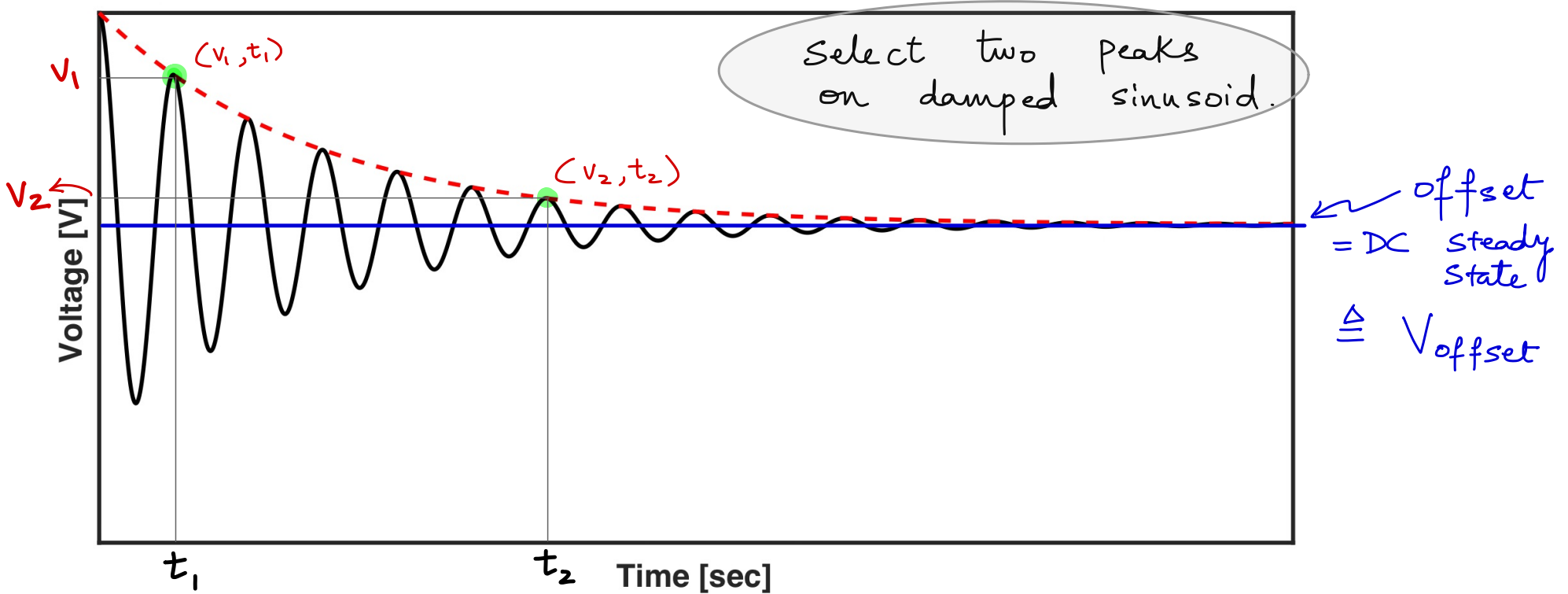
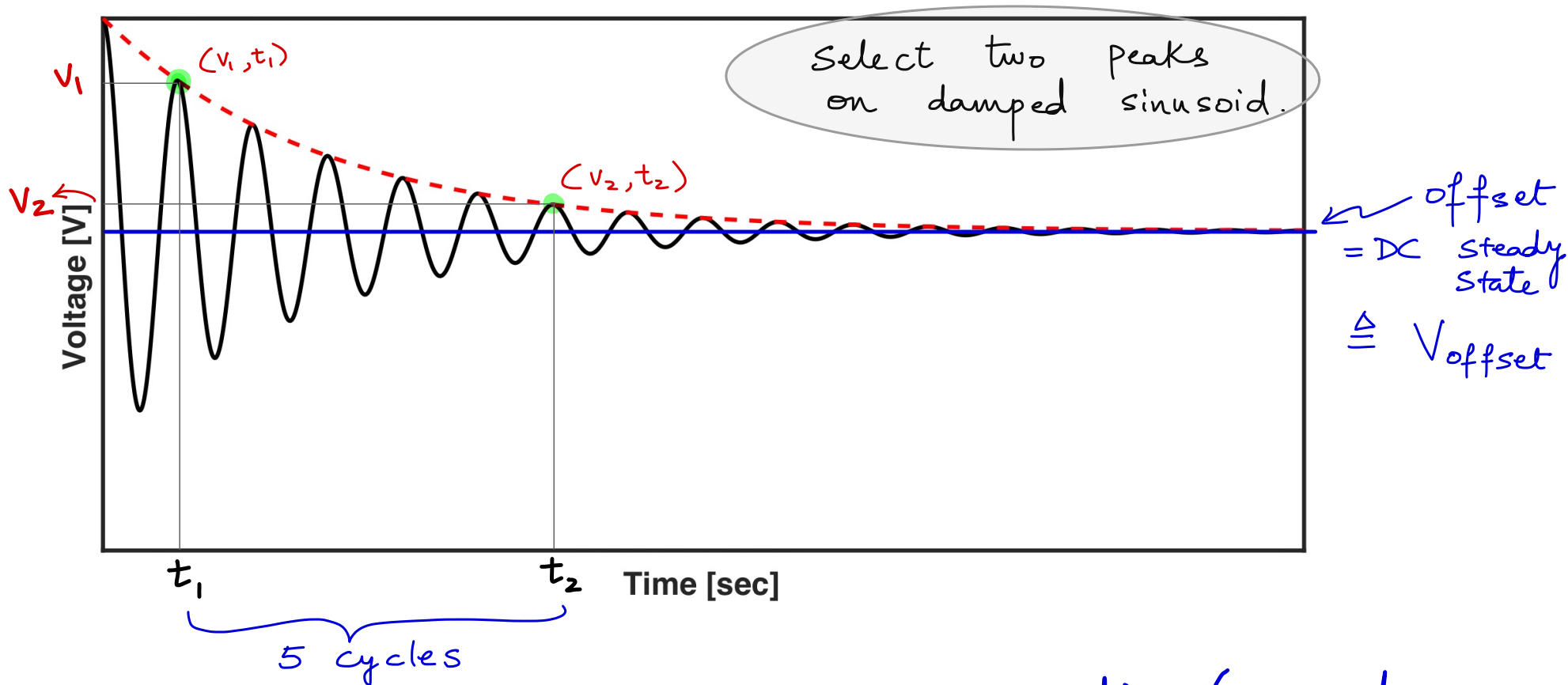


Formula Sheet for PS 20



$$\alpha = \text{attenuation constant} = \frac{\ln \left(\frac{V_2 - V_{\text{offset}}}{V_1 - V_{\text{offset}}} \right)}{t_2 - t_1}$$



$\beta = \text{oscillation frequency} = \frac{2\pi}{T}$ (in plot above, 5 cycles in $t_2 - t_1$ seconds)

$T = \text{time period of oscillation}$

$= \frac{1}{f}$ $f \rightarrow \text{Hz or } \text{sec}^{-1}$

$\Rightarrow T = \frac{t_2 - t_1}{5}$