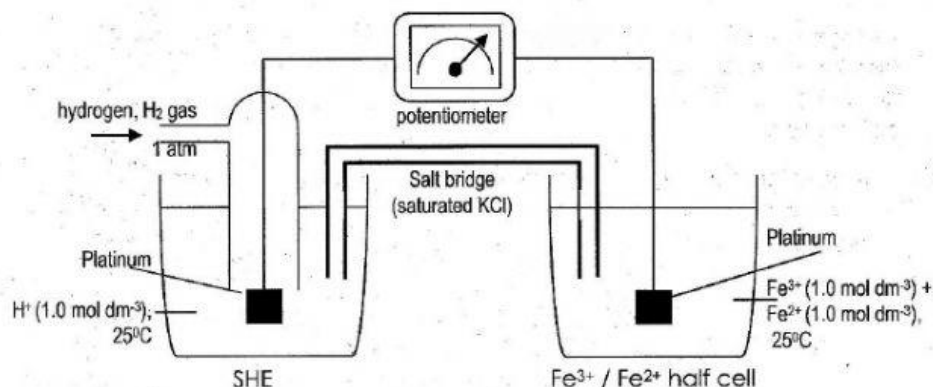


Fill in the blanks



$$E^\circ \text{ for } \text{H}^+/\text{H}_2 = 0\text{V}, E^\circ \text{ for } \text{Fe}^{3+}/\text{Fe}^{2+} = +0.77\text{V}$$

The half-equation at anode is  $\rightarrow$

The half-equation at cathode is  $\rightarrow$

The overall/ionic equation for the cell is

$\rightarrow$

The  $E_{\text{cell}}$  of the cell is

The cell diagram for the cell is

||

The electron flow from (SHE//  $\text{Fe}^{3+}/\text{Fe}^{2+}$ ) to (SHE// $\text{Fe}^{3+}/\text{Fe}^{2+}$ ) half cell through external circuit.

|                                                                              |                                                                      |
|------------------------------------------------------------------------------|----------------------------------------------------------------------|
| $\text{Fe}^{2+}(\text{aq})$                                                  | $\text{H}_2(\text{g})$                                               |
| $\text{Fe}^{3+}(\text{aq}), \text{Fe}^{2+}(\text{aq})   \text{Pt}(\text{s})$ | $2\text{H}^+(\text{aq}) + 2\text{e}^-$                               |
| $\text{Fe}^{3+}(\text{aq}) + \text{e}^-$                                     | $2\text{H}^+(\text{aq}) + 2\text{Fe}^{2+}(\text{aq})$                |
| $\text{H}_2(\text{g}) + 2\text{Fe}^{3+}(\text{aq})$                          | $\text{Pt}(\text{s})   \text{H}_2(\text{g})   \text{H}^+(\text{aq})$ |