

**SCIENCE**

**1113/02**

**Paper 2**

**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.

Part	CP	Dist	Mark	Answer	Further Information
(a)	CP2	K	1	The pitch of sound is also called its frequency	
(b)	CP2	A	1	see	
<b>Total</b>			<b>2</b>		

This document consists of 8 printed pages.

Question number		1		CSS00431	
Part	CF	Skill	Mark	Answer	Further information
	8P16	A	2	A red B no light	
Total			2		

Question number		2		S_009_051_A	
Part	CF	Skill	Mark	Answer	Further information
(a) (i)	9Bp3	A	1	nectar / bright petals / coloured petals / large petals / scent / pollen	
(ii)	9Bp3	K	2	pollen from anther gets onto stigma	
(b) (i)	9Bp3	K	1	Any one from prevent overcrowding less competition (for light, water or nutrients)	
(ii)	9Bp3	A	2	method = wind reason = parachute / hairs / feathery	if method is incorrect = 0 marks for the question
Total			6		

Question number			3	CSS00361		
Part	CF	Skill	Mark	Answer	Further Information	
(a) (i)	8Ep6 8Cs1	E	1	go down / decrease		
(ii)	8Cs1	K	2	move closer together  particles slow down / move slower / particles have less energy		
(b) (i)	8Eo3 8Cs1	E	1	wear eye protection / gloves / don't hold the apparatus / put the apparatus in a clamp / safety screen / laboratory coat		
(ii)	8Eo3 8Cs1	E	1	(eye protection) = to prevent (hot) water going into eyes / to prevent glass going in your eyes  (gloves / don't hold the apparatus / put the apparatus in a clamp / laboratory coat) = to prevent burning / prevent hot water getting to the skin	a reason linked to the safety precaution related to the experiment in the question	
<b>Total</b>			<b>5</b>			

Question number			4	CSS00425		
Part	CF	Skill	Mark	Answer	Further Information	
(a)	8Ps2	K	1	The pitch of sound is also called its <b>frequency.</b>		
(b)	8Ps2	A	1	tuna		
<b>Total</b>			<b>2</b>			

Question number		5		CSS00163	
Part	CF	Skill	Mark	Answer	Further Information
(a)	7Bc2	A	1	(idea of) water loss	
(b)	7Bc2	A	2	Any two from from fungi in the air / by the wind from other rotten fruit direct contact (with other rotten fruit)	
(c)	7Bc2	A	2	Any two from (idea of) fridge is cold (idea of) limited access (to the fruits) / enclosed / spores unable to gain access no draughts	
<b>Total</b>			<b>5</b>		

Question number			6	CSS00453		
Part	CF	Skill	Mark	Answer		Further information
(a)	7Cs1	K	2	Liquids have no fixed shape.	<input checked="" type="checkbox"/>	each correct tick = 1 mark
				Liquids have no fixed volume.	<input type="checkbox"/>	three ticks and two correct = 1 mark
				Liquid particles only vibrate.	<input type="checkbox"/>	three ticks and one correct = 0 marks
				The particles in a liquid expand.	<input type="checkbox"/>	four or five ticks = 0 marks
				The particles in a liquid move around.	<input checked="" type="checkbox"/>	
(b) (i)	7Eo1 7Cs1	E	1	103		
(ii)	7Ec1 7Cs1	E	1	increases / goes up		
Total			4			

Question number			7	CSS00575		
Part	CF	Skill	Mark	Answer		Further Information
(a)	9Pe2	K	1	The main form of thermal (heat) energy transfer in liquids and gases is called <b>convection</b> .		
(b)	9Pe2	K	1	Thermal (heat) energy is transferred through a solid by <b>conduction</b> .		
(c)	9Pe2	K	1	Iron is a metal so it is a good <b>conductor</b> .		
(d)	9Pe2	K	1	<b>insulator</b>		
Total			4			

Question number			8	CSS00337		
Part	CF	Skill	Mark	Answer	Further Information	
(a)	7Ec1 8Bh11	E	1	As the number of cigarettes smoked each day during pregnancy increases, the birth mass of a baby <b>decreases</b> .		
(b)	8Bh11	A	1	give up smoking / reduce the number of cigarettes they smoke each day		
Total			2			

Question number			9	CSS00277		
Part	CF	Skill	Mark	Answer	Further Information	
(a)	8Cp2	K	1	Na	Do not accept NA / na / Na / Na	
(b)	8Cp1	K	2	Sodium conducts electricity. <input checked="" type="checkbox"/> Sodium does not conduct heat. <input type="checkbox"/> Sodium has a low boiling point. <input type="checkbox"/> Sodium is ductile. <input checked="" type="checkbox"/> Sodium is not malleable. <input type="checkbox"/>	each correct tick = 1 mark  three ticks and two correct = 1 mark  three ticks and one correct = 0 marks  four or five ticks = 0 marks	
(c)	(i)	9Cc2	K	1	hydrogen	
	(ii)	9Cp3	K	1	faster / greater / bigger / more / quicker	
Total			5			

Question number		10		CSS00444	
Part	CF	Skill	Mark	Answer	Further Information
(a)	7Ep4 7Pf1	E	2	force / newtons mass	
(b) (i)	7Ep5 7Pf1	E	1	the force needed to move the wooden block will be less (than with rougher surfaces)	
(ii)	7Ep5 7Pf1	E	1	(smoother surfaces have) less friction	
Total			4		

Question number		11		CSS00372	
Part	CF	Skill	Mark	Answer	Further Information
(a) (i)	9Cc2	K	1	potassium / K sodium / Na calcium / Ca	all three in any order = 1 mark  case must be correct if symbol written
(ii)	9Cc2	K	1	hydrogen	
(b)	9Cc4	A	2	aluminium and silver nitrate <input checked="" type="checkbox"/> calcium and zinc sulfate <input checked="" type="checkbox"/> copper and sodium chloride <input type="checkbox"/> lead and iron nitrate <input type="checkbox"/> tin and magnesium chloride <input type="checkbox"/>	each correct tick = 1 mark three ticks and two correct = 1 mark three ticks and one correct = 0 marks four or five ticks = 0 marks
Total			4		

Question number			12	CSS00558	
Part	CF	Skill	Mark	Answer	Further Information
(a)	8Pm1	A	2	they all <b>repel</b> each other  (idea that) the north poles are next to north poles / south poles are next to south poles / like poles are next to each other	
(b)	8Pm1	A	2	they all <b>attract</b> each other  (idea that) the north and south poles are next to each other / unlike poles are next to each other	
<b>Total</b>			<b>4</b>		

Question number			13	CSS00418	
Part	CF	Skill	Mark	Answer	Further Information
(a)	8Pf1	A	2	10/4 or distance/time  2.5 (in metres per hour)	
(b)	8Pf1	A	1	4 (hours)	
<b>Total</b>			<b>3</b>		