

Q	Part	Sub Part	Marking Guidance	Mark	Comments
3	(a)		Same phase/state	1	
3	(b)		Because only exist in one oxidation state	1	Allow do not have variable oxidation states
3	(c)		$2\text{I}^- + \text{S}_2\text{O}_8^{2-} \rightarrow \text{I}_2 + 2\text{SO}_4^{2-}$	1	Ignore state symbols Allow multiples
3	(d)		Both (ions) have a negative charge	1	Or both have the same charge Or (ions) repel each other Do not allow both molecules have the same charge (contradiction)
3	(e)		$2\text{Fe}^{2+} + \text{S}_2\text{O}_8^{2-} \rightarrow 2\text{Fe}^{3+} + 2\text{SO}_4^{2-}$	1	Equations can be in any order Mark independently
			$2\text{Fe}^{3+} + 2\text{I}^- \rightarrow 2\text{Fe}^{2+} + \text{I}_2$	1	
			Positive and negative (ions)/oppositely charged (ions)	1	
3	(f)		Equations 1 and 2 can occur in any order	1	Allow idea of Fe^{3+} converted to Fe^{2+} then Fe^{2+} converted back to Fe^{3+}