

SCIENCE

1113/02

Paper 2

October 2015

FINAL MARK SCHEME

Maximum Mark: 50

IMPORTANT NOTICE

Mark Schemes have been issued on the basis of one copy per Assistant examiner and two copies per Team Leader.

Question number	Mark	Answer	Further Information
(a)	1	A	
(b)	1	A	
Total	2		

This document consists of 8 printed pages.

Question number	1	CSS00330	
Part	Mark	Answer	Further information
(a)	1	cactus and sage bush	both correct answers needed for the mark any order
(b)	1	hawk, scorpion and snake	all three needed for the mark any order
(c)	2	increase There are fewer foxes eating them / fewer of them are being eaten	decrease = 0 marks for the question
(d)	2	cactus → insect → lizard → scorpion → hawk or cactus → insect → lizard → snake → fox	five organisms in correct order = 1 mark arrows pointing correctly in any correct chain = 1 mark
Total	6		

Question number	2	CSS00362	
Part	Mark	Answer	Further Information
(a)	1	condensation diffusion fermentation neutralisation	more than one answer circled = 0 marks.
(b)	2	<p>The particles are already too far apart. <input type="checkbox"/></p> <p>The particles in a solid do not move around. <input checked="" type="checkbox"/></p> <p>Solids have a fixed shape. <input checked="" type="checkbox"/></p> <p>Solids can only take on the shape of a container. <input type="checkbox"/></p> <p>The pressure in a solid is too great. <input type="checkbox"/></p>	<p>each correct tick = 1 mark</p> <p>if three ticks and two correct = 1 mark</p> <p>if three ticks and one correct = 0 marks</p> <p>if four or five ticks = 0 marks</p>
(c)	1	A melting B evaporating / boiling	both needed for 1 mark
Total	4		

Question number	3	CSS00448	
Part	Mark	Answer	Further Information
(a)	1	A	
(b)	1	A	
Total	2		

Question number	4	CSS00243	
Part	Mark	Answer	Further Information
(a)	3	<p>number of bubbles in one minute</p> <p>distance / cm</p>	<p>correct plots for 25 cm and 30 cm = 1 mark</p> <p>correct plot for 20 cm = 1 mark</p> <p>Accept plots to within half a square</p> <p>smooth curve through all points including anomalous point</p> <p>or</p> <p>smooth curve through all points but ignoring anomalous point = 1 mark</p> <p>Do not allow dot to dot for smooth curve mark</p>
(b)	2	<p>The result that may be wrong is the one for a distance of 25 cm</p> <p>This is because (idea that) it is not on the same curve / not in the same pattern as others</p>	
(c)	2	<p>As the water plant is moved away from the lamp the amount of light on it reduces / decreases / gets dimmer</p> <p>This makes the rate of photosynthesis decrease / reduce</p>	Accept slower
Total	7		

Question number	5	CSS00054_A	
Part	Mark	Answer	Further Information
(a)	1	fluorine and neon	Accept F and Ne. both required for the mark, either order
(b)	1	sulfur	Accept S, sulphur
(c)	1	sodium	Accept Na
(d)	1	sulfur and neon	both required for the mark, either order Accept S and Ne, Accept sulphur
(e)	1	sodium and sulfur	Accept Na, sulphur or S both answers required for the mark, either order
Total	5		

Question number	6	CSS00302	
Part	Mark	Answer	Further Information
(a)	2	meters / metres / distance tape measure / trundle wheel	each correct part = 1 mark
(b)	2	Any two from to see if the results are consistent to work out an average time or speed improves the reliability of the results	Accept to compare results Accept to see the effect of fatigue / see the effect of training any two correct ideas = 2 marks one correct idea = 1 mark
Total	4		

Question number	7	CSS00355	
Part	Mark	Answer	Further Information
(a)	1	egg / ovum / ova / female gamete / female sex cell	
(b) (i)	1	(Idea of) breeding brown with the same colour	Accept use a brown male
(ii)	1	(Idea that) can inherit brown information from both parents (not just one)	Accept (idea that) this eliminates the black characteristic
Total	3		

Question number	8	CSS00327	
Part	Mark	Answer	Further Information
	3	Any three from (same) temperature (same) mass or amount of zinc (same) concentration (of acid) (same) volume of acid (same) state of zinc / zinc powder / zinc lumps	
Total	3		

Question number	9	CSS00398	
Part	Mark	Answer	Further Information
(a)	1	A and B A and C B and D C and D	more than one answer circled = 0 marks
(b)	1	Sound cannot travel in a vacuum because it can only travel when there are particles .	Accept matter / molecules / atoms / material / medium / solid, liquid and gas
Total	2		

Question number	10	CSS00356	
Part	Mark	Answer	Further Information
	2	The flies pick up the pollen produced by the anther and carry it to the stigma .	
Total	2		

Question number	11	CSS00326	
Part	Mark	Answer	Further Information
(a)	2	A, C and E they all conduct electricity	correct materials in any order = 1 mark explanation = 1 mark The explanation can be awarded providing one, two or all of the metals have been identified.
(b) (i)	1	hydrogen	Accept H ₂
(ii)	1	zinc sulfate	Accept ZnSO ₄ Do not accept zinc sulfide
Total	4		

Question number	12	CSS00188	
Part	Mark	Answer	Further Information
(a)	2	ammeter in series and correct symbol voltmeter connected in parallel across lamp and correct symbol	ammeter may be on either side of the lamp one mark for each correct answer
(b)	1	The current going into a junction in a circuit is equal to the current coming out of the junction.	
(c)	1	increases	Accept doubles
Total	4		

Question number	13	CSS00296	
Part	Mark	Answer	Further information
(a)	1	We can feel the heat of the Sun because of radiation .	
(b)	1	Metals transfer thermal (heat) energy using the process of conduction .	
Total	2		

Question number	14	CSS00301	
Part	Mark	Answer	Further information
(a)	1	6 (kilometres)	
(b)	1	(idea that) the line has different gradients / steepness / slopes	Answer must refer to the shape of the graph or correct calculation of two speeds
Total	2		