Total No. of Questions :6]

SEAT No. :

P1467

[Total No. of Pages :2

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F.Y. B. Pharmacy

4.7.6. BIOPHARMACEUTICS AND PHARMACOKINETICS

(2013 Pattern) (Semester - VII)

Time : 3 Hours] *[Max. Marks :70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Answers to the two sections should be written in separate answer books.***
3) ***Neat labelled diagrams must be drawn wherever necessary.***
4) ***Figures to the right indicate full marks.***

SECTION-I

Q1) Explain mechanisms involved in absorption of drug from GI tract. **[10]**

OR

Define apparent volume of distribution. Discuss factors affecting apparent volume of distribution.

Q2) Answer the following (Any 5): **[15]**

a) Effect of surface area of drug on drug dissolution and absorption.

b) Absorption of drug after buccal administration.

c) Drug-food interaction.

d) Phase I reactions in biotransformation of drugs.

e) Pulmonary route of administration.

f) BCS class I drugs.

g) Discuss in brief physiological barriers to drug distribution.

P.T.O.

Q3) Write short note on (Any 2): **[10]**

a) Effect of dosage form on absorption after oral administration.

b) Clearance concept and renal clearance.

c) Non-Linear pharmacokinetics.

d) Necessity of In-vitro-In-vivo co-relation.

SECTION-II

Q4) Define Bioavailability and Bioequivalence and explain study designs for conducting bioequivalence study. **[10]**

OR

Explain ONE Compartmental open model for assessment of parameters by IV Bolus administration.

Q5) Answer the following (Any 5): **[15]**

a) Discuss factors affecting bioavailability of drugs.

b) What are the advantages of urinary data over plasma data.

c) How bioavailability determined on the basis of urinary excretion data.

d) What is Wash out period.

e) What is Two compartmental analysis.

f) What is significance of compartmental analysis.

g) Define and explain in short Cmax and tmax.

Q6) Write short note on (Any 2): **[10]**

a) Method of residual.

b) Biowaivers.

c) Assessment of Bioavailability.

d) Single verses Multiple dose study.

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