

[LB 823]

OCTOBER 2012

Sub. Code: 3823

PHARM. D / POST BACCALAUREATE DEGREE EXAMINATION**FOURTH YEAR****PAPER V – BIOPHARMACEUTICS AND PHARMACOKINETICS****Q.P. Code: 383823****Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****I. Elaborate on :****Pages Time Marks
(Max.) (Max.) (Max.)**

1. Discuss the principle that governs the renal excretion of drugs? 17 40 min. 20
2. Define Nonlinear Pharmacokinetics?
What are the causes for the Nonlinearity? 17 40 min. 20
Explain Michaelis Menten equation with respect to the
estimation of K_m and V_{max} ?

II. Write notes on :

1. Write a note on measurement of bioavailability by plasma
Level - time study? 4 10 min. 6
2. Discuss Latin square design in bioequivalent study? 4 10 min. 6
3. Derive the equation for two compartment open model
intravenous infusion? 4 10 min. 6
4. How to determine the normal renal function in patients? 4 10 min. 6
5. Write a note on statistical moment theory? 4 10 min. 6
6. Calculate the absolute bioavailability of Amoxycillin capsule.
The dose of the capsule was 500 mg and the AUC was 50.9 mcg $\cdot$ hr/L.
The dose of IV amoxycillin is 250 mg and the AUC is 34.63 mcg $\cdot$ hr/L. 4 10 min. 6
7. Write the importance of Wagner Nelson method in
pharmacokinetics? 4 10 min. 6
8. Write a note on Non Compartmental Pharmacokinetics 4 10 min. 6
9. What are the formulation factors that affect drug absorption? 4 10 min. 6
10. After oral administration of single dose of 500 mg rifampicin
the following urine data were obtained. Calculate the renal
excretion rate. 4 10 min. 6

Collection interval	Urine volume (ml)	Urine Concentration (mg/ml)
0-2	119	0.60
2-4	81	0.70
4-8	160	0.50
8-12	220	0.23
12-18	284	0.15
18-24	212	0.10