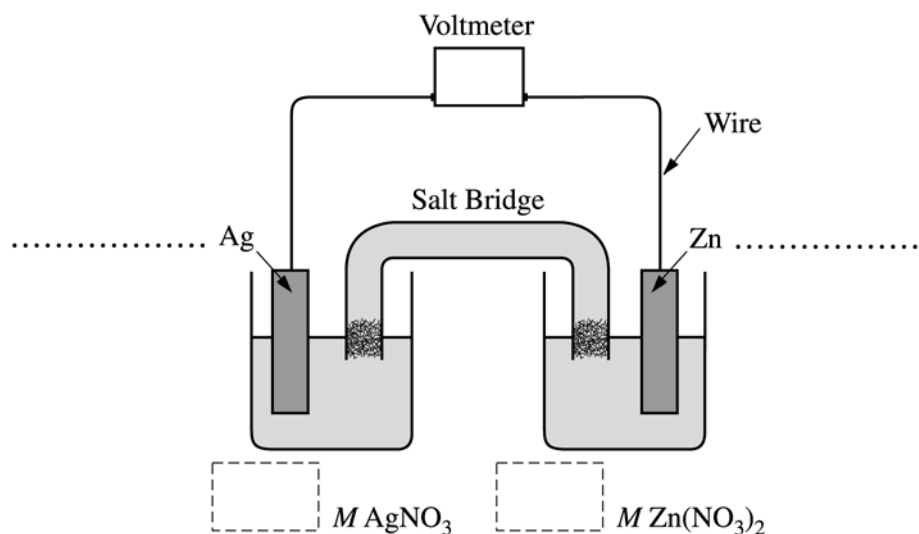


2004 AP[®] CHEMISTRY FREE-RESPONSE QUESTIONS (Form B)



6. The following questions refer to the electrochemical cell shown in the diagram above.
- Write a balanced net ionic equation for the spontaneous reaction that takes place in the cell.
 - Calculate the standard cell potential, E° , for the reaction in part (a).
 - In the diagram above,
 - label the anode and the cathode on the dotted lines provided, and
 - indicate, in the boxes below the half-cells, the concentration of AgNO_3 and the concentration of $\text{Zn(NO}_3)_2$ that are needed to generate E° .
 - How will the cell potential be affected if KI is added to the silver half-cell? Justify your answer.