

**CAMBRIDGE**  
INTERNATIONAL EXAMINATIONS

**NOVEMBER 2002**

**INTERNATIONAL GCSE**

**MARK SCHEME**

**MAXIMUM MARK : 40**

**SYLLABUS/COMPONENT : 0620/5**

**CHEMISTRY  
(PRACTICAL)**



UNIVERSITY of CAMBRIDGE  
Local Examinations Syndicate

Question Number	Question (including any Source Details)	Part Mark																								
	<p>Results obtained for Q1.</p> <table border="1"> <thead> <tr> <th>Experiment</th> <th>Metal</th> <th>Temp / °C. initial</th> <th>max</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>zinc</td> <td>19</td> <td>22</td> </tr> <tr> <td>2</td> <td>iron</td> <td>19</td> <td><del>21</del> 21</td> </tr> <tr> <td>3</td> <td>magnesium</td> <td>19</td> <td>82</td> </tr> <tr> <td>4</td> <td>copper</td> <td>19</td> <td>19</td> </tr> </tbody> </table> <p>Experiment 5.</p> <table border="1"> <tbody> <tr> <td>Initial temp (at start)</td> <td>21°C</td> </tr> <tr> <td>Max temp reached</td> <td>40°C</td> </tr> </tbody> </table>	Experiment	Metal	Temp / °C. initial	max	1	zinc	19	22	2	iron	19	<del>21</del> 21	3	magnesium	19	82	4	copper	19	19	Initial temp (at start)	21°C	Max temp reached	40°C	
Experiment	Metal	Temp / °C. initial	max																							
1	zinc	19	22																							
2	iron	19	<del>21</del> 21																							
3	magnesium	19	82																							
4	copper	19	19																							
Initial temp (at start)	21°C																									
Max temp reached	40°C																									

Question Number	Mark Scheme Details	Part 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>	10
(a)	(i) magnesium (1)	1
	(ii) largest temperature rise (1)	2
	most violent reaction (1)	1
	(iii) hydrogen (1)	

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

Question Number	Mark Scheme Details	Part Mark
2(a)	(i) <u>F</u> colorless (1) <u>not</u> clear / transparent description of smell (1)	2
	(ii) <u>G</u> colorless <del>if</del> 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 <sup>-</sup> (1)	1
	<u>Sub total</u>	18
	<u>Total for paper</u>	40