

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