

REDOX REACTIONA & ELECTROLYSIS 3

MARK SCHEME

Q1.

Question	Answer	Extra information	Marks
(i)	has melting point lower than 950°C	(it = aluminium) allow has a low melting point ignore boiling point	1
(ii)	electrode(s) made of carbon oxygen reacts with electrode(s) / carbon	accept $C + O_2 \rightarrow CO_2$ NB oxygen reacts with the carbon electrode(s) = 2 marks	1 1
Total marks			3

Q2.

Question	Answer	Extra information	Marks
(i)	removal of oxygen	accept definition in terms of electrons or oxidation numbers ignore oxides	1
(ii)	sodium is more reactive (than titanium)	accept sodium is very reactive or titanium is less reactive do not accept sodium is more reactive than argon	1
Total marks			2

Q3.

Question	Answer	Extra information	Marks
(a)	1		1
(b)	2		1
(c)	2		1
(d)	3		1
Total marks			4

Q4.

Question	Answer	Extra information	Marks
(a)	4		1
(b)	2		1

(c)	3		1
(d)	1		1
Total marks			4

Q5.

Question	Answer	Extra information	Marks
	aluminium (ions) / they are positively charged	they = aluminium ions ignore particle names accept aluminium (ions) / they are cations allow aluminium (ions) / they have an opposite charge	1
	so they are attracted or they move towards the negative electrode OR aluminium (ions) / they need to gain electrons (1) which come from the negative electrode (1)		1
		if no other marks awarded allow 'opposites attract' for 1 mark	
Total marks			2

Q6.

Question	Answer	Extra information	Marks
	any two from: copper / ions move or are attracted to the negative electrode / cathode where they are reduced or gain (two) electrons where they form copper (metal / atoms)		2
Total marks			2