

**First Year M.Pharm Degree Examinations- February 2013**  
**(2011 Admn- New Scheme)**  
**(Pharmaceutics)**

**Paper II-Biopharmaceutics and Pharmacokinetics**

**Time: 3 hrs**

**Maximum Marks: 100**

- *Answer all questions*
- *Draw diagrams wherever necessary*

**Essays:**

**(2x20 =40)**

1. Explain the various pharmacokinetic parameters implicated in fixing multiple dosage regimens. Add a note on individualization therapy.
2. Explain the role of partition coefficient, drug loading dose, polymer solubility and polymer diffusivity as rate determining parameters on the release of drugs from controlled release formulations.

**Short Essays:**

**(6x10=60)**

3. Explain the study protocol for bioavailability - bioequivalence studies for drug formulations.
4. Explain the various ex-vivo and in-vivo methods in gene therapy
5. Derive Michaelis- Menten equation. How Vmax and Km are determined.
6. Explain briefly on biopharmaceutical classification system .
7. Explain the physicochemical factors affecting GI absorption of drugs.
8. Explain the method of residuals to determine the absorption rate constant. Mention its limitations.

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