

# **2010 Scheme**

**QP CODE: 304006**

**Reg. No: .....**

**Third Year B.Pharm Degree Supplementary Examinations March 2024**

## **Pharmaceutics - V (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*
- *Draw table/diagrams/flow charts wherever necessary*

### **Essays**

**(3x10=30)**

1. Define drug absorption. Enlist and discuss various transcellular transport mechanisms of drug absorption.
2. Explain the mechanism of renal clearance. Discuss on the determination of renal clearance.
3. Explain non-linearities in drug absorption and elimination with examples.

### **Short notes**

**(14x5=70)**

4. Particle size and effective surface area.
5. Pseudo-polymorphism on drug dissolution.
6. Explain In vitro – in vivo correlations.
7. Characteristics of drug distribution process.
8. Enterohepatic circulation.
9. Explain biopharmaceutical classification system.
10. Compartment modeling and physiological modeling.
11. Individualization of dosage regimen.
12. Binding of drug to human serum albumin.
13. Methods of residuals.
14. Steady state concept.
15. Bioavailability and methods of calculating bioavailability.
16. Biotransformation and drug metabolizing enzymes.
17. Explain one compartment open model for IV bolus administration.

\*\*\*\*\*