

Multiple Choice Answers

Q12: C

Multiple Choice Answers

Q11: A

Multiple Choice Answers

Q10: D

Q12: B

3(a)	M1 ionic M2 molten M3 in aqueous solution
3(b)(i)	increase
3(b)(ii)	becomes paler blue or becomes colourless
3(b)(iii)	bubbles
3(b)(iv)	$4\text{OH}^- \rightarrow 2\text{H}_2\text{O} + \text{O}_2 + 4\text{e}^-$ M1 any negatively charged OH species losing electrons OR $\text{H}_2\text{O} + \text{O}_2$ as only products (other than electrons) on RHS M2 any negatively charged OH species losing electrons AND $\text{H}_2\text{O} + \text{O}_2$ as only products (other than electrons) on RHS M3 correct equation
3(c)(i)	increases
3(c)(ii)	no change
3(d)(i)	bauxite
3(d)(ii)	cryolite
3(d)(iii)	M1 anodes or carbon / graphite react with oxygen / O_2 M2 (form) carbon dioxide

Multiple Choice Answers

Q13: A

2(a)	M1 (strong) (electrostatic) attraction between ions M2 ions have opposite charges
2(b)	M1 8 dots in third shell of each K M2 6 crosses and 2 dots in third shell of S M3 '+' charge on each K ion on correct answer line and '2-' charge on S ion on correct answer line
2(c)(i)	M1 3 correctly positioned positive ions next to given negative M2 all ions correct
2(c)(ii)	cation(s)
2(d)(i)	electrolysis
2(d)(ii)	$2\text{Br}^- \rightarrow \text{Br}_2 + 2\text{e}^-$ M1 any negative Br species losing electron(s) M2 correct ionic half equation
2(d)(iii)	M1 hydrogen M2 bubbles M3 oxygen M4 water M5 bubbles