

Question	Marking Guidance	Mark	Comments
5(a)	Yellow (solution)	1	Allow equation with H <sub>2</sub> SO <sub>4</sub>
	Orange <u>solution</u>	1	
	$2\text{CrO}_4^{2-} + 2\text{H}^+ \rightarrow \text{Cr}_2\text{O}_7^{2-} + \text{H}_2\text{O}$	1	
5(b)	Yellow / purple (solution)	1	Allow orange / brown (solution)
	Brown precipitate / solid	1	
	$[\text{Fe}(\text{H}_2\text{O})_6]^{3+} + 3\text{OH}^- \rightarrow \text{Fe}(\text{H}_2\text{O})_3(\text{OH})_3 + 3\text{H}_2\text{O}$	1	
5(c)	Blue (solution)	1	Allow pale blue
	Dark / deep blue <u>solution</u>	1	Ignore any reference to blue ppt
	$[\text{Cu}(\text{H}_2\text{O})_6]^{2+} + 4\text{NH}_3 \rightarrow [\text{Cu}(\text{H}_2\text{O})_2(\text{NH}_3)_4]^{2+} + 4\text{H}_2\text{O}$	1	Can be in two equations
5(d)	Colourless (solution)	1	Do not allow grey  Do not allow just CO <sub>2</sub>
	White precipitate / solid	1	
	Bubbles / effervescence / gas evolved / given off	1	
	$2[\text{Al}(\text{H}_2\text{O})_6]^{3+} + 3\text{CO}_3^{2-} \rightarrow 2\text{Al}(\text{H}_2\text{O})_3(\text{OH})_3 + 3\text{CO}_2 + 3\text{H}_2\text{O}$	1	