010 Scheme)**

Time: 3 Hours

Total Marks: 100

- Answer all Questions.
- Write equations wherever necessary.

Essays

(3x10=30)

1. Explain any two methods for determination of Michaelis-Menten constant in non-linear pharmacokinetics following IV-bolus administration.
2. Discuss the factors influencing drug distribution in the body.
3. Define dissolution. Explain in vitro drug dissolution testing models. Add a note on *in vitro-in vivo* correlation.

Short notes

(14x5=70)

4. Mention the mechanisms of drug absorption. Explain passive diffusion.
5. Influence of polymorphism on drug's bioavailability.
6. Explain briefly non-renal clearance of drug.
7. Give the pharmacokinetics of zero order absorption process.
8. Extraction ratio.
9. Explain the method of residuals for K_a determination after extravascular administration.
10. Different mechanisms in renal clearance of drugs.
11. How do you determine extent of bioavailability. Explain the methods of determination of AUC.
12. Explain compartment model.
13. What is apparent volume of distribution. Give the significance and method of determination.
14. Define biotransformation. Give examples for phase – I reactions.
15. Glucuronidation
16. Loading dose
17. Sigma minus method
