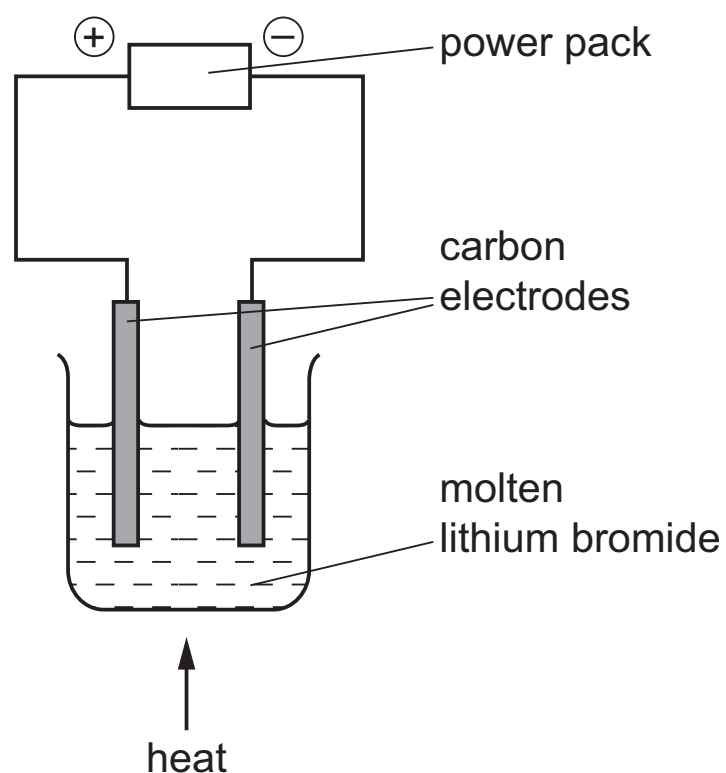


ELECTROLYSIS OF MOLTEN COMPOUNDS

5.6.1

The diagram shows the electrolysis of molten lithium bromide.



- (i) Mark on the diagram the direction of the electron flow. [1]
- (ii) Write an ionic equation for the reaction at the negative electrode (cathode).
..... [1]
- (iii) Write an ionic equation for the reaction at the positive electrode (anode).
..... [2]
- (iv) Which ion is oxidised? Explain your answer.
.....
..... [2]

-----Marking Scheme-----

(i)	correct direction (going towards negative electrode);	
(ii)	$\text{Li}^+ + \text{e}^- \rightarrow \text{Li}$ / $\text{Li}^+ \rightarrow \text{Li} - \text{e}^-$;	
(iii)	$2\text{Br}^- \rightarrow \text{Br}_2 + 2\text{e}^-$ / $2\text{Br}^- - 2\text{e}^- \rightarrow \text{Br}_2$ formulae; balancing;	
(iv)	Br^- / bromide (ion); electron lost / donated electrons / increased oxidation state / increased oxidation number / oxidation numbers changed from -1 to 0 / increased valency;	