Note: If you want your paper returned folded (i.e., score concealed), please print your name on the back.

1. (3) Consider the electrolyte (when dissolved in water) Ca$_3$(PO$_4$)$_2$.
   (a) Give the values of $\nu_+$, $\nu_-$, $z_+$, and $z_-$ for Ca$_3$(PO$_4$)$_2$.
   
   (b) Give an expression (including all required numerical entries) with which you could calculate $\nu_\pm$ for Ca$_3$(PO$_4$)$_2$.

   (c) Write the expression for $\gamma_\pm$ for Ca$_3$(PO$_4$)$_2$, in terms of $\gamma_+$ and $\gamma_-$.  

[For answers, see Quiz 1, problem 3, from last year.]