



Mark Scheme (Results)

Summer 2023

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

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General Marking Guidance

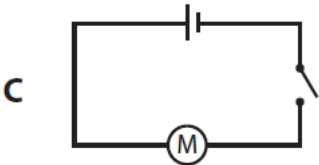
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should 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.

Mark scheme

Question number	Answer	Mark
1	<p>The only correct answer is C the leaf</p> <p><i>A is not correct because it is the flower</i> <i>B is not correct because it is the stem</i> <i>D is not correct because it is the root</i></p>	(1)

Question number	Answer	Mark
2	<p>The only correct answer is B there is an absence of light</p> <p><i>A is not correct darkness is not due to an absence of air</i> <i>C is not correct darkness is not due to an absence of movement</i> <i>D is not correct darkness is not due to an absence of sound</i></p>	(1)

Question number	Answer	Mark
3	<p>The only correct answer is B a heap of sand</p> <p><i>A – a block of concrete is not correct because it is not made up of very small particles that are free to flow</i> <i>C – a piece of plasticine is not correct because it is not made up of very small particles that are free to flow</i> <i>D – a piece of wood is not correct because it is not made up of very small particles that are free to flow</i></p>	(1)

Question number	Answer	Mark
4	<p>The only correct answer is C</p> <p>C</p>  <p><i>A is not correct because this circuit contains a bulb</i> <i>B is not correct because this circuit contains a buzzer</i> <i>D is not correct because this circuit has two switches and no motor</i></p>	(1)

Question number	Answer	Mark
5	<p>The only correct answer is D invertebrate Z</p> <p><i>A is not correct because the invertebrate has legs</i></p> <p><i>B is not correct because the invertebrate does have eight legs and a body made up of two sections</i></p> <p><i>C is not correct because the invertebrate has more than six legs</i></p>	(1)

Question number	Answer	Mark
6	<p>The only correct answer is A bread cooking and wood burning</p> <p><i>B is not correct because ice melting is a reversible change</i></p> <p><i>C is not correct because water boiling is a reversible change</i></p> <p><i>D is not correct because ice melting and water boiling are reversible changes</i></p>	(1)

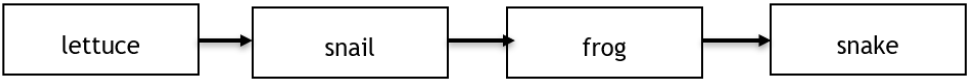
Question number	Answer	Mark
7	<p>The only correct answer is A candle star torch</p> <p><i>B is not correct because the moon is not a source of light</i></p> <p><i>C is not correct because a mirror and the moon are not sources of light</i></p> <p><i>D is not correct because a mirror is not a source of light</i></p>	(1)

Question number	Answer	Mark
8	<p>The only correct answer is D a radio</p> <p><i>A is not correct because electricity is used in a fan to produce movement</i></p> <p><i>B is not correct because electricity is used in a kettle to heat water</i></p> <p><i>C is not correct because electricity is used in a lamp to produce light</i></p>	(1)

Question number	Answer	Mark
9	<p>The only correct answer is B the heart</p> <p><i>A is not correct because the brain does not pump blood.</i></p> <p><i>C is not correct because the lungs do not pump blood.</i></p> <p><i>D is not correct because the stomach does not pump blood.</i></p>	(1)

Question number	Answer	Mark
10 a(i)	<p>The only correct answer is A the forces are the same size and act in opposite directions</p> <p><i>B is not correct because the forces are the same size and act in opposite directions</i></p> <p><i>C is not correct because the forces are the same size and act in opposite directions</i></p> <p><i>D is not correct because the forces are the same size and act in opposite directions</i></p>	(1)

Question number	Answer	Additional guidance	Mark
10 a(ii)	<p>Force A air resistance (1)</p> <p>Force B weight/gravity (1)</p>	Allow upthrust, friction	(2)

Question number	Answer	Mark
11	 <pre> graph LR lettuce[lettuce] --> snail[snail] snail --> frog[frog] frog --> snake[snake] </pre> <p>Award 2 marks for all 4 organisms in the correct order</p> <p>Award 1 mark for 2 or 3 consecutive organisms in the correct order, or if all 4 in complete reverse order</p>	(2)

Question number	Answer	Mark
12	<p>The sun is heating the sea, producing water vapour.</p> <p>The water vapour is rising into the atmosphere, cooling and condensing to form clouds</p> <p>Both correct for one mark</p>	(1)

Question number	Answer	Mark
13	<p>The only correct answer is D: N</p> <p><i>A is not correct because cm is the symbol for the unit of length</i></p> <p><i>B is not correct because °C is the symbol for the unit of temperature</i></p> <p><i>C is not correct because kg is the symbol for the unit of mass.</i></p>	(1)

Question number	Answer	Mark
14	<p>The only correct answer is B light and water</p> <p><i>A is not correct because plants require light and water to grow well</i></p> <p><i>C is not correct because plants require light and water to grow well</i></p> <p><i>D is not correct because plants require light and water to grow well</i></p>	(1)

Question number	Answer	Mark
15	<p>The only correct answer is B there is a change of state and no new substance is formed</p> <p><i>A is not correct because although there is a change of state a new substance is not formed</i></p> <p><i>C is not correct because there is no change of state and a new substance is not formed</i></p> <p><i>D is not correct because there is no change of state and a new substance is not formed</i></p>	(1)

Question number	Answer	Mark
16	<p>The only correct answer is B oxygen nitrogen carbon dioxide</p> <p><i>A is not correct because soil is not a gas</i></p> <p><i>C is not correct because soil and sand are not gases</i></p> <p><i>D is not correct because sand is not a gas</i></p>	(1)

Question number	Answer	Mark
17	<p>The only correct answer is A breathing</p> <p><i>B is not correct because circulation does not involve ventilation</i></p> <p><i>C is not correct because fertilisation does not involve ventilation</i></p> <p><i>D is not correct because respiration does not involve ventilation</i></p>	(1)

Question number	Answer	Mark
18	<p>The only correct answer is B water has evaporated</p> <p><i>A is not correct because water evaporates in a warm room and does not condense</i></p> <p><i>C is not correct because water evaporates in a warm room and does not melt</i></p> <p><i>D is not correct because water evaporates in a warm room and does not freeze</i></p>	(1)

Question number	Answer	Mark
19	<p>Award 2 marks for all three correct Award 1 mark for one or two correct</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 30%;"> <p>Substance</p> <p>A</p> <p>B</p> <p>C</p> </div> <div style="width: 65%;"> <p>Conclusion from the graph</p> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px; margin-bottom: 10px;"> as the temperature increases, the mass of the substance that dissolves increases and then decreases </div> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px; margin-bottom: 10px;"> as the temperature increases, the mass of the substance that dissolves always increases </div> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px; margin-bottom: 10px;"> as the temperature increases, the mass of the substance that dissolves stays the same </div> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px;"> as the temperature increases, the mass of the substance that dissolves always decreases </div> </div> </div> <p style="margin-top: 20px;">Do not award marks for more than one line drawn from or to a box</p>	(2)

Question number	Answer	Additional guidance	Mark
20 (a)	<p>One from</p> <p>(suitable) temperature/warmth (1)</p> <p>oxygen/air (1)</p>	Ignore sunlight	(1)

20 (b)	access water/minerals/anchor or stabilise the plant OWTTE		(1)
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Question number	Answer	Additional guidance	Mark
21	<p>(spikes) improve the grip to the running surface/stops athlete slipping (1)</p> <p>because spikes increase friction (between shoe and running surface) (1)</p>	<p>Allow spikes dig into ground</p> <p>Ignore stop athletes falling over</p>	(2)

Question number	Answer	Additional guidance	Mark
22a	<p>Award one mark for each of the following up to a maximum of two marks</p> <p><u>coloured/bright</u> petals (1)</p> <p>scent/perfume (1)</p> <p><u>sticky</u> stigma (1)</p> <p>sticky / rough / large pollen (1)</p> <p>nectar (1)</p> <p>stamens/anther/stigma/carpel inside the flower (1)</p>	<p>Allow coloured / bright flowers</p> <p>Ignore large</p> <p>Allow smell</p>	(2)

Question number	Answer	Additional guidance	Mark
22b	<p>Any one of the following</p> <p>large/long filament (1)</p> <p>hanging anther/stamen (1)</p> <p>long/large/feathery stigma (1)</p> <p>anther and filament in the 'open'/outside the flower (1)</p> <p>pollen light/smooth/small (1)</p>	Do not accept reference to petals	(1)

Question number	Answer	Mark
23	<p>The only correct answer is D sieving</p> <p><i>A is not correct because the equipment is used for sieving and not dissolving</i></p> <p><i>B is not correct because the equipment is used for sieving and not evaporating</i></p> <p><i>C is not correct because the equipment is used for sieving and not filtering</i></p>	(1)

Question number	Answer	Mark
24	<p>The only correct answer is A pulse rate decreases to the normal pulse rate</p> <p><i>B is not correct because after exercise the pulse rate will decrease and eventually return to a normal pulse rate.</i></p> <p><i>C is not correct because after exercise the pulse rate will decrease and eventually return to a normal pulse rate.</i></p> <p><i>D is not correct because after exercise the pulse rate will decrease and eventually return to a normal pulse rate</i></p>	(1)

Question number	Answer	Mark
25	<p>The only correct answer is B the voltage in circuit A is greater than the voltage in circuit B</p> <p><i>A is not correct because there has to be a voltage in order for the buzzer to operate in each circuit</i> <i>C is not correct because if the voltage in circuit A is less than circuit B the buzzer would be quieter</i> <i>D is not correct because when the voltages are the same the loudness would be the same since the buzzers are identical</i></p>	(1)

Question number	Answer	Mark
26	<p>The only correct answer is B have a backbone have dry scales are cold blooded</p> <p><i>A is not correct because reptiles do not have feathers</i> <i>C is not correct because not all reptiles live in water</i> <i>D is not correct because reptiles do not have fur</i></p>	(1)

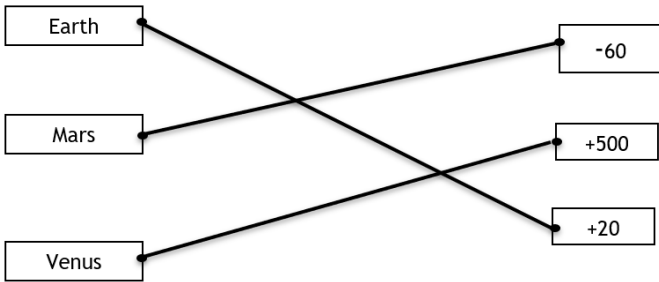
Question number	Answer	Additional Guidance	Mark
27	thorax/chest	Allow behind/inside the ribs Ignore respiratory /circulatory system Ignore lungs and heart	(1)

Question number	Answer	Mark										
28	<p>Both ticks must be correct</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Statement</th> <th style="width: 30%;">Tick (✓)</th> </tr> </thead> <tbody> <tr> <td>it has a streamlined shape to decrease water resistance</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>it has a rough surface to increase water resistance</td> <td></td> </tr> <tr> <td>it has a streamlined shape to increase water resistance</td> <td></td> </tr> <tr> <td>it has a smooth surface to decrease water resistance</td> <td style="text-align: center;">✓</td> </tr> </tbody> </table> <p>Do not award mark if more than two boxes ticked</p>	Statement	Tick (✓)	it has a streamlined shape to decrease water resistance	✓	it has a rough surface to increase water resistance		it has a streamlined shape to increase water resistance		it has a smooth surface to decrease water resistance	✓	(1)
Statement	Tick (✓)											
it has a streamlined shape to decrease water resistance	✓											
it has a rough surface to increase water resistance												
it has a streamlined shape to increase water resistance												
it has a smooth surface to decrease water resistance	✓											

Question number	Answer	Mark
29(a)	style	(1)

Question number	Answer	Additional Information	Mark
29(b)	ovules/ova	Accept seeds or egg cells Do not accept ovary Ignore egg unqualified	(1)

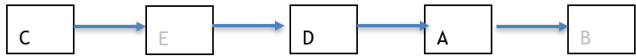
Question number	Answer	Mark
30	<p>Award 1 mark for each of the following up to a maximum of 2 marks</p> <p>The process involves a change that is reversible (1)</p> <p>The salt disappears because the salt is dissolving in the water (1)</p>	(2)

Question number	Answer	Mark
31(a)	<p>Award 2 marks for all three correct Award 1 mark for one or two correct</p>  <p>Do not award marks for more than one line drawn from or to each box</p>	(2)

Question number	Answer	Mark
31(b)	Any value greater than 2900 million (kilometres) (1)	(1)

Question number	Answer	Additional guidance	Mark
32	<p>the hooks (on the spines of the seed) attach to animal fur (1)</p> <p>(animals) move the seed to another area/seed falls off (animal) in another area (in an environment) (1)</p>	<p>Ignore references to spitting/defecating out the seed in a new area</p> <p>Allow idea of falls off in a new place</p> <p>Do not accept insects for (moved by) animals</p>	(2)

SECTION B

Question number	Answer	Mark
33(a)	<p>Award 2 marks for all three letters in the correct place</p>  <p>Award 1 for one letter in the correct place</p>	(2)

Question number	Answer	Additional guidance	Mark
33(b)	(volume of acid) is a control/to make it a fair test	<p>Allow type of acid is the variable being tested</p> <p>Do not accept reliable or accurate</p>	(1)

Question number	Answer	Additional guidance	Mark
33(c)	the investigation is repeated (1) to improve the reliability (of the investigation results) (1)	Allow to check the results Ignore to get the correct results Allow to obtain an average/mean Ignore fair test Do not accept accurate	(2)

Question number	Answer	Additional guidance	Mark
34a (i)	(metre) ruler	Measuring tape Ignore measuring stick	(1)

Question number	Answer	Additional guidance	Mark
34a (ii)	Any 1 from: measure to the same part (named) of the ball when it bounced (1) hold the bottom of the ball at 100 cm above the ground (1)	Allow step 3,	(1)

Question number	Answer	Additional guidance	Mark
34b (i)	bar drawn at 26.0 +/- ½ small square	Ignore width and position Do not accept if it touches any other bar	(1)

Question number	Answer	Additional guidance	Mark
34b (ii)	<p>M1 the hotter the ball ORA (1)</p> <p>M2 the higher the ball bounces ORA (1)</p> <p>OWTTE</p>	<p>For 2 marks M2 must be correctly linked to M1</p> <p>Award two marks for a correct temperature/bounce relationship</p> <p>one mark for simply comparing any two bounces of the balls correctly.</p>	(2)

Question number	Answer	Additional guidance	Mark
35(a)	5 (cm ³)		(1)

Question number	Answer	Additional guidance	Mark
35(b)	<p>results show greater number of woodlice are found in wet environment (1)</p> <p>this happens in each dish OWTTE (1)</p>	<p>Ignore restatement of the results</p> <p>Allow 12 found in the wet, 3 in the dry or a ratio of 4:1 for wet:dry</p> <p>Allow always or in every dish or 'total' if they have combined the results of all 3 dishes</p>	(2)

Question number	Answer	Additional guidance	Mark
35(c)	One from wash hands (with soap and water) (1) wash surfaces with antibacterial solution/disinfectant (1)	Allow any other reasonable response Ignore wear gloves /tie hair back / goggles	(1)

Question number	Answer	Mark												
35(d)	<p>All three ticks correct for one mark</p> <table border="1"> <thead> <tr> <th>Scientific Question</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Do woodlice prefer a dark or a light environment?</td> <td>✓</td> <td></td> </tr> <tr> <td>Do woodlice prefer a cold or a warm environment?</td> <td>✓</td> <td></td> </tr> <tr> <td>Do woodlice prefer a rough or a smooth surface?</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Scientific Question	Yes	No	Do woodlice prefer a dark or a light environment?	✓		Do woodlice prefer a cold or a warm environment?	✓		Do woodlice prefer a rough or a smooth surface?	✓		(1)
Scientific Question	Yes	No												
Do woodlice prefer a dark or a light environment?	✓													
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Do woodlice prefer a rough or a smooth surface?	✓													

