1) Identify the Pharmacokinetic metrics: Dose, Volume of Distribution or the Clearance (only pick one per scenario), whose changes would determine the differences observed in the following concentration time profiles. (eg: The structure of the answer would look like - The changes in the profiles of Fig A would be because of ____ parameter)

Ans) Fig A - Dose; Fig B - Vd; Fig C - Clearance; Fig D - Dose
2. List the assumptions that apply for a one compartment body model. (IV bolus administration).

   a) The Distribution is instantaneous
   
   b) Elimination is a first order process
   
   c) Linear Pharmacokinetics

True or False:

1) For a drug characterized by a one compartment body model and administered as an IV bolus the expression \( \text{AUC}_{0-\infty} = \frac{C_0}{K_e} \) can be used to calculate the \( \text{AUC}_{0-\infty} \). (T/F)

2) \( \text{CL}_{\text{tot}} = \text{CL}_{\text{bil}} + \text{CL}_{\text{ren}} + \text{CL}_{\text{met}} \) is always true. (T/F)

3) In the equation \( c = \left( \frac{\text{Dose}}{V_d} \right) * e^{(-ke \cdot t)} \), the expression \( e^{(-ke \cdot t)} \) has a value between 0 and 1. (T/F)