

Code: 9R01702

B.Pharm IV Year I Semester (R09) Supplementary Examinations June 2018

**BIOPHARMACEUTICS & PHARMACOKINETICS**

(For 2009 (LC), 2010, 2011, 2012 regular &amp; 2011 (LC), 2012, 2013 lateral admitted batches only)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Write a detailed note on influence of various pharmacokinetics processes on in-vivo drug performance.
- 2 (a) Write about various active mechanisms of drug absorptions.  
(b) Discuss the influence of physico-chemical properties of drug on its absorption.
- 3 Define and explain about apparent volume of distribution. Give a detailed account on influence of volume of distribution on other pharmacokinetic properties of a drug.
- 4 (a) Enumerate factors affecting protein binding.  
(b) Explain influence of plasma and tissue protein binding on volume of distribution and clearance.
- 5 (a) Derive the equation for determining absorption rate constant by Wagner-Nelson method.  
(b) What is the plasma drug concentration after five hours of administration of a drug through I.V route as a bolus dose of 100 mg, whose volume of distribution is 75 liter and half-life is 6 hours. Assume the drug follows one compartmental kinetics.
- 6 (a) Write a detailed note on dose adjustment in case of hepatic failure.  
(b) Write about various drug interactions of metabolism and excretion with suitable examples.
- 7 (a) Give an account on various pharmacokinetic parameters used for measuring bioavailability.  
(b) Write a detailed account on regulatory requirements for conductance of bio-equivalence studies.
- 8 Explain in detail about the bio availability study protocol.

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