



Science

Stage 9

Paper 1

2024

Cambridge Lower Secondary Progression Test

Mark Scheme

Question	Answer	Marks	Further Information
1(a)	(A) kidney (B) ureter (C) bladder (D) urethra (E) (renal) artery	3	all five correct = 3 marks three or four correct = 2 marks one or two correct = 1 mark
1(b)	protein(s)	1	

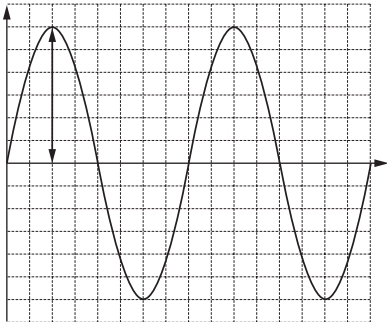
Question	Answer	Marks	Further Information
2(a)	10	1	
2(b)	(type of bonding) covalent (bonding) (explanation) a pair of electrons shared (by two atoms)	2	each correct answer = 1 mark Accept two electrons that are shared
2(c)	any one from low melting point low boiling point gas at room temperature	1	 Accept poor conductor of electricity or does not conduct electricity or can flow easily or has a low density

Question	Answer	Marks	Further Information
3	evaporation	1	Accept endothermic Ignore perspiration

Question	Answer	Marks	Further Information
4(a)	label the arrow from carbon dioxide in the air to carbon compounds in plants with the letter P	1	
4(b)	(process A) combustion (process B) feeding	2	each correct answer = 1 mark Accept burning Accept eating Ignore nutrition or taking in nutrients

Question	Answer	Marks	Further Information
5(a)	displacement	1	Ignore chemical
5(b)	copper magnesium sulfate	2	each correct answer = 1 mark Note answers can be given in either order
5(c)	zinc is less reactive than magnesium	1	Accept ora Accept zinc is lower down the reactivity series than magnesium

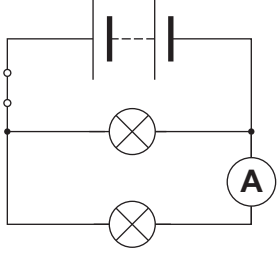
Question	Answer	Marks	Further Information
6(a)		2	labelling of x-axis and labelling of y-axis = 1 mark all points correctly plotted $\pm \frac{1}{2}$ small square = 1 mark Accept plots with small x, dot, or dot with circle
6(b)	point at (38, 2.6) circled	1	Accept any indication of anomalous plot, e.g. circle on table of results, but answer on graph takes precedence Accept ecf on plotting from part (a)
6(c)		1	Accept ecf on plotting from part (a) Accept ecf on plotting from part (b) Do not accept dot to dot Note line of best fit judged by eye and does not consider the anomalous result

Question	Answer	Marks	Further Information
7(a)	 <p>arrow drawn vertically from x-axis to the crest of waveform or arrow drawn vertically from x-axis to the trough of waveform</p>	1	
7(b)	high pitch sound has higher frequency (than low pitch sound)	1	Accept ora Accept the frequency decreases
7(c)	amplitude	1	

Question	Answer	Marks	Further Information
8	(idea that) these continents were once joined together (idea that) continents moved apart due to movement of plates or moved apart due to plate tectonics	2	each correct answer = 1 mark Accept (idea of) continental drift

Question	Answer	Marks	Further Information
9	D E (B) A C	2	DE in correct order = 1 mark AC in correct order = 1 mark

Question	Answer	Marks	Further Information
10(a)	decreases	1	
10(b)	98	1	Accept answers in the range 80–120

Question	Answer	Marks	Further Information
11(a)		3	<p>any complete circuit drawn with at least one component and no gaps = 1 mark</p> <p>correct symbol for a battery of cells and closed switch = 1 mark</p> <p>Do not accept open switch</p> <p>correct symbol for lamps in parallel and correct symbol for ammeter in series with one lamp = 1 mark</p> <p>Ignore junction of conductor symbols</p>
11(b)	in a series circuit the lamps are less bright	1	<p>Accept ora</p> <p>Note answer must be comparative</p>
Question	Answer	Marks	Further Information
12	<p>dust and gas</p> <p>stars</p>	3	<p>each correct answer = 1 mark</p> <p>Accept dust and gas in either order</p>

Question	Answer	Marks	Further Information								
13(a)	height or size or mass or fur colour	1	Accept fur thickness or antlers Ignore age								
13(b)	<table><tr><td>statement about natural selection</td><td>letter</td></tr><tr><td>Some adaptations are advantageous in one environment and not in another.</td><td>R</td></tr><tr><td>Genes controlling features which help survival pass into offspring.</td><td>S</td></tr><tr><td>Individuals with adaptations less advantageous to the environment die before they reproduce.</td><td>R</td></tr></table>	statement about natural selection	letter	Some adaptations are advantageous in one environment and not in another.	R	Genes controlling features which help survival pass into offspring.	S	Individuals with adaptations less advantageous to the environment die before they reproduce.	R	2	all three correct = 2 marks one or two correct = 1 mark
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Question	Answer	Marks	Further Information
14(a)	as the temperature increases the reaction time decreases	1	Accept ora
14(b)	<p>(prediction) as the concentration increases the reaction time decreases or as the concentration increases the rate increases</p> <p>(explanation) (as concentration increases) there are more particles per unit volume or particles are more crowded or particles are closer together</p> <p>more collisions</p>	3	<p>each correct answer = 1 mark</p> <p>Accept more particles in the same volume</p> <p>Accept more frequent collisions or more chance of collision or collisions more often or more collisions per second = 2 marks</p> <p>Do not accept particles have more energy or particles are moving faster</p> <p>Ignore references to successful collisions</p>

Question	Answer	Marks	Further Information
15	3 rd box ticked	1	<p>more than one box ticked = 0 marks</p> <p>Accept any indication of the correct answer, e.g. circling or underlining, but ticking takes precedence</p>

Question	Answer	Marks	Further Information
16	any two from sea levels rise or sea levels change flooding drought extreme weather events	2	each correct answer = 1 mark Accept other suitable impacts of climate change
Question	Answer	Marks	Further Information
17(a)	(materials) plastic and wood (explanation) less dense than water	2	each correct answer = 1 mark both materials needed either order for the mark Note explanation marking point is independent of materials
17(b)	1030 kg/m ³	1	more than one answer circled = 0 marks Accept any indication of the correct answer, e.g. ticking or underlining, but circling takes precedence
17(c)	37(.0) (cm ³)	1	