[LN 823] OCTOBER 2018 **Sub. Code: 3823**

PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FOURTH YEAR
PAPER V – BIOPHARMACEUTICS AND PHARMACOKINETICS

Q.P. Code: 383823

Time : Three hours **Maximum : 70 Marks**

I. Elaborate on: **(4 x 10 = 40)**

1. Define Pharmacokinetic models and equations of one compartment open model IV Bolus administration.
2. Define drug absorption. Discuss the various factors influencing GI absorption of a drug.
3. Explain the protocol, procedure for bioequivalence study.
4. Discuss the principles that governs the renal excretion of drugs.

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

1. Write short note on statistical moment theory
2. Discuss causes of non-linearity with example.
3. Explain significance of Protein binding.
4. Calculate the excretion rate at steady state for a drug given by IV infusion at a rate of 30mg/hr. The C_{ss} is 20mcg/ml. If the rate of Infusion were increased to 40mg/hr, what would be the new steady state concentration C_{ss}? Would the excretion rate for the drug at the new steady state be the same? Assume first order elimination kinetics and a one compartment model.
5. Note on Wagner – Nelson method.
6. Describe Blood Brain Barrier.

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