
SCIENCE

1113/01

Paper 1

October 2017

MARK SCHEME

Maximum Mark: 50

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Markers were instructed to award marks. It does not indicate the details of the discussions that took place at an Markers' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the End of Series Report. Cambridge will not enter into discussions about these mark schemes.

This document consists of **9** printed pages and **1** blank page.

Annotations and abbreviations

/ OR alternate responses for the same marking point

() the words or units in brackets do not need to be stated

Accept an acceptable response

Do not accept indicates an incorrect response that would contradict another otherwise correct alternative

Ignore indicates an irrelevant answer that is not creditworthy, however, full marks can still be achieved even with the answers that are ignored

ecf error carried forward, marks are awarded if an incorrect response has been carried forward from earlier working, provided the subsequent working is correct

ora or reverse argument

note provides extra information when necessary

Question	Answer	Marks	Further Information																					
1(a)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">structure</th> <th style="width: 30%;">found in plant cells</th> <th style="width: 30%;">found in animal cells</th> </tr> </thead> <tbody> <tr> <td>cell membrane</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>cell wall</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✗</td> </tr> <tr> <td>chloroplast</td> <td style="text-align: center;">(✓)</td> <td style="text-align: center;">(✗)</td> </tr> <tr> <td>cytoplasm</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>nucleus</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> <tr> <td>vacuole</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✗</td> </tr> </tbody> </table>	structure	found in plant cells	found in animal cells	cell membrane	✓	✓	cell wall	✓	✗	chloroplast	(✓)	(✗)	cytoplasm	✓	✓	nucleus	✓	✓	vacuole	✓	✗	2	each correct column = 1 mark assume a blank cell = ✗
structure	found in plant cells	found in animal cells																						
cell membrane	✓	✓																						
cell wall	✓	✗																						
chloroplast	(✓)	(✗)																						
cytoplasm	✓	✓																						
nucleus	✓	✓																						
vacuole	✓	✗																						
1(b)	<p>any two from</p> <p>absorb light (energy) for photosynthesis to make food / to make glucose / to make sugar / to make starch / to make oxygen</p>	2																						

Question	Answer	Marks	Further Information
2(a)	bumper / fender and tyres	1	both answers needed Accept polymers and rubber or air
2(b)	ductile magnetic sonorous strong	1	more than one answer circled = 0 marks
2(c)	ductile magnetic sonorous strong	1	more than one answer circled = 0 marks
2(d)	rusts slowly / does not rust	1	ora e.g. iron rusts Accept corrode / corrosion instead of rusting Accept stronger / harder
2(e)	lets light through	1	Accept you can see through it

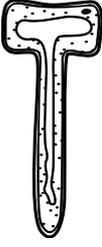
Question	Answer	Marks	Further Information
3	<p>When these three primary colours are added together it makes white light.</p> <p>This light contains red light, green light and blue light.</p> <p>The yellow paper reflects the red light and green light.</p> <p>The green filter only transmits green light.</p>	4	each correct sentence = 1 mark

Question	Answer	Marks	Further Information
4(a)	D	1	more than one letter = 0 marks
4(b)	B	1	more than one letter = 0 marks
4(c)	(direction of) the transfer of energy / energy flow	1	

Question	Answer	Marks	Further Information
5(a)	number of bubbles / amount of bubbles	1	
5(b)	14	1	
5(c)	(most reactive) zinc / Zn iron / Fe tin / Sn (least reactive) copper / Cu	1	all correct for 1 mark
5(d)	hydrogen / H ₂	1	ignore H
5(e)	zinc chloride / ZnCl ₂	1	Do not accept zinc chlorine

Question	Answer	Marks	Further Information
6(a)	conduction	1	
6(b)	(idea that) some metals are better conductors than others / metals have different conductivities	1	Accept heat travels faster through some metals
6(c)	atoms vibrate energy is passed or transferred from one atom to another atom	2	Accept molecules, particles or ions instead of atoms

Question	Answer	Marks	Further Information
7(a)	7	1	
7(b)	5	1	Accept 15
7(c)	N	1	Do not accept n

Question	Answer	Marks	Further Information
8(a)		1	more than one answer circled = 0 marks
8(b)	water	1	Accept oxygen
8(c)(i)	root (growth) = 1 mark fruit (growth) = 1 mark you only get fruit and root growth when phosphates present in A or B / not good growth when phosphate not present in C = 1 mark	3	the third marking point depends on the first and/or the second marking points
8(c)(ii)	magnesium must be needed to make chlorophyll / without magnesium the plant cannot make chlorophyll	1	Accept chlorophyll contains magnesium

Question	Answer	Marks	Further Information
9(a)	160	1	
9(b)(i)	C	1	Accept ecf from (a)
9(b)(ii)	D	1	Accept ecf from (a)
9(c)	fossils igneous peat rocky	1	more than one answer circled = 0 marks
9(d)	pH (scale)	1	

Question	Answer	Marks	Further Information
10 (a)	uses a (triple-beam, top-pan or electric) balance / scale(s)	1	Do not accept weighing scales
10(b)(i)	volume	1	
10(b)(ii)	measure height, width and depth multiply them together or use a Eureka can and water measure volume of water displaced or put known volume of water in measuring cylinder add cube and measure volume of water displaced	2	

Question	Answer	Marks	Further Information
11(a)	any one of large eyes / eyes at side of head / has all round vision large ears / sensitive ears	1	
11(b)	any two of can rear young safely out of sight young kept warm / sheltered from cold / sheltered from heat / sheltered from the wind / sheltered from the rain to breed	2	

Question	Answer	Marks	Further Information
12	1. ammeter 2. voltmeter 3. A / amp / ampere 4. V / volt	4	each answer = 1 mark

PUBLISHED

BLANK PAGE