

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

**Time: 3 Hours**

**Total Marks: 100**

- Answer all Questions.
- Write equations wherever necessary.

**Essay**

**(3x10=30)**

1. Describe how the physico-chemical properties of a drug substance influence their gastro intestinal absorption
2. What is meant by non-linear pharmacokinetics. What are the tests for non-linearity in pharmacokinetics. Explain the reasons for non-linearity in pharmacokinetics.
3. Describe the kinetics of one compartment open model extra vascular administration and determination of various pharmacokinetic parameters.

**Short notes**

**(14x5=70)**

4. Active transport of drugs
5. Physiological barriers to distribution of drugs.
6. Plasma protein binding
7. Glucuronic acid conjugation
8. Factors affecting renal clearance
9. Hepatic clearance
10. Entero-hepatic circulation
11. Explain rate of excretion method in urine data analysis. What are its advantages.
12. In-vitro in-vivo correlation
13. Explain the BCS classification of drugs.
14. Compartment modelling
15. Attainment of steady state plasma concentration in continuous intravenous administration
16. Determination of bioavailability of drugs
17. Dose adjustment in renal failure.

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