



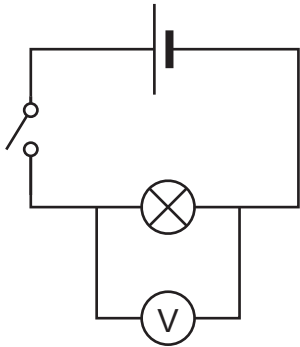
Cambridge Assessment
International Education

Cambridge Lower Secondary Sample Test
For use with curriculum published in
September 2020

Science Paper 1
Mark Scheme
Stage 9

Question	Answer	Marks	Further Information
1(a)(i)	kidney	1	
1(a)(ii)	urea	1	Accept higher level answers e.g. ammonia / uric acid Ignore water
1(b)(i)	<div> <div>material or piece of apparatus</div> <div> <div>lentils</div> <div>rice grains</div> <div>sieve</div> <div>sugar</div> </div> <div>part of human excretory system</div> <div> <div>blood cells</div> <div>kidney</div> <div>waste product</div> </div> </div>	3	all four lines correct = 3 marks two or three lines correct = 2 marks one line correct = 1 mark if two lines from one material or piece of apparatus and one is incorrect = 0 marks for that material or piece of apparatus
1(b)(ii)	any two from the kidney separates waste or urea from blood / the sieve separates the sugar from the rice and or lentils it acts as a filter large particles do not pass through / blood cells do not pass through / rice or lentils do not pass through small particles do pass through / urea passes through / sugar passes through	2	Accept the waste passes through the sieve

Question	Answer	Marks	Further Information
2(a)	2.8.3	1	Accept correct drawing but 2.8.3 takes precedence
2(b)	9	1	
2(c)	(sodium atom) loses an electron	1	Accept electron(s) lost

Question	Answer	Marks	Further Information
3(a)	A	1	
3(b)	variable resistor	1	
3(c)	 <p>voltmeter connected across lamp or cell</p>	1	

Question	Answer	Marks	Further Information
4(a)(i)	chlorophyll	1	
4(a)(ii)	protein / amino acids / peptides / polypeptides	1	
4(b)(i)	plant A has more chlorophyll plant A can make more food / more photosynthesis	2	Note assume answer refers to plant A Accept converse argument if plant B specified Accept plant A has more green leaves but name takes precedence
4(b)(ii)	oxygen	1	Accept O ₂ or O
4(c)	to reduce competition (for light, water or minerals)	1	Accept to reduce overcrowding Accept prevents spread of disease or pests / make harvesting easier Accept to have more space to grow

Question	Answer	Marks	Further Information
5(a)	decreases / goes down / reduces / gets less	1	Accept ora if going up the group is specified
5(b)	density	1	
5(c)	any value between 20 and 50 (°C)	1	Accept answers written in table but answer line takes precedence
5(d)	reactivity increases (down the group)	1	

Question	Answer	Marks	Further Information												
6(a)	piece of the Earth's crust floating on the mantle / which moves around (slowly)	2	Accept part of the lithosphere												
6(b)	any one from the two continents have complementary shapes fit together (almost exactly)	1	Ignore they have the same / similar shapes												
6(c)	<table><tr><td>evidence</td><td></td></tr><tr><td>comparing their climates</td><td></td></tr><tr><td>comparing their rocks</td><td>✓</td></tr><tr><td>comparing their sizes</td><td></td></tr><tr><td>comparing their fossil records</td><td>✓</td></tr><tr><td>comparing their ecosystems</td><td></td></tr></table>	evidence		comparing their climates		comparing their rocks	✓	comparing their sizes		comparing their fossil records	✓	comparing their ecosystems		2	each correct answer = 1 mark one or two correct ticks and one incorrect tick = 1 mark two or more incorrect ticks = 0 marks
evidence															
comparing their climates															
comparing their rocks	✓														
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comparing their fossil records	✓														
comparing their ecosystems															
6(d)	earthquake / volcano / tsunami	1	Accept subduction / mountain building Accept mid-ocean ridges or trenches made												
6(e)	The tectonic plates are represented by the plastic / blocks . The water represents the magma / mantle . The water moves in a cycle in a process called convection . The Bunsen burner represents the heat source from the core .	4	each correct answer = 1 mark Accept inner core / outer core Accept centre of the Earth												

Question	Answer	Marks	Further Information
7	A white-hot spark is at a very high temperature . It does not contain much heat energy because it does not contain many particles .	3	each correct answer = 1 mark

Question	Answer	Marks	Further Information
8(a)	hydrogen	1	Accept H / H ₂ but name takes precedence
8(b)	filtration / filtering	1	
8(c)	evaporation	1	Accept boiling Ignore crystallisation
8(d)	zinc oxide + sulfuric acid → zinc sulfate + water	1	order on each side unimportant

Question	Answer	Marks	Further Information
9(a)	B	1	
9(b)	E	1	
9(c)	D and E	1	both required order unimportant
9(d)	C	1	

Question	Answer	Marks	Further Information
10(a)	all points correctly plotted curve line passing through all points	2	Accept ecf from incorrect points plotted Do not accept dot to dot Do not accept line that starts at the origin
10(b)	the higher the concentration the shorter the reaction time / ora	1	Ignore the higher the concentration the faster the reaction time Accept the higher the concentration the faster the reaction / ora

Question	Answer	Marks	Further Information
11(a)	he repeats the experiment	1	
11(b)	any two from the apparatus gets hot / risk of getting burnt the pins are sharp / risk of getting skin wound the wax catches fire	2	Note the question asks for the risks not for the precautions