



**International Islamic University Chittagong**  
**Department of Pharmacy**

**B. Pharm (Hons.) Program**

**Midterm Examination**

**Spring- 2024**

**Course Code: Pharm- 3503**

**Course Title: Biopharmaceutics & Pharmacokinetics-I**

**Time: 1 hour 30 minutes**

**Full Marks: 30**

*(Answer any three questions from the followings. Figures in the right margin indicate marks)*

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1. a) State Fick's first law of diffusion & correlate it with drug absorption. 4  
b) 'Active transport of drugs are site specific & follow saturation kinetics'- Justify. 3  
c) Draw a diagram highlighting diffusion drug layer model for drug dissolution & point out its different aspects. 3
  
2. a) Depicts the pH partition theory. Why acidic drug rapidly absorbed from stomach as compared with basic drug? 4  
b) 'Presence of food greatly influence on drug absorption'- justify this statement. 3  
c) Write down the different factors that influencing gastric emptying time. 3
  
3. a) Outline the several approaches to study biopharmaceutics. Draw Plasma concentration-time curve & interpret its different aspects. 5  
b) Establish the relationship between drug-drug product & pharmacological action. How can you measure drug concentration from body? 5
  
4. a) Name the different factors that influence on drug absorption. Discuss the several physicochemical factors that control drug absorption. 5  
b) Discuss at least two barrier systems of body. Compare & contrast between different modes of transport of drug. 5