Paper ID 250479

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Subject Code: BP604T

Roll No:

BPHARM
(SEM VI) THEORY EXAMINATION 2024-25
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.	Name the physiological barriers for drug distribution.
b.	What is BCS of drugs?
c.	Name the reactions that takes place in Phase 1 and Phase 2 reactions.
d.	Define central compartment and peripheral compartment.
e.	What are the different sites of presystemic metabolism of orally administered drugs?
f.	Define the term dosage regimen.
g.	List the advantages of physiological model.
h.	Explain loading dose and maintenance dose.
i.	Classify pharmacokinetics model.
j.	Outline the graph of non-linear pharmacokinetics.

SECTION B

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

a.	Discuss in detail factors affecting absorption of drug.
b.	Explain extravascular administration method using relevant graphs and equation.
c.	Discuss drug accumulation in multi compartment kinetics.

SECTION C

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

a.	Give a detailed discussion on various methods to enhance solubility and bioavailability of poorly soluble drugs.
b.	Discuss the equation for IV bolus in two-compartment kinetics.
c.	Discuss *in vitro-in vivo* correlation.
d.	Write a detailed note on various methods for bioavailability measurement.
e.	Determine the MichaelisMenten equation for non-linearity.
f.	Determine dose adjustment in renal disease.
g.	Discuss Lineweaver plot and direct linear plot for estimation of non-linearity parameters.