

[KV 823]

SEPTEMBER 2009

Sub. Code: 3823

DOCTOR OF PHARMACY (PHARM. D / POST BACCALAUREATE)**DEGREE EXAMINATION****(Regulations 2008-2009)****(Candidates admitted from 2008-2009 onwards)****FOURTH YEAR****PAPER V – BIOPHARMACEUTICS AND PHARMACOKINETICS*****Q.P. Code: 383823*****Time: Three Hours****Maximum: 70 marks****Answer ALL questions****I. Elaborate on:****(2 x 20 = 40)**

1. Elaborate on the pharmacokinetic model and equations in one compartment open model I.V. bolus.
2. a) Define bio-equivalence.
List the various methods involved in the determination of bio-equivalence.
b) Elaborate on any one delivery system for estimation of bioequivalence.

II. Write notes on:**(6 x 5 = 30)**

1. Physiological barrier to drug distribution.
2. Causes of non-linearity with example.
3. Mean residence time.
4. Limitations of multi compartmental analysis.
5. Renal impairment and creatinine clearance.
6. A drug has to be administered as a continuous I.V. infusion so as to reach a study state concentration of 0.5mcg/ml. What should be the infusion rate if it is following the one compartment model? ($T_{1/2}=8$ hr. and $V_d=13L$)
