

SCIENCE

1113/01

Paper 1

April 2016

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.

This document consists of 8 printed pages.

Question number			1	CSS00504	
Part	CF	Skill	Mark	Answer	Further Information
(a)	7Be2	A	2	cabbages (plants) slugs (load) snakes rooks	mark each pair of boxes independently two pairs correct = 2 marks one pair correct = 1 mark
(b)	7Be2	A	1	5	
(c)	9Be4	K	2	example e.g. bacteria / fungi / microorganisms / microbes why decays organic or waste matter / rots organic or waste matter / breaks down organic matter / breaks down waste (matter) / makes compost / provides minerals / provides (plant) nutrients	
Total			5		

Question number			2	CSS00270_A	
Part	CF	Skill	Mark	Answer	Further Information
(a) (i)	7Ce1	A	1	igneous	
(ii)	7Ce1	A	1	magma cooled slowly / took longer for the magma to cool	Accept reverse argument if specified
(b)	7Ce1	A	1	E	more than one answer = 0 mark
(c)	7Ce3	K	1	fossils	
Total			4		

Question number		3		CSS00411	
Part	CF	Skill	Mark	Answer	Further Information
(a)	7Pb2	K	1	orbit	
(b)	7Pb1	K	1	24 (hours)	
(c)	7Pb4	K	1	The Sun is a source of light.	
(d)	7Pb4	K	1	A planet is seen because light is reflected by its surface.	
Total			4		

Question number		4		CSS00613	
Part	CF	Skill	Mark	Answer	Further Information
(a)	8Bh12	K	1	growth of body hair / pubic hair	
(b) (i)	8Bh13	K	1	ovary	Accept ovaries
(b) (ii)	8Bh13	K	1	produce eggs / release eggs	Do not accept ovule
(c) (i)	8Bh13	K	1	prepare for implantation	The answer must refer to a fertilised egg, foetus, zygote or embryo
(c) (ii)	8Bh13	K	1	released as a period / menstruation / released as blood / passes out through the vagina	
Total			5		

Question number		5	CSS00445		
Part	CF	Skill	Mark	Answer	Further Information
(a)	7Ep2 8Pm3	E	1	Increasing the number of turns of wire around the iron rod will make the electromagnet stronger / the electromagnet pick up more objects.	
(b)	7Ep2 8Pm3	E	1	yes (no marks) use of two pieces of data to illustrate that she is correct / more turns picks up more paper clips	If no then = 0 marks for question Answer must specifically refer to turns and number of paper clips
(c)	8Ec4 8Pm3	E	1	(idea of) using a wider range of the number of turns / use 1, 3, 5, turns / use the same size paper clips / repeat each one / get an average value / use smaller paper clips	
Total			3		

Question number		6	CSS00383										
Part	CF	Skill	Mark	Answer	Further Information								
(a)	9Ec2 9Cc1	E	2	<table border="1"> <thead> <tr> <th>change in temperature in °C</th> <th>endothermic or exothermic reaction</th> </tr> </thead> <tbody> <tr> <td>(-4)</td> <td>endothermic</td> </tr> <tr> <td>(+4)</td> <td>exothermic</td> </tr> <tr> <td>-5</td> <td>endothermic</td> </tr> </tbody> </table>	change in temperature in °C	endothermic or exothermic reaction	(-4)	endothermic	(+4)	exothermic	-5	endothermic	left hand column = 1 mark, minus sign (-) must be present right hand column = 1 mark.
change in temperature in °C	endothermic or exothermic reaction												
(-4)	endothermic												
(+4)	exothermic												
-5	endothermic												
(b)	9Cc5	A	3	sodium chloride water carbon dioxide	one mark for each correct answer answers can be in any order								
Total			5										

Question number			7	CSS00498	
Part	CF	Skill	Mark	Answer	Further Information
(a) (i)	8Ec1 7Bc1	E	1	1.24 seconds	
(a) (ii)	8Ec1 7Bc1	E	1	0.31 seconds	
(a) (iii)	9Ec4 7Bc1	E	1	no because Oliver takes longer or not sure because their times are very similar	NOTE the mark is for the explanation. BUT No marks for Yes.
(b) (i)	8Ec4 7Bc1	E	2	anomalous = not fitting the pattern 4 th trial / 0.42 seconds	one mark for each correct point
(b) (ii)	9Eo1 7Bc1	E	1	do more repeats / more trials	
Total			6		

Question number		8		GSS00379		
Part	CF	Skill	Mark	Answer	Further information	
(a)	(I)	9Cp1	A	1	4	
	(II)	9Cp1	A	1	5	
(b)		8Cp2	K	1	Be	Do not accept BE or be
(c)		9Cp2	A	2	<p>Any two from</p> <p>different number of protons / less protons / fewer protons / has 3 protons / lower atomic number / atomic number is 3</p> <p>smaller number of particles in nucleus / smaller mass number / smaller nucleon number / 7 particles in nucleus / mass or nucleon number is 7</p> <p>different number of electrons / less electrons / fewer electrons / 3 electrons / lithium is 2, 1 / different electronic structure</p>	
(d)		9Cp1	K	1	Darwin Galileo Newton <u>Rutherford</u>	two answers = 0 marks
Total				6		

Question number			9	CSS00427	
Part	CF	Skill	Mark	Answer	Further Information
(a)	8PI3	A	1	C	
(b)	8PI3	K	1	<p>i is always larger than r</p> <p>i is always the same as r</p> <p>r is always larger than i</p> <p>r is sometimes larger than i</p>	more than one answer circled = 0 marks
Total			2		

Question number			10	CSS00178_A	
Part	CF	Skill	Mark	Answer	Further Information
	9P11	A	3	<p>force/area or $10/2$</p> <p>5</p> <p>N/cm^2 or N per cm^2</p>	correct numerical answer with incorrect units = 2 marks
Total			3		

[Turn over

Question number			11	CSS00350						
Part	CF	Skill	Mark	Answer	Further Information					
(a)	7Bv3	A	2	Any two from 6 legs 3 body sections / has head, thorax and abdomen wings (1 pair of) antennae	must be visible features					
(b) (i)	9Bv4	K	1	(Charles) Darwin						
(ii)	9Bv4	K	2	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>C</td> <td>D</td> <td>(A)</td> <td>B</td> </tr> </table>	C	D	(A)	B	C and D = 1 mark B = 1 mark	
C	D	(A)	B							
Total			5							

Question number			12	CSS00423		
Part	CF	Skill	Mark	Answer	Further Information	
(a)	8Ps1	K	1	The loud speaker vibrates .		
(b)	8Ps1	K	1	When air particles are close together it is called a compression .		
Total			2			