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SEAT No. :

P3986

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M.Pharmacy (Semester - I & II)

BIOPHARMACEUTICS AND PHARMACOKINETICS

(2013 Pattern) (Credit System)

Time : 3 Hours]

[Max. Marks : 50

Instructions to the candidates :

- 1) All questions are compulsory.
- 2) Figures to the right indicates full marks.
- 3) Neat diagrams must be drawn wherever necessary.

**Q1)** Describe in detail time and dose dependent pharmacokinetics of drugs and its implications in the clinical use and dosage regiment design of such drugs.[10]

**Q2)** Answer any three : [3 × 5 = 15]

- a) How do perfusion rate and organ size affect distribution of drugs?
- b) What are the properties of the drug that affect its permeation across the cell membrane?
- c) Explain significance and factors affecting to protein binding study.
- d) What is the importance of Level A IVIVC for new dosage forms

**Q3)** Write short notes on any three : [3 × 5 = 15]

- a) Compartmental Models and their advantages and limitations
- b) Area under the curve
- c) Protocol for bioavailability studies of conventional dosage forms
- d) In vitro models for determinations of permeability

**Q4)** What are the physiological barriers to distribution of drugs? Explain the difficulties encountered in targeting drugs to the brain. How are these overcome? [10]

OR

Discuss plasma concentration time profile. If drug is given as I.V. infusion through one compartmental model, derive equation for it's determination of plasma concentration.

