

**PY-702**

**B.Pharm. VII Semester**

**Examination, December 2012**

**Pharmaceutics - IX**

**(Biopharmaceutics & Pharmacokinetics)**

*Time : Three Hours*

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*Maximum Marks : 70*

*Note : 1. Attempt any five questions  
2. Each question carries equal marks.*

- 1) Describing the nature of biological membranes explain different mechanisms of gastrointestinal absorption of drugs. How will you confirm whether the absorption of the given drug is through active transport or passive transport mechanism.
- 2) a) What is pH partition theory ? How is it useful in understanding drug absorption?  
b) How dietary factors influence drug absorption? Explain giving examples.
- 3) What is meant by plasma protein and tissue protein binding ? What is their biopharmaceutic significance ? Give a brief note of drug-drug interaction.

- 4) Discuss pathways of drug metabolism. What is the role of enzymes in drug metabolism. Give a brief account of enzyme inhibitors and stimulators,

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- 5) What do you understand by a 'compartment' and 'model'? Describe the scheme of one compartment open model and derive equations to estimate pharmacokinetic parameters using drug concentration data.
- 6) What is meant by drug clearance? How is it measured? Discuss the factors affecting drug clearance.
- 7) How are dose and dosage regimen of a drug decided? Discuss how is dosage regimen adjusted in patients with renal impairment.
- 8) Describe the methods of bioavailability determination using blood and urinary concentration data. What are regulatory issues related to bioavailability studies?

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