Question 27 (2 marks)

The diagram shows a particular cell with relevant half equations.   **2**

$$Zn(s) + 2OH^-(aq) \rightarrow ZnO(s) + H_2O(l) + 2e^-$$

$$HgO(s) + H_2O(l) + 2e^- \rightarrow Hg(l) + 2OH^-(aq)$$
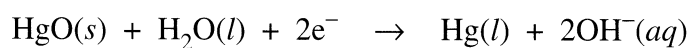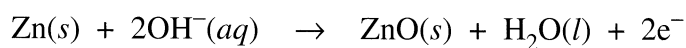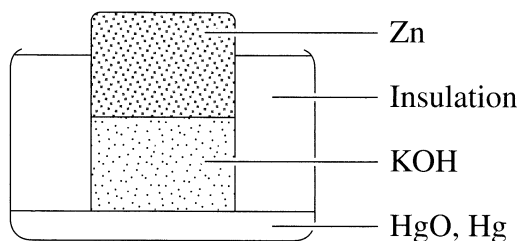
Identify the anode, cathode and electrolyte for this cell.

anode : $Zn_{(s)} + 2OH^-_{(aq)} \rightarrow ZnO_{(s)} + H_2O_{(l)} + 2e^-$

Cathode : $HgO_{(s)} + H_2O_{(l)} + 2e^- \rightarrow Hg_{(l)} + 2OH^-_{(aq)}$

electrolyte: $H_2O_{(l)}$

$$Zn \rightarrow Zn^{2-} + 2e^-$$

$$Hg^{2-} + 2e^- \rightarrow Hg$$