

Chapter 2 – Elements, atoms, and compounds

Question	Answers	Extra information	Mark
1(a)	a substance that contains only one type of atom		1
(b)	carbon – C magnesium – Mg sodium – Na calcium – Ca	2 marks for two correctly matched 1 mark for one correctly matched	3
2	smallest different from does not		1 1 1
3(a)	E		1
(b)	A, B	1 mark for both correct	1
(c)	A, D	1 mark for both correct	1
4(a)	more than one only one more than one		1 1 1
(b)	carbon dioxide carbon monoxide sulfur trioxide		1 1 1
5(a)	all the elements arranged according to their properties		1 1
(b)	Fe Cu Cl		1 1 1
(c)	100–120	Any number in this range	1

Question	Answers	Extra information	Mark
6(a)	hydrogen – gas – colourless oxygen – gas – colourless	One mark for each correct box Do not accept clear instead of colourless	2 2
(b)	all three substances are colourless hydrogen and oxygen are in a gas state at room temperature, but water is in a liquid state		1 1
7(a)	each compound has 2 elements		1
(b)	H ₂ O, CO ₂ , and NO ₂ have 3 atoms SO ₃ has 4 atoms and N ₂ O ₅ has 7 atoms/SO ₃ and N ₂ O ₅ do not have 3 atoms		1 1
8	chlorine – molecules with 2 atoms molecules drawn spaced out helium – single atom atoms drawn spaced out		1 1 1 1
9	particles leave the surface of the liquid only – evaporation bubbles of the substance in its gas state form throughout the liquid – boiling happens at the boiling point – boiling happens at any temperature – evaporation		1 1 1 1
10(a)	boxes A and C, boxes B and D, boxes E and F gases, liquids, solids	1 mark for three categories 1 mark for explanation	1 1
(b)	boxes B, C, D, F contain one element only/the particles in each box are the same (size, shape, mass) boxes A and E contain more than one element/there are two types of particle in each box	1 mark for two categories 1 mark for explanation Accept any other suitable categories and explanations	1 1