

III B. Pharmacy II Semester Supplementary Examinations, April - 2018
BIOPHARMACEUTICS & PHARMACOKINETICS

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks

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1. a) Explain the mechanisms of drug absorption. (9M)  
b) Give the differences between pharmacokinetics and pharmacodynamics and mention their significance. (6M)
2. a) Enumerate the role of pharmaceutical factors influencing the drug absorption. (10M)  
b) Write about pH partition theory. (5M)
3. a) Write about biological half life, first pass effect and volume of distribution. (9M)  
b) Write about plasma protein binding sites. (6M)
4. a) Differentiate between one and two compartments. (5M)  
b) Explain Wagner-Nelson method. Mention its advantages. (10M)
5. a) Mention the reasons for non-linear kinetics. Explain Michaelis-Menten kinetics. (9M)  
b) How the dose adjustments are made in renal and hepatic failure? (6M)
6. Explain the single dose bioavailability studies with requirements to be followed. (15M)  
Write about statistical designs to be followed in these studies.
7. a) Write the significance of Noyes-Whitney equation in dissolution testing. (6M)  
b) Define clearance and write about renal clearance in detail. (9M)
8. Write notes on the following: (15M)
  - a) Loo-Riegelman method
  - b) Pharmacokinetic drug interactions
  - c) Fick's first law of diffusion

