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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.

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