PAPER ID-410060

Roll No: | | | | | | | | | | | | | |

BPHARM
(SEM VI) THEORY EXAMINATION 2023-24
BIOPHARMACEUTICS AND PHARMACOKINETICS THEORY

TIME: 3 HRS **M.MARKS: 75**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Define elimination and excretion of drug
b.	Classify different pharmacokinetic models
c.	What is IVIVC studies
d.	Define renal clearance of drug
e.	What are the different site for binding of drug in case of human serum albumin
f.	What is apparent volume of distribution of drug
g.	Draw a model for one compartment open model I V infusion
h.	List out different non per oral route of absorption of drug
i.	What is maintenance and loading dose in multiple dosing of drug
j.	Explain the cause of non-linearity in case of absorption

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Calculate the value of α,β and volume of distribution using Two compartment open model IV bolus using graph.
b.	What are the different Pharmacokinetic methods used for the measurement of bioavailability?
c.	Describe various pharmacokinetic and pharmacodynamic parameter used to measure plasma concentration time profile of a drug

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Enumerate the patient related factors affecting drug absorption from GIT.
b.	Calculate elimination rate constant and half-life using one compartment open model I V bolus.
c.	What is the clinical significance of protein binding of drugs?
d.	Explain the different passive mechanism for absorption of drug with example.
e.	What are the different non renal route of drug excretion?
f.	How are steady state drug levels in case of multiple drug dosing calculated?
g.	Describe the Michaelis-menten method of estimating different pharmacokinetic parameters.