

28/6/22 M

Roll Number ----- (Total Number of Questions 13) (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	6 <sup>th</sup>
Subject	Biopharmaceutics and Pharmacokinetics
Subject Code	BP604T
Paper ID	77989
Time	3Hours
Maximum Marks	75

**Instructions to Candidates:** No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.

\*Section A consists of Ten parts of 2 marks each (Objective Type); Attempt **ALL**.

\*\*Section B consists of Three questions carrying 10 marks each (Long Answer); attempt any **TWO**.

\*\*\*Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.

### Section A

(10 X 2 = 20)

1. Give very short answers to the followings (2 marks each):

i.	Differentiate Pharmacokinetics and Pharmacodynamics.
ii.	Define bioavailability.
iii.	What do you mean by plasma protein binding? Write its effect on metabolism of drug.
iv.	What do you mean by compartment model?
v.	Differentiate IV bolus and IV injection.
vi.	Define half-life of drug. How it affect the bioavailability?
vii.	What do you mean by extra –vascular route? Give any two examples.
viii.	Define Biopharmaceutics.
ix.	Define Bioequivalence.
x.	What do you mean by IVIVC?

### Section B

(2 X 10 = 20)

2.	Define drug absorption. Discuss in detail various factors affecting drug absorption.
3.	What are the various methods to enhance dissolution and bioavailability of poorly soluble drugs?
4.	Discuss in detail Bioequivalence studies. What are various methods to assess the bioequivalence?

### Section C

(7 X 5 = 35)

5.	Discuss in detail one compartment model.
6.	Discuss in detail factors affecting plasma protein binding of drugs.
7.	Give a note on factor affecting renal excretion of drug.
8.	Write a note on <i>in-vitro</i> dissolution methods.
9.	Discuss in detail various metabolic pathways for the renal excretion of drugs.
10.	What is the clinical significance of protein binding of drugs?
11.	Discuss in detail the mechanism of drug absorption through GIT.
12.	Give a detail note on non-renal route of drug excretion.
13.	Differentiate absolute v/s relative bioavailability. Give a note on method to measure absolute and relative bioavailability.

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**Note:** Disclosure of identity by writing mobile number or making request for passing on any page of answer-sheet will lead to UMC against the candidate.