



Pearson
Edexcel

Mark Scheme (Results)

October 2021

Pearson Edexcel International Award
in Primary Science (JSC11) Paper 01
Year 6 Achievement Test

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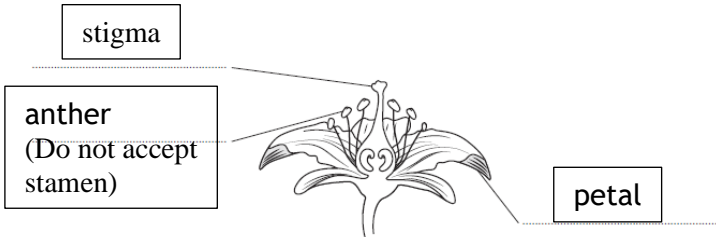
General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

SECTION A

Question number	Answer	Mark
1	<p>The only correct answer is A because a thermometer measures temperature</p> <p><i>B is incorrect because a stopwatch measures time</i> <i>C is incorrect because a ruler measures length</i> <i>D is incorrect because a balance measures mass</i></p>	1
2	<p>The only correct answer is C because the Moon reflects light</p> <p><i>A is incorrect because a light bulb is a light source</i> <i>B is incorrect because the lit match is a light source</i> <i>D is incorrect because the Sun is a light source</i></p>	1
3	<p>The only correct answer is B because an iron nail rusting is an irreversible change</p> <p><i>A is incorrect because an ice cube melting is a reversible change</i> <i>C is incorrect because sieving a mixture is a reversible change</i> <i>D is incorrect because dissolving salt in water is a reversible change</i></p>	1
4	<p>The only correct answer is B hyacinth because it has flowers and there are more than one on each stem</p> <p><i>A is incorrect because it has multiple flowers on each stem</i> <i>C is incorrect because it does have flowers</i> <i>D is incorrect because it does have flowers</i></p>	1
5	<p>The only correct answer is C because foxes eat rabbits, which eat grass</p> <p><i>A is incorrect because foxes eat rabbits, which eat grass</i> <i>B is incorrect because foxes eat rabbits, which eat grass</i> <i>D is incorrect because foxes eat rabbits, which eat grass</i></p>	1
6	<p>The only correct answer is C because the shoe has no tread on it</p> <p><i>A is incorrect because the shoe has tread on it</i> <i>B is incorrect because the shoe has tread on it</i> <i>D is incorrect because the shoe has spikes on it</i></p>	1

7	The only correct answer is D to protect the flower bud <i>A is incorrect because the sepal does not attract insects</i> <i>B is incorrect because the sepal does not make ova</i> <i>C is incorrect because the sepal does not make pollen</i>	1
8	The only correct answer is A Y lands first because it has the least air resistance <i>B is incorrect because the open parachute would increase air resistance</i> <i>C is incorrect because the force of gravity on the parcel is not affected by the status of the parachute</i> <i>D is incorrect because the force of gravity on the parcel is not affected by the status of the parachute</i>	1
9	The only correct answer is D bacteria, yeast, viruses are all micro-organisms <i>A is incorrect because birds and plants are not micro-organisms</i> <i>B is incorrect because animals are not micro-organisms</i> <i>C is incorrect because invertebrates are not micro-organisms</i>	1
10	The only correct answer is B as the bulb will be dimmest with one cell and a motor <i>A is incorrect because it has two cells powering one bulb and one motor</i> <i>C is incorrect because it has two cells powering only one bulb and no motor</i> <i>D is incorrect because it has one cell powering one bulb and no motor</i>	1

Question number	Acceptable answers	Additional guidance	Mark
11 (a)	any two of: absorb / take in water (1) absorb / take in nutrients (1) anchor the plant / holds the plant in the ground (1) store food (1)	Ignore support	2
11 (b)	Award one mark for each correct label <div style="text-align: center;">  </div>		3


		Total for question	5
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Question number	Answer	Mark
12	The only correct answer is B because bacteria cause decay <i>A is incorrect because animals do not cause decay</i> <i>C is incorrect because plants do not cause decay</i> <i>D is incorrect because rocks do not cause decay</i>	1
13	The only correct answer is D it (ice) melts in a warm room <i>A is incorrect because the ice will not condense</i> <i>B is incorrect because the ice does not dissolve</i> <i>C is incorrect because the ice will not freeze</i>	1
14	The only correct answer is C because the light from the television reflects from the mirror to the viewer's eye <i>A is incorrect because light travels in straight lines</i> <i>B is incorrect because the light does travel from the viewer's eye</i> <i>D is incorrect because light cannot pass through the wall</i>	1
15	The only correct answer is B because the flowers are colourful to attract insects and seedhead is sticky to attach to animals to be carried away <i>A is incorrect because the seedhead is not adapted to water seed dispersal</i> <i>C is incorrect because the flowers are colourful, so is not wind pollinated</i> <i>D is incorrect because the flowers are colourful, so is not wind pollinated</i>	1
16	The only correct answer is C because plants in Area A received more sunlight as they are not shaded by the tree. <i>A is incorrect because Area A would receive more water if it rained as the tree reduces the amount of water reaching the ground</i> <i>B is incorrect because the available nutrients would be absorbed by the tree</i> <i>D is incorrect because would Area B would receive less water if it rained as the tree reduces the amount of water reaching the ground</i>	1

17	The only correct answer is B because refrigerating food keeps it cool and lasts longer <i>A is incorrect because keeping it in a cupboard does not cool it</i> <i>C is incorrect because leaving it on a windowsill allow rapid decay</i> <i>D is incorrect because leaving it in fresh air will allow bacteria to grow</i>	1
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18	<p>The only correct answer is D because a streamlined shape reduces the effect of air and water resistance</p> <p><i>A is incorrect because its shape does not increase grip</i></p> <p><i>B is incorrect because the force of gravity is not changed by the shape of an object</i></p> <p><i>C is incorrect because a non-streamlined shape would move more slowly than a streamlined shape</i></p>	1
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Question number	Acceptable answers	Additional guidance	Mark
19	both <u>sugar</u> and <u>salt</u> dissolve (in the water)	<p>Accept they formed a solution</p> <p>Accept neither sugar or salt are insoluble (in water)</p>	1

Question number	Acceptable answers	Additional guidance	Mark
20a		<p>Components can be in any order</p> <p>2 marks for all four symbols + no errors in the wires e.g. no gaps and wires not going through the components, in a fully functioning circuit</p> <p>1 mark for three correct symbols in a circuit Ignore errors in the wires.</p>	2
20b	<p>copper is used as it is a conductor of electricity (1)</p> <p>plastic covering is an insulator / for safety / to prevent electrocution / to prevent electric shock (1)</p>	<p>Accept copper allows electricity to flow</p> <p>Accept doesn't allow electricity to flow</p>	2

Question number	Acceptable answers	Additional guidance	Mark
21 a		<p>If more than one box contains evaporation or condensation then do not award the mark</p> <p>Ignore <u>other</u> words in what should be empty boxes e.g. precipitation</p>	2
21 b	it cools down / cooling	Accept comes into contact with cool air OWTTE	1

Question number	Answer	Mark
22	<p>The only correct answer is B because X is a liquid, Y is a gas and Z is a solid</p> <p><i>A is incorrect because X is not a solid</i> <i>C is incorrect because X is not a gas</i> <i>D is incorrect because Y is not a solid</i></p>	1
23	<p>The only correct answer is C germination occurs when the seed first starts to sprout</p> <p><i>A is incorrect because fertilisation is when the ovule and pollen grain fuse</i> <i>B is incorrect because flowering is when the flowers open to attract insects</i> <i>D is incorrect because pollination is when a pollen grain transfers to the stigma</i></p>	1
24	<p>The only correct answer is A because colourless plastic is transparent</p> <p><i>B is incorrect because copper metal is opaque</i> <i>C is incorrect because white cloth is opaque</i> <i>D is incorrect because wood is opaque</i></p>	1

25	The only correct answer is D (frog) amphibian (snake) reptile (wolf) mammal <i>A is incorrect because a frog is not a reptile, nor is a snake an amphibian B is incorrect because a snake is not a mammal, nor is a wolf a reptile C is incorrect because a frog is not a mammal, nor is a wolf an amphibian</i>	1

Question number	Acceptable answers	Additional guidance	Mark
26 (a)	Circles drawn around: blood , heart and blood vessels	If more than three circles are drawn do not award the mark If fewer than three are circled do not award the mark	1
26 b)	award 2 marks for any two of the following because heart rate increases (1) because muscles (1) need more (blood carrying) oxygen / nutrients (1)	Ignore ref. to energy Accept heart beats or pumps faster or harder OR heart pumps more blood	2

Question number	Acceptable answers	Additional guidance	Mark
27a	Z		1
27b	thrust / lift / drag	Accept upthrust / air resistance / friction Ignore a letter (from 27a)	1
27c	Newtons	Accept N	1
		Total for question	3

Question number	Acceptable answers	Additional guidance	Mark
28	award two marks for a fully correct comparative statement e.g. the higher the temperature, the higher the final volume	Accept reverse argument Ignore restatement of numbers from the table e.g. at 4 °C it was 52 cm ³ , but at 34 °C it was 100 cm ³	2

	award one mark for a partially comparative statement e.g. the final value is higher at a high temperature OR when the temperature is high, the volume (of dough) is high.	Ignore any reference to rate or speed of rising (of the dough)	
		Total for question	2

Question number	Acceptable answers	Additional guidance	Mark
29	The salt is the solute (1) and the mixture is a solution (1)		2
		Total for question	3

Question number	Acceptable answers	Additional guidance	Mark
30	nearest to the Sun A D C furthest from the Sun B	All correct scores (1) mark	1
		Total for question	1

SECTION B

Question number	Acceptable answers	Additional guidance	Mark
31 (a)	temperature / amount of light / same type of sunflower seed / same number of seeds / same height of plant pot	Accept put them in the same place / same type of pot	1
31 (b)	to make the results more reliable	Accept in case seed does not grow or germinate Accept to check their results / to make sure they have the right results. Do not accept fair test / accuracy	1
31 (c)(i)	circle drawn around 250		1
31(c)(ii)	measured in millimetres (not centimetres)	Ignore used the wrong scale on the ruler / missed out decimal point / added a zero	1
31 (d)	21.5 (cm)		1
31 (e)	Circle drawn around: the bigger the pot the taller the plant grows		1
Total for question			5

Question number	Acceptable answers	Additional guidance	Mark
32(a)	B = Bunsen / burner C = weighing scale /(top pan) balance D = evaporating dish / evaporating basin	All three correct for 2 marks One or two correct for 1 mark Scale alone is not sufficient Ignore electric scale Ignore bowl unqualified	2
32 (b)	wear <u>safety glasses</u> / goggles	Ignore do not knock it over / keep away from the flame Accept use safety gloves	1
Total for question			3

Question number	Acceptable answers	Additional guidance	Mark												
33(a)(i)	distance (in) cm (1)	Accept how far it travelled in cm	1												
33(a)(ii)	<table border="1"> <thead> <tr> <th>Volume of air added in cm³</th> <th>distance in cm</th> </tr> </thead> <tbody> <tr> <td>50</td> <td>12</td> </tr> <tr> <td>100</td> <td>16</td> </tr> <tr> <td>150</td> <td>20</td> </tr> <tr> <td>200</td> <td>24</td> </tr> <tr> <td>250</td> <td>28</td> </tr> </tbody> </table> <p>results shown in numerical order, either ascending or descending (1) results linked correctly (1)</p>	Volume of air added in cm ³	distance in cm	50	12	100	16	150	20	200	24	250	28	Ignore units repeated in body of the table	2
Volume of air added in cm ³	distance in cm														
50	12														
100	16														
150	20														
200	24														
250	28														
33(b)(i)	correct point plotted at 200, 24 with an x	+ / - half a small square	1												
33(b)(ii)	one straight line drawn through all the points	Ignore extrapolation of the line UNLESS it changes direction, then do not award	1												
33(b)(iii)	correct answer from the candidate's graph, should be 32 (cm)	Must be read from the students graph	1												
Total for question			6												