

**Fourth Year Pharm D Degree Supplementary Examinations**  
**February 2025**  
**Biopharmaceutics & Pharmacokinetics**

**Time: 3 Hours**

**Total Marks: 70**

- **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 Absorption. Discuss in detail the various biological factors affecting drug absorption.
2. Discuss in detail one-compartment open model for a drug administered as IV Bolus with the schematic representation, equations and graphs.
3. Define biotransformation. Explain phase I and phase II reactions.

**Short notes:**

**(8x5=40)**

4. Explain passive diffusion of drugs and principle involved in passive diffusion.
5. Write a short note on BCS classification of drugs.
6. Discuss about the Glucuronic acid conjugation.
7. Explain drug distribution to foetus through placental barrier.
8. Explain the assumptions of one-compartment open model.
9. Give the estimation Km and Vmax.
10. What are the various methods for measurement of bioavailability.
11. Explain statistical moment's theory.

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