

Question	Marking Guidance	Mark	Comments
5(a)(i)	Co/Cobalt	1	If Co or Cobalt not given CE = 0
	(+) 4	1	ignore case in symbol for Co
	(+) 3	1	Allow 4 and 3 in either order
5(a)(ii)	$\text{Li} \rightarrow \text{Li}^+ + \text{e}^-$	1	Ignore state symbols Allow e without -ve sign Do not allow equilibrium sign
5(a)(iii)	Platinum is a conductor	1	Ignore mention of surface area or catalyst
	(Platinum is) unreactive/inert	1	Allow 2 marks if two properties given on one answer line Apply list principle to contradictions/wrong answers Do not allow platinum resists corrosion
5(a)(iv)	<u>Li</u> reacts with <u>water</u> /forms lithium hydroxide	1	Allow water breaks down (or is electrolysed) on re-charge

5(b)(i)	Pt   $\text{SO}_3^{2-}(\text{aq})$ , $\text{SO}_4^{2-}(\text{aq})$    $\text{ClO}_3^{-}(\text{aq})$ , $\text{Cl}^{-}(\text{aq})$   Pt	2	<p>State symbols and ‘,’ not necessary</p> <p>Allow   in place of ‘,’ NOT ‘,’ in place of  </p> <p>Ignore <math>\text{H}^{+}</math> and <math>\text{H}_2\text{O}</math></p> <p>Deduct one mark for each mistake (e.g. Pt missed twice counts as two mistakes)</p> <p>Allow reverse order for whole cell</p> <p>Pt   <math>\text{Cl}^{-}</math>, <math>\text{ClO}_3^{-}</math>    <math>\text{SO}_4^{2-}</math>, <math>\text{SO}_3^{2-}</math>   Pt</p>
5(b)(ii)	$\text{ClO}_3^{-} + 3\text{SO}_3^{2-} \rightarrow \text{Cl}^{-} + 3\text{SO}_4^{2-}$ Oxidising agent $\text{ClO}_3^{-}$ Reducing agent $\text{SO}_3^{2-}$	1 1 1	