

NOVEMBER 2002

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK : 40

SYLLABUS/COMPONENT : 0620/5

**CHEMISTRY
(PRACTICAL)**



Question Number	Question (including any Source Details)																								
	<p>Results obtained for Q1.</p> <table border="1"> <thead> <tr> <th data-bbox="335 448 558 515">Experiment</th> <th data-bbox="622 448 766 515">Metal</th> <th data-bbox="893 470 1037 515">initial Temp / °C</th> <th data-bbox="1085 403 1244 515">max</th> </tr> </thead> <tbody> <tr> <td data-bbox="399 582 430 649">1</td> <td data-bbox="622 582 734 649">zinc</td> <td data-bbox="925 582 973 649">19</td> <td data-bbox="1149 560 1228 627">22</td> </tr> <tr> <td data-bbox="399 694 430 761">2</td> <td data-bbox="606 694 718 761">iron</td> <td data-bbox="925 694 973 761">19</td> <td data-bbox="1149 672 1276 739">21 21</td> </tr> <tr> <td data-bbox="399 828 430 896">3</td> <td data-bbox="574 828 798 896">magnesium</td> <td data-bbox="925 806 973 873">19</td> <td data-bbox="1165 784 1244 851">82</td> </tr> <tr> <td data-bbox="399 918 430 985">4</td> <td data-bbox="590 918 750 985">copper</td> <td data-bbox="925 896 973 963">19</td> <td data-bbox="1197 873 1260 940">19</td> </tr> </tbody> </table> <p>Experiment 5.</p> <table border="1"> <tbody> <tr> <td data-bbox="335 1164 638 1232">Initial temp (substance)</td> <td data-bbox="1005 1142 1117 1209">21°C</td> </tr> <tr> <td data-bbox="335 1232 766 1321">Max temp reached</td> <td data-bbox="1005 1209 1133 1276">40°C</td> </tr> </tbody> </table>	Experiment	Metal	initial Temp / °C	max	1	zinc	19	22	2	iron	19	21 21	3	magnesium	19	82	4	copper	19	19	Initial temp (substance)	21°C	Max temp reached	40°C
Experiment	Metal	initial Temp / °C	max																						
1	zinc	19	22																						
2	iron	19	21 21																						
3	magnesium	19	82																						
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Initial temp (substance)	21°C																								
Max temp reached	40°C																								

Question Number	Mark Scheme Details	Mark
1	<p>Table of results. of supervisor's results.</p> <p>All initial temperatures recorded (2)</p> <p>All maximum temperatures recorded (2)</p> <p>Observations</p> <p>zinc few bubbles / slow reaction (1)</p> <p>iron few bubbles / slow reaction (1)</p> <p>magnesium violent / rapid (1) reaction, bubbles (1) / heat (1) mark 3</p> <p>copper no reaction (1)</p> <p>(a) (i) magnesium (1)</p> <p>(ii) largest temperature rise (1)</p> <p>most violent reaction (1)</p> <p>(iii) hydrogen (1)</p>	<p>10</p> <p>1</p> <p>2</p> <p>1</p>

Question Number	Mark Scheme Details	
1	Experiment 5	
	Table of results. of supervisor's	
	Initial temperature recorded (1)	
	Maximum temperature recorded of supervisor's (1)	2
	observations.	
	solution becomes paler (1), red / brown / dark	
	/ lighter blue, black.	
ppt /	deposit / solid (1), fizz / bubbles (1)	3
(b)	temperature rises / goes up (1)	1
(c)	displacement / redox (1)	1
(d)	copper least	
	iron	
	zinc	
	magnesium most (1)	1
	Total - total	22

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2(a)	(i) <u>F</u> colorless (1) <u>not</u> clear / transparent description of smell (1)	2
	(ii) <u>G</u> colorless if no smell (1)	1
(b)	(i) iodine dissolves (1) <u>pink / violet</u> / purple (1) solution	2
	(ii) iodine dissolves (1) <u>yellow / orange / brown</u> / reddish (1) solution	2
	Mixtures combined give two layers (1) or similar	1
(c)	(i) catches fire / ignites (1) yellow / blue flame (1)	2
	(ii) extinguishes splint (1) <u>does not burn</u>	1
(d)	yellow (1) precipitate (1)	2
(e)	yellow (1) precipitate (1)	2
(f)	organic (1), hydrocarbon (1), alkane (1) max 2	2
(g)	iodide / I ⁻ (1)	1
	Sub total	18
	Total for paper	40