

Roll No.: _____

Enrolment No. _____

PARUL UNIVERSITY

PARUL INSTITUTE OF PHARMACY & RESEARCH

PHARM.D. 5th YEAR · FIRST INTERNAL EXAMINATION: 2021-2022

Subject Name: CPKTDM

Subject Code: 08207503

Time: 10.00 – 11.30 am

Date: 31/07/2021

Total Marks: 30

Instructions: Figures to the right indicate full marks.

I Long Essay. (Answer Any One) 10 X 1 = 10M

1. Discuss in detail, Pharmacokinetic of drug interactions with examples.
2. The elimination half-life of a drug is 4 hrs. with V_d equivalent to 30% of the body weight. The usual therapeutic range is between 10 and 20 $\mu\text{g/ml}$. Calculate dosage regimen (multiple IV doses) that will just maintain the serum concentrations between 10 and 20 $\mu\text{g/ml}$.

II Short Essay. (Answer Any Two) 5 X 2 = 10M

1. Which two parameters are important for designing of the dosage regimen and why?
2. Write in detail about the pharmacokinetic changes and drug dosing in geriatric population.
3. Drug A has elimination half-life 4.15 hrs. and volume of distribution 30% of the body weight.
 - a. What is the dose for an 80 kg patient if steady state level of 2.5 $\mu\text{g/ml}$ is desired? Assume drug is given intravenously every 12 hrs.
 - b. In normal cases Drug A is given at a rate of 1mg/kg every 12 hrs. With this dosage regimen what would be the average steady-state level?

III Short Answers. (Answer All) 2 X 5 = 10M

1. Explain drug dosing in Pediatric patients.
2. Explain drug dosing in obese patients.
3. Write in brief about drug interactions at metabolism site with examples.
4. Explain the following parameters with equations.

Volume of distribution	Loading dose
Half-life	Maintenance dose
5. Drug A, 150 mg given at every 24 hrs. with 70% bioavailability, with volume of distribution 40L and half-life 15 hrs. Calculate steady state concentration achieved by drug A.

***** BEST OF LUCK *****