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**APRIL 2014** 

Sub. Code: 3823

## DOCTOR OF PHARMACY (PHARM. D / POST BACCALAUREATE)

### **DEGREE EXAMINATION**

#### FOURTH YEAR

#### **PAPER V – BIOPHARMACEUTICS AND PHARMACOKINETICS**

#### Q.P. Code: 383823

**Time: Three Hours** 

# **Answer All questions**

 $(2 \ge 20 = 40)$ 

Maximum: 70 marks

#### I. Elaborate on:

- 1. Drug elimination.
- 2. A 70 kg patient is to be a given a drug by i.v. infusion.

The drug has a half life of 22 hours, apparent volume of distribution 15.7 litres and desired steady state plasma concentration is 0.0002 mcg/ml. Assuming one compartment kinetics calculate; time to reach 90% steady state concentration, infusion rate to achieve desired steady state concentration, loading dose to attain steady state rapidly and concentration of drug in plasma after 48 hours from the start of infusion.

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#### **II. Write notes on:**

- 1. Enlist physiological barriers for distribution.
- 2. Statistical interpretation of bioequivalence data. FirstRa
- 3. Endocytosis.
- 4. Tissue localization.
- 5. Plasma level time curve.
- 6. Advantages of Catenary model.
- 7. Lineweaver-Burke Plot.
- 8. Persistance factor and loss factor.
- 9. Approaches for dosage regimen.
- 10. Dissolution apparatus I.

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 $(10 \times 3 = 30)$