PEBC PHARMACIST EVALUATING EXAMINATION

REFERENCE SHEET

The following formulas are provided for your reference. They do **NOT** need to be memorized, as they will be provided in the Examination Booklets.

$$C = C_0 \cdot 10^{\frac{-kt}{2.303}} \qquad \log C = \log C_0 - \frac{kt}{2.303}$$

$$C = C_0 \cdot e^{-kt} \qquad \ln C = \ln C_0 - kt$$

$$C_{ave} = \frac{AUC_0^{\tau}}{\tau} \qquad Cl_H = Q \times \frac{fuCl_{int}}{fuCl_{int} + Q}$$

$$t_{1/2} = \frac{0.693}{k} \qquad t_{1/2} = \frac{C_0}{2k}$$

$$t_{90} = \frac{0.105}{k} \qquad t_{90} = \frac{0.1\,C_0}{k}$$

$$Cl_t = \frac{\text{Amount absorbed}}{AUC_0^{\infty}} \text{ or } \frac{FD}{AUC_0^{\infty}} \qquad V_d = \frac{A_0}{C_0}$$

$$\bar{C}_{ss} = \frac{R_0}{kV_d} \qquad Cl = V_d k$$

$$C = \frac{R_0}{kV_d}(1 - e^{-kt}) \qquad \frac{k}{2.303} = \frac{\log C_1 - \log C_2}{t_2 - t_1}$$

$$F = \frac{AUC_{oral}/D}{AUC_{IV}/D}$$

For weak acids, percent ionization = $\dfrac{100}{1 + \text{antilog}\,(pK_a - pH)}$

For weak bases, percent ionization = $\dfrac{100}{1 + \text{antilog}\,(pH - pK_a)}$