Candidate 2

The evidence for this candidate has achieved the following marks for question paper, section 2.

Question	Max Mark	Mark awarded	Commentary
1 (a)	1	0	The incorrect term 'isomer' has been stated.
1 (b)	1	1	The candidate has re-stated the incorrect term 'isomer' but has stated 'different number of neutrons' therefore follow through has been applied.
1 (c)	1	1	The correct mass number has been stated.
2 (a)	1	1	The correct term 'carbon nanotube' has been stated.
2 (b)	1	1	The correct metal 'lithium' has been identified.
2 (c)	2	0	An incorrect number of moles has been calculated.
3 (a)	1	1	A diagram showing all outer electrons has been correctly drawn using petal diagrams.
3 (b)	1	0	The shape of the molecule has been incorrectly named as pyramidal.
3 (c)	1	0	The candidate has incorrectly described how chlorine achieves a stable electron arrangement.
3 (d)	2	1	One mark has been awarded as the candidate has only circled the correct properties for chloromethane.
4 (a)(i)	2	1	One mark has been awarded as the correct information for 'waste gases' and 'hot air' has been given. However, the remaining two descriptions are incorrect.
4 (a)(ii)	1	0	An incorrect explanation has been given as to why the temperature must not drop below 1538 °C.
4 (b)	1	0	An incorrect ion-electron equation has been given.
5 (a)(i)	1	0	An incorrect half-life has been calculated.
5 (a)(ii)	2	0	The candidate has carried out the wrong type of calculation.

Question	Max Mark	Mark awarded	Commentary
5 (b)	1	1	The correct type of radiation has been identified by name and symbol.
6	3	2	The candidate has demonstrated a reasonable understanding of the chemistry involved.
7 (a)	1	1	The functional group 'carboxyl' has been correctly identified.
7 (b)(i)	1	0	An incorrect structural formula has been drawn for butanoic acid.
7 (b)(ii)	2	1	The candidate has correctly described propanoic acid as having less carbons.
8 (a)(i)	1	1	The observation 'very bright light' has been given.
8 (a)(ii)	1	1	The candidate's description of 'quicker' is correct.
8 (b)	1	1	The correct substance 'magnesium' has been identified.
9 (a)	1	1	A correct definition of homologous series has been given.
9 (b)	1	0	The incorrect term 'isotope' has been stated.
9 (c)(i)	1	1	The candidate has given a correct linking statement.
9 (c)(ii)	1	0	The position of propane has been incorrectly identified.
10 (a)(i)	1	1	The candidate has correctly labelled the diagram.
10 (a)(ii)	1	0	An incorrect redox equation has been written.
10 (b)	3	2	Two marks are awarded as the candidate has correctly processed the calculation but has a rounding error in the final step.
11 (a)	2	0	The candidate has incorrectly stated the pH would not change. (This answer is in the additional space).
11 (b)	1	1	A correct general trend has been stated.

Question	Max Mark	Mark awarded	Commentary
12 (a)	1	0	The candidate has incorrectly circled the C-CH_2 along with the hydroxyl functional group.
12 (b)	1	0	The candidate has incorrectly stated the family are 'carboxlic'.
12 (c)	3	2	The candidate has incorrectly calculated the number of moles of geraniol used. However, the correct concept is displayed and the final answer is correct for their working.
13 (a)	1	0	An incorrect general formula for the alkyne family has been stated.
13 (b)(i)	1	1	The repeating unit for the polymer has been correctly drawn. (One missing end bond is accepted as a slip.)
13 (b)(ii)	1	1	The correct type of polymerisation has been named.
13 (c)(i)	1	0	The full structural formula for the alkyne has been incorrectly drawn.
13 (c)(ii)	1	0	An incorrect description of why 2,4-dibromopentane does not form an alkyne has been stated.
14 (a)(i)	1	0	An incorrect structural formula for hexan-1-ol has been drawn.
14 (a)(ii)	1	0	An incorrect predicted value for the energy released has been given.
14 (b)	3	0	The candidate has not used the correct concept and has incorrectly substituted 13.3 as the mass.
15	3	1	The candidate has demonstrated a limited understanding of the chemistry involved.
Total	**60**	**26**	