

Examiners' Report/
Principal Examiner Feedback

November 2011

360Science

GCSE Science
Multiple Choice Paper C1a (5007)

GCSE Chemistry
Multiple Choice Paper C1a (5035)

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5007/ 5035 (C1a) Examiners' Report November 2011

Foundation Tier

Only 40% of candidates could recognise sodium chloride as a salt with 30% choosing a mixture. Only 31% knew that silver chloride forms as a precipitate because it is insoluble with 39% choosing because it has a high melting point. In Q7 only 42% could identify the position of sodium in the periodic table, 30% chose the position of calcium and 23% the position of iron. Only 30% knew that the noble gases are unreactive compared to other elements and 40% thought that they become less reactive as their atomic number increases. In Q13 only 17% could recognise that the copper is reduced with 39% choosing oxidised, 26% thermally decomposed and 19% neutralised. Only 32% of candidates knew that the gas produced when dilute sulphuric acid reacts with magnesium carbonate is carbon dioxide; 37% chose sulphur dioxide and 22% hydrogen. Only 33% knew that in baking powder the acid is neutralised by the sodium hydrogencarbonate, 28% chose thermally decomposed and 25% combusted. Only 29% knew that the test to prove that a gas is carbon dioxide is that the gas turns limewater milky with 37% thinking that when mixed with air and ignited, it burns with a 'pop' and 26% that it puts out a glowing splint. Only 36% could recognise that one of the halogens is a red-brown liquid at room temperature, 27% chose a dark green gas, 21% a yellow liquid and 15% a purple solid. Only 21% knew the test for chlorine with 35% thinking that it burns with a green flame, 31% that it turns moist red litmus paper blue and 13% that it displaces fluorine from potassium fluoride solution. Only 29% knew that solutions of copper salts form a pale blue precipitate with sodium hydroxide solution, 29% chose zinc, 27% magnesium and 14% iron.

Higher Tier

As would be expected higher tier candidates performed better than foundation candidates on questions 17 to 24 but some of the weaknesses indicated above were still present especially in Q19 (44% correct), Q21 (37% correct), Q22 (36% correct) and Q24 (47% correct).

Knowledge of periods was weak, when asked to identify a non-metallic element in period 4, 29% chose the correct answer but 28% chose the one in period 5 and 36% the element in group 4. Only 31% could identify the position of an element with salts which when dissolved in water form a red-brown precipitate with sodium hydroxide solution, 29% chose V in group 6, 23% S in group 2 and 17% R in group 1. Only 31% of candidates could identify the apparatus to collect a gas that is denser than air and soluble in water with 44% choosing to collect it over water. As usual balanced equations caused problems with only 34% choosing the correct answer in Q33, 53% chose options involving H_2Cl . In Q34 knowledge of halogen displacement reactions was weak with only 36% choosing the correct answer and all the distracters being popular choices. Whilst 34% of candidates knew that phosphoric acid is used to make fertilisers and 35% knew that it is used in some soft drinks, only 22% of candidates knew that it has both uses. Only 15% knew that zinc, zinc oxide and zinc carbonate all react with dilute hydrochloric acid, 40% thought that zinc carbonate does

not react, 29% thought that zinc oxide does not react and 15% thought that zinc does not react. In Q39 only 18% chose the correct answer, all the distracters were popular choices. Q40 was another balanced equation with 16% choosing the correct answer, 49% choosing options involving HSO_4 .

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