

Assessment Schedule 10C 2008

/ means OR eg. green / blue – answer needs green OR blue

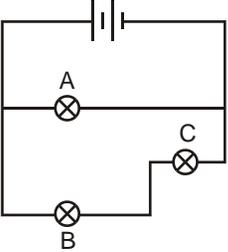
() means additional, not really required eg. Gauze (mat) – gauze would be sufficient

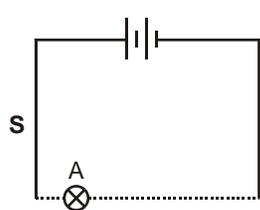
: means AND eg. red : hot - answer needs red and hot.

Question	Evidence	Marks																								
1 (a)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;"><i>liquid</i></th> <th style="width: 25%;"><i>acidic</i></th> <th style="width: 25%;"><i>neutral</i></th> <th style="width: 25%;"><i>alkaline</i></th> </tr> </thead> <tbody> <tr> <td>alcohol</td> <td></td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td><i>dilute hydrochloric acid</i></td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td>distilled water</td> <td></td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>vinegar</td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td>sodium hydroxide solution</td> <td></td> <td></td> <td style="text-align: center;">✓</td> </tr> </tbody> </table>	<i>liquid</i>	<i>acidic</i>	<i>neutral</i>	<i>alkaline</i>	alcohol		✓		<i>dilute hydrochloric acid</i>	✓			distilled water		✓		vinegar	✓			sodium hydroxide solution			✓	3
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<p><i>award three marks for all ticks being correct if more than one column is ticked for any liquid award no mark for the liquid</i></p>																										
(b) (i)	<p>any one from</p> <ul style="list-style-type: none"> • to clean the probe or it • to prevent contamination • to get an accurate reading • so the liquids do not get mixed up • it is neutral <p><i>Accept 'to neutralise the probe' OR so that it does not affect the other liquids OR to make it pH 7</i></p> <p>To make it a fair test is insufficient</p>	1																								
(ii)	<p>alcohol</p> <p><i>accept 'the first or top one'</i></p>	1																								

c (i)	<p>hydrochloric acid has a lower pH or is more acidic <i>accept the converse</i> accept 'vinegar is a weak acid'</p>	1
(ii)	<p>any one from</p> <ul style="list-style-type: none"> • more bubbles would be given off <p><i>accept 'more bubbles' or 'more fizzing'</i></p> <ul style="list-style-type: none"> • bubbles would be given off more rapidly • there would be a bigger rise in temperature <p><i>accept 'there would be a rise in temperature' or 'the test-tube would get hot'</i></p> <ul style="list-style-type: none"> • the magnesium would be used up more quickly <p>If student mentions magnesium had dissolved it is incorrect</p>	1
(d) (i)	<p>One mark each</p> <ul style="list-style-type: none"> • magnesium chloride + • hydrogen <p><i>answers may be in either order (both should be correct for achievement)</i></p>	2
(ii)	<p>any one from</p> <ul style="list-style-type: none"> • the acid was used up <p><i>accept 'there were no reactants left'</i></p> <ul style="list-style-type: none"> • all the magnesium was used up <p><i>accept 'one of the reactants has been used up'</i> <i>accept 'the reaction was complete'</i></p> <p><i>do not accept 'the magnesium had dissolved'</i></p>	1
2	<p>1 Mark per correct food chain + 1 Mark per correct identification.</p> <p>grass → antelope → Lions → Fleas A Rose bushes → greenflies → Ladybirds → Swallows C Long grass → Zebra → Ticks → Bird B</p> <p>Note: arrows must be drawn properly and in the correct direction</p>	6

(3) a	Position of the shooter/where the gun was fired from	1
b	Using a (comparison) microscope/ photograph and compare bullets	1
c	Any two from; Length, Diameter, Calibre, Manufacturer, Metal, Mixture of gunpowder/ discharge residue Note: Feature cannot be marks/indentations on bullet as already examined in previous question	2
d	So that they don't wash them/get rid of the evidence	1
e	So that they don't contaminate the evidence	1
f	One mark each <ul style="list-style-type: none"> • Cotton bud or tape used to remove the sample • Sample placed in plastic bag/container Note: not sufficient to just write (swab and plastic bag)	2
g	One mark each (two needed) <ul style="list-style-type: none"> • See if the bullet has the same chemicals as the casing • Measure the bullet and see if its size matches the calibre of the gun • Compare marks on bullet to marks created by suspected guns 	2
(4) a	any one from <ul style="list-style-type: none"> • it cools more slowly <i>accept 'it cools slowly'</i> or 'it is cooler above ground' or "hotter below" • large volume of magma <i>accept 'there is a lot of it'</i> • magma is insulated by rock <i>accept 'magma is surrounded by rock' or "kept hot"</i> • heat is transferred more slowly to rock than to air <i>accept 'it is hotter underground'</i> • lava cools more quickly 	1
b (i)	crystals formed underground will be larger <i>accept the converse</i> <i>accept 'they will be larger'</i>	1

(ii)	<p>any one from</p> <ul style="list-style-type: none"> • magma cools more slowly than lava <i>accept 'magma cools slowly' or "more time to cool"</i> <i>do not accept 'bigger crystals cool more slowly'</i> • lava cools more quickly than magma rock above the lava <i>accept 'lava cools quickly'</i> <i>accept 'there is no'</i> 	1
c (i)	<p>One mark each</p> <ul style="list-style-type: none"> • high temperatures <i>accept 'heat' or 'hot'</i> • high pressure <i>accept 'pressure' but not "compression"</i> 	2
(5) a	<ul style="list-style-type: none"> • one mark for B and C in series • one mark for A in parallel with B and C <p>for example</p>  <p>both marks should only be awarded if the circuit is correct award one mark if all three bulbs are drawn in parallel or all in series</p>	2
b	<p>One mark each</p> <ul style="list-style-type: none"> • Bulb C went out because it was in series with Bulb B/ Circuit broken/ No current (electricity) through it • Bulb A stayed on because it was in parallel with bulb B/ Still a path/ complete circuit/ Current (electricity) flows through it 	2

c	<p>a letter S in any part of the circuit before it branches or after reconnects</p>  <p><i>accept a letter S in any part of the circuit if the three bulbs are drawn in series</i></p>	1
(6) a i	<p>the number of turns or coils of wire</p> <p><i>accept 'the coils'</i></p> <p><i>accept 'the turns' NOT "more wire"</i></p>	1
ii	<p>any one from</p> <ul style="list-style-type: none"> • the current • the length or thickness or material of the wire or coil <p><i>accept 'the voltage or power' not "power supply"</i></p> <p><i>accept 'the wire'</i></p> <ul style="list-style-type: none"> • the circumference of the coil • the size of paper-clips <p><i>accept 'the paper-clips'</i></p> <p><i>accept 'position of the coil on the nail'</i></p> <p><i>accept 'tightness of the coil'</i></p> <p><i>accept 'distance between turns'</i></p> <p><i>accept 'the nail'</i></p> <p><i>Do not accept 'the number of paper-clips' Do not accept faulty equipment since that would affect all results</i></p>	1
iii	<p>any one from</p> <ul style="list-style-type: none"> • count the paper-clips picked up <p><i>accept 'number of paper-clips'</i></p> <p><i>accept 'count them'</i></p> <ul style="list-style-type: none"> • measure their mass <p><i>accept 'weigh them'</i></p> <p><i>accept 'the more clips the stronger the magnet'</i></p> <p><i>accept 'measure the distance at which a magnet will just pick up a paper-clip'</i></p>	1

b	<p>any one from</p> <ul style="list-style-type: none"> • an inaccuracy in results <p><i>accept a description of inaccuracies, such as 'she counted the number of clips wrongly'</i></p> <ul style="list-style-type: none"> • a problem with the data or results • a problem with the method <p><i>accept 'something wrong with the tests'</i></p> <p><i>accept 'he used different sized paper-clips'</i></p> <p><i>accept 'the paper-clips were already magnetised'</i></p> <p><i>accept 'he did something wrong'</i></p> <p><i>'the test is unfair' is insufficient</i></p> <p><i>do not accept a description of an odd result</i></p>	1
	Total marks	40