



Mark Scheme (Results)

Summer 2018

Pearson Edexcel International
Primary Curriculum
In Science (JSC01) 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 D</p> <p><i>A is incorrect because it is not cooling, it is warming</i></p> <p><i>B is incorrect because it is not turning into a gas</i></p> <p><i>C is incorrect because it is melting not freezing</i></p>	(1)
2	<p>The only correct answer is C</p> <p><i>A is incorrect because binoculars are not used to look at microorganisms, they are too small</i></p> <p><i>B is incorrect because a camera does not have the magnification required</i></p> <p><i>D is incorrect because a telescope looks at the stars etc</i></p>	(1)
3	<p>The only correct answer is C</p> <p><i>A is incorrect because it is a reflector of light not a source</i></p> <p><i>B is incorrect because it is a reflector of light not a source</i></p> <p><i>D is incorrect because it is a piece of equipment</i></p>	(1)
4	<p>The only correct answer is D</p> <p><i>A is incorrect because a flower is involved in reproduction</i></p> <p><i>B is incorrect because a stem is for support</i></p> <p><i>C is incorrect because a leaf photosynthesises</i></p>	(1)
5	<p>The only correct answer is B</p> <p><i>A is incorrect because opaque means to block light</i></p> <p><i>C is incorrect because opaque means to block light</i></p> <p><i>D is incorrect because opaque means to block light</i></p>	(1)
6	<p>The only correct answer is A</p> <p><i>B is incorrect because ice is colder than 0°C</i></p> <p><i>C is incorrect because raindrops would be outside</i></p> <p><i>D is incorrect because smoke is not water</i></p>	(1)

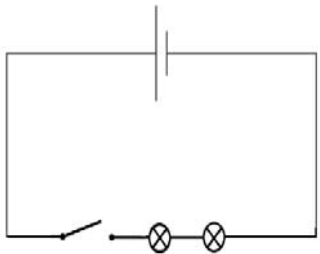
Question number	Answer	Mark
7	<p>The only correct answer is D</p> <p><i>A is incorrect because worms like moist aerated soil</i></p> <p><i>B is incorrect because worms like moist aerated soil</i></p> <p><i>C is incorrect because worms like moist aerated soil</i></p>	(1)
8	<p>The only correct answer is C</p> <p><i>A is incorrect because an insulator is required for safety</i></p> <p><i>B is incorrect because an insulator is required for safety</i></p> <p><i>D is incorrect because an insulator is required for safety</i></p>	(1)

Question number	Acceptable answers	Additional guidance	Mark																
9 (a)	burn(s)/burning	IGNORE injure/harm /damage IGNORE parts of the body, clothing etc IGNORE references to getting (too) hot	(1)																
9 (b)	<table border="1"> <thead> <tr> <th></th> <th>Name of change</th> <th>Is the change reversible? Write yes or no.</th> <th>Is a new material made? Write yes or no.</th> </tr> </thead> <tbody> <tr> <td>log fire</td> <td>burning</td> <td>(no)</td> <td>yes</td> </tr> <tr> <td>bread in a hot oven</td> <td>(baking)</td> <td>no</td> <td>yes</td> </tr> <tr> <td>wax dripping from a candle</td> <td>(melting)</td> <td>yes</td> <td>no</td> </tr> </tbody> </table>		Name of change	Is the change reversible? Write yes or no.	Is a new material made? Write yes or no.	log fire	burning	(no)	yes	bread in a hot oven	(baking)	no	yes	wax dripping from a candle	(melting)	yes	no	One mark per fully correct row ACCEPT ticks or crosses ALLOW burn(s) /burnt	(3)
	Name of change	Is the change reversible? Write yes or no.	Is a new material made? Write yes or no.																
log fire	burning	(no)	yes																
bread in a hot oven	(baking)	no	yes																
wax dripping from a candle	(melting)	yes	no																
		Total for question	(4)																

Question number	Answer	Mark
10	<p>The only correct answer is B</p> <p><i>A is incorrect because adaptation is not a life process</i></p> <p><i>C is incorrect because filtration is not a life process</i></p> <p><i>D is incorrect because variation is not a life process</i></p>	(1)
11	<p>The only correct answer is C</p> <p><i>A is incorrect because yeast is a fungus</i></p> <p><i>B is incorrect because yeast is a fungus</i></p> <p><i>D is incorrect because yeast is a fungus</i></p>	(1)
12	<p>The only correct answer is B</p> <p><i>A is incorrect because when salt is added to water it dissolves not condenses</i></p> <p><i>C is incorrect because when salt is added to water it dissolves not evaporates</i></p> <p><i>D is incorrect because when salt is added to water it dissolves not melts</i></p>	(1)
13	<p>The only correct answer is D</p> <p><i>A is incorrect because change 1 needs heat</i></p> <p><i>B is incorrect because change 1 needs heat</i></p> <p><i>C is incorrect because change 1 needs heat</i></p>	(1)
14	<p>The only correct answer is A</p> <p><i>B is incorrect because it is a parallel circuit not a series circuit</i></p> <p><i>C is incorrect because it is a parallel circuit not a short circuit</i></p> <p><i>D is incorrect because it is a parallel circuit not a striped circuit</i></p>	(1)
15	<p>The only correct answer is A</p> <p><i>B is incorrect because it is a parallel circuit, so all bulbs light independently of the others</i></p> <p><i>C is incorrect because it is a parallel circuit, so all bulbs light independently of the others</i></p> <p><i>D is incorrect because it is a parallel circuit, so all bulbs light independently of the others</i></p>	(1)


Question number	Answer	Mark
16	<p>The only correct answer is B</p> <p><i>A is incorrect because disease is not helpful</i></p> <p><i>C is incorrect because food spoilage is not helpful</i></p> <p><i>D is incorrect because neither disease nor food spoilage are helpful</i></p>	(1)
17	<p>The only correct answer is D</p> <p><i>A is incorrect because light reflection makes an object look shiny</i></p> <p><i>B is incorrect because light reflection makes an object look shiny</i></p> <p><i>C is incorrect because light reflection makes an object look shiny</i></p>	(1)
18	<p>The only correct answer is D</p> <p><i>A is incorrect because air resistance does not act downwards</i></p> <p><i>B is incorrect because friction does not act downwards</i></p> <p><i>C is incorrect because upthrust does not act downwards</i></p>	(1)

Question number	Acceptable answers	Additional guidance	Mark
19		<p>All four substances correctly matched = 3 marks</p> <p>Three substances correctly matched = 2 marks</p> <p>One or two substances correctly matched = 1 mark</p> <p>If two lines coming from a Substance box on the left then no marks for that Substance</p>	(3)
		Total for question	(3)

Question number	Acceptable answers	Additional guidance	Mark
20 (a)	<p>two lamps drawn in series using the correct symbol and connected by wire (1)</p> <p>correct symbol for switch drawn (1)</p> <p>completely correct series circuit diagram drawn, no gaps (1)</p> 	<p>ALLOW freehand drawing of wires without use of ruler</p> <p>ALLOW an open or closed switch</p> <p>ALLOW in any type of circuit or an incomplete circuit, or as isolated symbol</p>	(3)
20 (b)	<p>add another cell(s) (1)</p> <p>just have bulb A in the circuit/only have one bulb (not two) (1)</p>	<p>ALLOW increase voltage/higher voltage cell</p> <p>ALLOW battery for cell throughout</p> <p>ACCEPT remove bulb B/remove the other bulb/remove a bulb</p> <p>ALLOW lamp/light for bulb throughout</p> <p>ALLOW put bulbs in parallel</p> <p>ALLOW use thicker wire(s)</p> <p>ALLOW use shorter wire(s)</p> <p>IGNORE anything to do with switch</p>	(2)
Total for question			(5)

Question number	Answer	Mark
21	<p>The only correct answer is B</p> <p><i>A is incorrect because only clay soil would leave finger imprints</i></p> <p><i>C is incorrect because only clay soil would leave finger imprints</i></p> <p><i>D is incorrect because only clay soil would leave finger imprints</i></p>	(1)
22	<p>The only correct answer is C</p> <p><i>A is incorrect because the salt dissolves in the water and passes through filter paper</i></p> <p><i>B is incorrect because the salt dissolves in the water and passes through filter paper</i></p> <p><i>D is incorrect because sand does not dissolve in water and so remains in the filter paper</i></p>	(1)
23	<p>The only correct answer is D</p> <p><i>A is incorrect because there are only 3 on the dry side</i></p> <p><i>B is incorrect because there are only 3 on the dry side</i></p> <p><i>C is incorrect because there are only 2 in the tube</i></p>	(1)
24	<p>The only correct answer is D</p> <p><i>A is incorrect because the pictures show differences in the plant which is variation not excretion</i></p> <p><i>B is incorrect because the pictures show differences in the plant which is variation not nutrition</i></p> <p><i>C is incorrect because the pictures show differences in the plant which is variation not reproduction</i></p>	(1)
25	<p>The only correct answer is C</p> <p><i>A is incorrect because an ammeter measures current</i></p> <p><i>B is incorrect because a flow of electricity is not called a battery</i></p> <p><i>D is incorrect because a flow of electricity is not called a voltage</i></p>	(1)

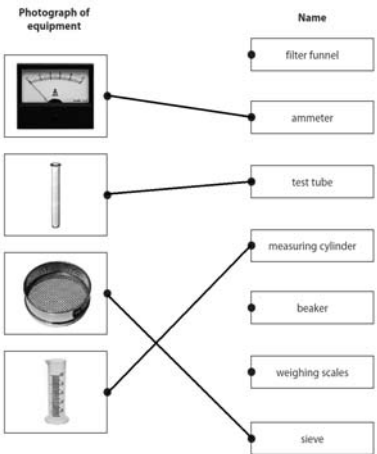
Question number	Answer	Mark
26	<p>The only correct answer is D</p> <p><i>A is incorrect because she collected 7 cm³ with salt</i></p> <p><i>B is incorrect because she collected 7 cm³ with salt</i></p> <p><i>C is incorrect because she collected 7 cm³ with salt</i></p>	(1)
27	<p>The only correct answer is D</p> <p><i>A is incorrect because the same volume was used each time</i></p> <p><i>B is incorrect because increasing temperature decreases the time</i></p> <p><i>C is incorrect because the same volume was used each time</i></p>	(1)
28	<p>The only correct answer is B</p> <p><i>A is incorrect because repeating his results would have no effect</i></p> <p><i>C is incorrect because using bigger cubes of sugar would give longer times</i></p> <p><i>D is incorrect because using a heavier beaker would have no effect</i></p>	(1)

Question number	Acceptable answers	Additional guidance	Mark
29	 <p>line drawn from Sun to book and from book to eye (1)</p> <p>arrows correctly shown pointing from Sun to book and pointing from book to eye (1)</p>	<p>IGNORE angle of reflection</p> <p>ALLOW lines drawn freehand without use of ruler</p>	(2)
Total for question			(2)

Question number	Acceptable answers	Additional guidance	Mark
30 (a)	habitat		(1)
30 (b)	<p>(snowshoe) hare in centre of food chain (1)</p> <p>other two organisms placed one either side AND correct arrows for chosen placement (1)</p> <p>e.g. (snowshoe) plant(s) → hare → lynx</p> <p>(snowshoe) lynx ← hare ← plant(s)</p>	<p>ALLOW just hare / snowshoe but not rabbit</p> <p>Allow left to right, right to left, or up/down/diagonal positioning second mark dependent on first mark having been scored</p> <p>ACCEPT (big) cat(s) for lynx</p> <p>ALLOW recognisable drawings</p>	(2)
30 (c)	<p>An answer that includes any three pairs (F AND P) of the following:</p> <p>F1 <u>white/light</u> fur</p> <p>P1 for camouflage (in snow) OR to hide from predator (1)</p> <p>F2 <u>thick</u> fur</p> <p>P2 insulates/less heat loss (1)</p> <p>F3 big/large (back) <u>feet/paws</u></p> <p>P3 to stop sinking in snow/ice OR to dig through snow to get to plants (1)</p> <p>F4 big/large/strong (back) <u>legs</u></p> <p>P4 to run/escape <u>fast/quickly</u> OR to run/escape <u>from predator</u> (1)</p> <p>F5 eyes at <u>side(s)</u> of head</p> <p>P5 gives <u>all-round/wider</u> view OR see <u>more</u> (area) OR see <u>predator</u> coming/sooner (1)</p>	<p>Each feature (F) must have a matching purpose (P)</p> <p>Allow <u>lynx</u> or (big) <u>cat</u> instead of predator</p> <p>IGNORE skin ALLOW big fur / long fur / large fur Allow 'keep warm' here</p> <p>ALLOW to be able to walk over snow/ice</p> <p>ALLOW lynx or (big) cat instead of predator</p>	(3)

	<p>F6 body (high) above snow</p> <p>P6 reduces heat loss (to snow) (1)</p> <p>F7 small ears/tail</p> <p>P7 reduces heat loss (1)</p> <p>OR</p> <p>F7 large ears</p> <p>P7 to hear predator (1)</p>	<p>ALLOW <u>lynx</u> or (big) <u>cat</u> instead of predator</p> <p>IF NO MARKS have been awarded ALLOW 1 mark for any 2 correct features with no purpose/incorrect purpose</p>	
		Total for question	(6)

SECTION B

Question number	Acceptable answers	Additional guidance	Mark
31 (a) (i)	1	If more than one number given scores 0	(1)
31 (a) (ii)	3 4	(1) (1) Mark each box independently – answers in either order If more than two numbers given deduct one mark for each incorrect answer. e.g. 1,3,4 scores 1 mark. e.g. 1,2,3,4 scores 0	(2)
31 (b)	<p>Photograph of equipment</p>  <p>Name</p> <ul style="list-style-type: none"> filter funnel ammeter test tube measuring cylinder beaker weighing scales sieve 	<p>All four correctly matched = 2 marks</p> <p>Two or three correctly matched = 1 mark</p> <p>No marks for fewer than two correct</p> <p>If two lines coming from a photograph of equipment box on the left then no marks for that piece of equipment</p>	(2)
		Total for question	(5)

Question number	Acceptable answers	Additional guidance	Mark
32 (a)	<p>An answer that includes any two of the following:</p> <ul style="list-style-type: none"> - (same type of/size/folds in) paper (1) - (drop from same) height (1) - (same type of/mass) paper clip(s) (1) - (use the same) timer (1) - start it/spinner same way up (1) - let it/spinner go with same/without force (1) 	<p>ALLOW (same) number of wings / size of wing / (size) spinner</p> <p>ALLOW drop from same (high) place</p> <p>ALLOW (same) position of paper clip IGNORE number of paper clips</p> <p>ALLOW this as meaning person or instrument ALLOW start timing at the moment of release of spinner each time</p> <p>IGNORE let it go the same way unqualified</p>	(2)
32 (b)(i)	6 circled	If more than one number circled scores 0	(1)
32 (b)(ii)	the <u>greater</u> the number of paper clips, the <u>shorter</u> the time (taken to reach the floor)	<p>comparative needed</p> <p>ALLOW reverse argument i.e. the <u>smaller</u> the number of paper clips, the <u>longer</u> the time (taken to reach the floor)</p> <p>ALLOW the <u>greater</u> the number of paper clips the faster the spinner falls or reverse argument</p>	(1)
32 (c)(i)	it would fall <u>quicker</u> / <u>faster</u>	<p>ALLOW it would fall <u>too</u> quickly/fast (to time)</p> <p>ALLOW time would be less than 2 seconds / time could be 1 second /less than 1 second /time would be too short to record</p> <p>ALLOW correct references to wings would not (stay) open / wings would fold/close</p>	(1)

32 (c) (ii)	<p>an answer that includes any one of the following:</p> <ul style="list-style-type: none"> - use a more accurate timer/stopwatch (1) - drop spinners from greater height (1) - use paper clips of less mass (1) - use spinner with more wings or use larger spinner (1) 	<p>Creditworthy answers may refer to <i>accuracy or precision</i> and relate to details of timing or ways of slowing spinner down to make fall times longer</p> <p>ACCEPT record time to fractions/decimals of a second ACCEPT use a timer/stopwatch with fractions/decimals of seconds</p> <p>ALLOW use lighter/smaller paper clips</p> <p>IGNORE references to repeats or other means of improving <i>reliability</i></p>	(1)
Total for question			(6)

Question number	Acceptable answers	Additional guidance	Mark
33	<p><u>First two marks (plotting):</u></p> <p>All four bars correct height and same width (2)</p> <p><u>Third mark (bar labels):</u></p> <p>all bars correctly labelled with whale names (1)</p> <p><u>Fourth mark (y axis label):</u></p> <p>y axis correctly labelled with (average) length (of whale) <u>and unit</u> m (1)</p>	<p>minimum width five small squares</p> <p>two or three bars correct height (ignoring width) scores 1 mark</p> <p>ALLOW bars touching or gaps between them</p> <p>If bars not drawn allow 1 mark for all four points plotted correctly</p> <p>mark independently ignoring bar heights and widths</p> <p>ignore x axis labelling</p>	(4)
Total for question			(4)

