Roll No: 1 9 0 3 9 2 0 5 0 0 0 7 2

BPHARMA

(SEM VI) THEORY EXAMINATION 2021-22

BIOPHARMACEUTICS AND PHARMACOKINETICS – THEORY

Time: 3 Hours ***Total 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.	Classify different types of pharmacokinetic models.
b.	Compare absolute bioavailability with relative bioavailability.
c.	Define clearance. What are its units?
d.	Define volume of distribution.
e.	What are the advantages of IV infusion injection?
f.	Enumerate the factors affecting drug absorption.
g.	Mention the non-renal routes of drug excretion of drugs.
h.	How will you define steady state drug levels?
i.	Define Nonlinear Pharmacokinetics.
j.	Enlist the various methods to enhance the dissolution rates of poorly soluble drugs.

SECTION B

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

a.	Discuss the various mechanisms of drug absorption through GIT.
b.	How will you calculate loading dose? Discuss its role in maintenance of dose.
c.	Describe Michaelis-menton method of estimating pharmacokinetic parameters.

SECTION C

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

a.	Describe the various factors causing non-linearity.
b.	Write a detailed note on Wagner Nelson method for the calculation of absorption rate constant for extravascular administration.
c.	Explain in detail the plasma level time curve for a two compartment open model.
d.	What do you mean by drug metabolism? Explain factors affecting renal excretion of drugs.
e.	Enumerate the objectives of bioavailability. Discuss the direct methods for tis assessment.
f.	Give the kinetics of protein binding along with its clinical significance.
g.	What is AUC? Describe the trapezoidal method for its calculation.