Sardar Bhagwan Singh PG Institute of Biomedical Sciences & Research
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Assignment-5
B. Pharm 6th Semester
Subject: Biopharmaceutics and Pharmacokinetics (BP-604T)

Short questions: (each carry 2 marks)

Q1: What are the two main parameters that are adjusted during development of multiple dosage regimen?
Q2: Write the minimum and maximum steady state concentration in IV injection.
Q3: Define loading dose.
Q4: Define maintenance dose.
Q5: How to calculate loading dose in IV and EV route.
Q6: Name the two compartments according to Multicompartment model.
Q7: Differentiate between one compartment and Multicompartment model.
Q8: Name the two processes in two compartment model explaining biexponential decline after IV injection.
Q9: Write the equation used to resolve individual components in two compartment model using method of residuals.
Q10: Construct the biexponential plasma concentration time curve by method of residuals for two compartment IV bolus injection.

Attempt all questions: (1×10=10)

Q1: ---------- will transform a single dose equation into a multiple-dosing equation.

Q2: Dost ratio, r = ----------

Q3: In IV route, $\overline{C_{SS}}$= ----------

Q4: ---------- is affected by the elimination half-life of the drug and the dosing interval.

Q5: ---------- is equal to the loading dose divided by the maintenance dose.

Write the equation for the following pharmacokinetic parameters for two compartment IV bolus:

Q6: AUC

Q7: Apparent volume of distribution of central compartment

Q8: K_{12}

Q9: Total systemic clearance

Q10: Equation for finding out various pharmacokinetic parameters for two compartment IV bolus using urinary excretion data.