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**SCIENCE**

**1113/01**

Paper 1

**For Examination from 2014**

SPECIMEN MARK SCHEME

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**MAXIMUM MARK: 50**

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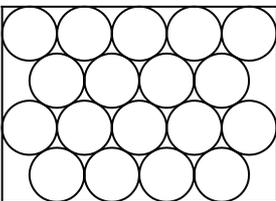
This document consists of 7 printed pages and 1 blank page.

Question	1		
Part	Mark	Answer	Further Information
(a)	1	water plants / bamboo plant	<b>Accept</b> plant / bamboo
(b)	1	snail / panda	
(c)	1	idea of eating both animals and plants	
(d)	1	energy flow	<b>Ignore</b> what eats what
(e)	1	not enough food / shelter / habitat	<b>Accept</b> loss of homes / loss of nests
<b>Total</b>	<b>5</b>		

Question	2		
Part	Mark	Answer	Further Information
(a)	2	<b>C</b> / very high melting point <b>E</b> / good conductor of heat	1 mark for each answer Either order
(b)	1	<b>B</b> / can be compressed	
(c)	1	<b>F</b> / poor conductor of heat	
(d)	1	<b>H</b> / non-conductor of electricity	
<b>Total</b>	<b>5</b>		

Question	3		
Part	Mark	Answer	Further Information
(a) (i)	1	The amplitude of whistle <b>1</b> is <b>less than</b> the amplitude of whistle <b>2</b> .	
(ii)	1	The wavelength of whistle <b>1</b> is <b>the same as</b> the wavelength of whistle <b>2</b> .	
(b)	2	(Loudness) whistle <b>2</b> is louder (than whistle <b>3</b> ) (Pitch) whistle <b>2</b> has a lower pitch (than whistle <b>3</b> )	1 mark for each <b>Accept</b> converse argument for each answer
<b>Total</b>	<b>4</b>		

Question	4		
Part	Mark	Answer	Further Information
	1	(Coral reef fish is a) <b>clownfish</b> .	
<b>Total</b>	<b>1</b>		

Question	5		
Part	Mark	Answer	Further Information
(a)	1	Diagram should show regular arrangement of close packed particles  	The regular arrangement does not need to fill the box.
(b) (i)	1	In diffusion the perfume moves from an area of <b>high</b> concentration to an area of <b>low</b> concentration.	<b>Accept</b> higher/lower, more/less  Both required for 1 mark
(ii)	1	(idea that) particles move <b>or</b> spread out	
<b>Total</b>	<b>3</b>		

Question	6		
Part	Mark	Answer	Further Information
(a)	1	Yes  quotes some information from the table such as Mercury is closest to Sun and shortest time for orbit	No mark for yes – marks are for the explanation
(b) (i)	2	No  Earth is cooler than Mars but closer to the Sun  Mercury is cooler than Venus but closer to the Sun	No mark for no – marks are for the explanations
(ii)	1	information about more planets	<b>Accept</b> find another source to check the evidence obtained
(c)	1	(strength of) gravity is higher on Earth than Mars	<b>Accept</b> mass of Earth is greater than Mars
<b>Total</b>	<b>5</b>		

Question	7		
Part	Mark	Answer	Further Information
(a) (i)	1	Coo (and) Lam	Either order
(ii)	1	the ones that produce the most eggs	
(b)	2	size of eggs <input checked="" type="checkbox"/> amount of milk produced <input type="checkbox"/> low life expectancy <input type="checkbox"/> number of feathers <input type="checkbox"/> colour of feathers <input type="checkbox"/> resistance to disease <input checked="" type="checkbox"/>	2 correct = 2 marks 1 correct = 1 mark If 3 boxes ticked, 2 correct = 1 mark If 3 boxes ticked, 1 correct = 0 marks If 4 or 5 or 6 boxes ticked, 2 correct = 0 marks
<b>Total</b>	<b>4</b>		

Question	8		
Part	Mark	Answer	Further Information
(a)	1	<b>Igneous</b> rocks are formed when molten lava from a volcano cools down.	
(b)	1	<b>Sedimentary</b> rocks are made from grains of rock that are cemented (stuck) together.	
(c)	1	<b>Metamorphic</b> rocks are made when heat and pressure change other types of rock.	
(d)	1	<b>Sedimentary</b> rocks are found in layers and often contain fossils.	
<b>Total</b>	<b>4</b>		

Question	9		
Part	Mark	Answer	Further Information
(a)	2	A – coil or wire B – core	
(b)	2	part A – material: copper part B – material: iron	
<b>Total</b>	<b>4</b>		

Question	10		
Part	Mark	Answer	Further Information
(a)	2	<p>diet</p> <p>health problem</p> <p>too much sugar — heart disease</p> <p>too much fat — tooth decay</p> <p>too much salt — high blood pressure</p> <p>too little protein — little energy</p> <p>too little carbohydrate — poor growth</p>	<p>4 correct = 2 mark</p> <p>2 or 3 correct = 1 mark</p> <p>1 correct = 0 marks</p>
(b) (i)	1	pineapple (and) banana	Both required, either order
(ii)	1	(idea that it) keeps the digestive system healthy / speeds up the movement of waste out of the body / helps prevent (bowel) cancer	<b>Accept</b> prevents constipation
(iii)	1	fruits contain very little fat (or no fat) / there is less fat than fibre in fruit	
(iv)	1	mass / size / volume	
<b>Total</b>	<b>6</b>		

Question	11																														
Part	Mark	Answer	Further Information																												
(a)	3	<table border="1"> <thead> <tr> <th>length in cm</th> <th>temperature before in °C</th> <th>temperature at end in °C</th> <th>temperature change in °C</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>20</td> <td>22</td> <td>2</td> </tr> <tr> <td>2</td> <td>21</td> <td>25</td> <td>4</td> </tr> <tr> <td>3</td> <td>21</td> <td>27</td> <td>6</td> </tr> <tr> <td>4</td> <td>21</td> <td>26</td> <td>5</td> </tr> <tr> <td>5</td> <td>21</td> <td>31</td> <td>10</td> </tr> <tr> <td>6</td> <td>22</td> <td>34</td> <td>12</td> </tr> </tbody> </table>	length in cm	temperature before in °C	temperature at end in °C	temperature change in °C	1	20	22	2	2	21	25	4	3	21	27	6	4	21	26	5	5	21	31	10	6	22	34	12	<p>Correct data recorded in table = 1 mark</p> <p>Correct headings = 1 mark</p> <p>Correct temperature changes entered in table = 1 mark</p> <p><b>Accept</b> if not in correct order but data is same</p>
length in cm	temperature before in °C	temperature at end in °C	temperature change in °C																												
1	20	22	2																												
2	21	25	4																												
3	21	27	6																												
4	21	26	5																												
5	21	31	10																												
6	22	34	12																												
(b)	1	result for 4 cm	This can be highlighted on the table or written down																												
(c)	1	exothermic																													
<b>Total</b>	<b>5</b>																														

Question	12		
Part	Mark	Answer	Further Information
(a)	1	newtonmeter / forcemeter	
(b)	1	(idea of) checking reliability / identify anomalous / odd / unusual results	
(c)	1	9.7	
(d)	1	<b>32.6</b> - first row second number	<b>Accept</b> answer written on paper by (d)
<b>Total</b>	<b>4</b>		

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