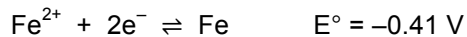
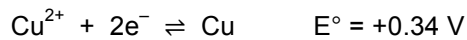




# ELECTROCHEMISTRY (A)

1 Half cells for the following redox half equations were connected using a wire and salt bridge.



a Write the standard cell notation (cell representation) for this cell.

..... (2)

b Calculate the emf of this cell. .... (1)

c Write a balanced equation for the reaction that takes place in this cell.

..... (2)

d State three essential conditions in order for this cell to operate under standard conditions.

1 .....

2 .....

3 ..... (3)

2 The electrode potential of the  $\text{Zn}^{2+}/\text{Zn}$  half cell was measured against the standard hydrogen electrode (SHE). In this cell, the SHE was placed on the left, and an emf of  $-0.76 \text{ V}$  was recorded.

a Write the standard cell notation (cell representation) for this cell.

..... (2)

b Calculate the electrode potential of the  $\text{Zn}^{2+}/\text{Zn}$  half cell. .... (1)

c Write a balanced equation for the reaction that takes place in this cell.

..... (2)

d What is the role of the platinum in the SHE? .....

..... (1)