NKT/KS/17/6581

B.Pharm. Seventh Semester (C.B.S.) Examination
BIOPHARMACEUTICS AND PHARMACOKINETICS
Paper–6

Time : Three Hours]   [Maximum Marks : 80

N.B. :— (1) Question No. **1** is compulsory.

(2) Attempt any **FOUR** questions from remaining.

(3) Draw neat labelled diagram wherever necessary.

(4) Discuss the reaction, mechanism wherever necessary.

(5) Use of electronic calculator, excluding programmable calculator is permitted.

1.   Solve any **FIVE** questions :

(a) What is first pass effect ?

(b) What is the relationship between apparent volume of distribution with clearance ?

(c) Enumerate the objectives of bioavailability studies and explain the term absolute and relative bioavailability.

(d) What are the various causes of nonlinearity of drugs ?

(e) What is IVIVC ?

(f) Describe Hixon Crowell's model for erodible matrix formulations.

(g) What do you understand by tissue localization of drugs ?   5×4=20

2.   (a) Describe the various physiological barriers affecting distribution of drug.   8

(b) Discuss the significance of protein bindings of drug.   7

3.   Discuss in detail about phase I biotransformation of drug.   15

4.   (a) Describe the principal processes that determine the urinary excretion of a drug.   8

(b) Describe the factors affecting renal clearance of drugs.   7

5.   (a) Describe the various methods of assessment of bioavailability.   8

(b) Describe the various transport mechanisms in absorption of drug.   7

6.   Discuss the one compartment open model for IV Bolus and IV Infusion administration.   15

7.   Write a short note (any **THREE**) :

(a) Theory of disillusion

(b) Kinetics of protein drug binding

(c) Gastric Emptying

(d) Plasma Drug Concentration Profile.   3×5=15

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