

Q14.

Question Number	Answer	Mark
(i)	<p>The only correct answer is D ($\text{Br}^+(\text{g}) - \text{e}^- \rightarrow \text{Br}^{2+}(\text{g})$)</p> <p><i>A is not correct because $\text{Br}(\text{g}) + \text{e}^- \rightarrow \text{Br}^-(\text{g})$ is an equation for first electron affinity</i></p> <p><i>B is not correct because $\text{Br}^-(\text{g}) + \text{e}^- \rightarrow \text{Br}^{2-}(\text{g})$ is an equation for second electron affinity</i></p> <p><i>C is not correct because $\text{Br}(\text{g}) - 2\text{e}^- \rightarrow \text{Br}^{2+}(\text{g})$ is an equation that combines first and second ionisations</i></p>	(1)

Question Number	Answer	Mark
(ii)	<p>The only correct answer is B (801, 2 427, 3 660, 25 026, 32 828)</p> <p><i>A is not correct because 738, 1 451, 7 733, 10 541, 13 629 is typical of Group 2 elements</i></p> <p><i>C is not correct because 1 086, 2 353, 4 621, 6 223, 37 832 is typical of Group 4 elements</i></p> <p><i>D is not correct because 1 402, 2 856, 4 578, 7 475, 9 445 could be for Group 5, 6, 7, 8 or transition elements</i></p>	(1)

Q15.

Question Number	Answer	Mark
	<p>The only correct answer is D (Na^+ and Mg^{2+})</p> <p><i>A is not correct because the chloride ion has an extra shell of electrons compared to the nitride ion</i></p> <p><i>B is not correct because the sulfide ion has an extra shell of electrons compared to the oxide ion</i></p> <p><i>C is not correct because the potassium ion has an extra shell of electrons compared to the sodium ion</i></p>	(1)