

# **Cambridge Assessment International Education**

Cambridge International General Certificate of Secondary Education

PHYSICAL SCIENCE 0652/51

Paper 5 Practical Test

October/November 2018

MARK SCHEME
Maximum Mark: 30

## **Published**

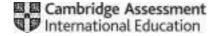
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began,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

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

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This document consists of 5 printed pages.



[Turn over

# Cambridge IGCSE – Mark Scheme **PUBLISHED**

**Generic Marking Principles** 

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

### **GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

the specific content of the mark scheme or the generic level descriptors for the question the specific skills defined in the mark scheme or in the generic level descriptors for the question the standard of response required by a candidate as exemplified by the standardisation scripts.

#### **GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

#### **GENERIC MARKING PRINCIPLE 3:**

# Marks must be awarded positively:

marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate

marks are awarded when candidates clearly demonstrate what they know and can do

marks are not deducted for errors

marks are not deducted for omissions

answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

### **GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

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# **GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

# **GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

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# Cambridge IGCSE – Mark Scheme **PUBLISHED**

Question	Answer	Marks
1(a)(i)	filter funnel and filter paper drawn ;	2
	any <b>two</b> labels from funnel, filter paper, filtrate, residue ;	
1(a)(ii)	(filtrate) colourless AND (residue) grey;	1
1(b)(i)	white ppt.;	3
	ppt. disappears / forms colourless solution ;	
	Zn <sup>2+</sup> / zinc ions ;	
1(b)(ii)	add acid (to filtrate) AND carbonate AND bubbles ;	3
	add silver nitrate (solution) AND chloride AND white ppt.;	
	add barium nitrate (solution) AND sulfate AND white ppt.;	
1(b)(iii)	silver nitrate AND white ppt. AND chloride ;	1
1(c)(i)	pop sound ;	2
	colourless liquid ;	
1(c)(ii)	hydrogen / H <sub>2</sub> ;	1
1(c)(iii)	(reactive) metal;	1
1(c)(iv)	(slowly add) sodium hydroxide solution / ammonia solution ;	1

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Question	Answer	Marks
2(a)(i)	I recorded;	2
	V recorded ;	
2(b)	so that cell does not run down / to avoid circuit getting hot ;	1
2(c)(i)	combined resistance R <sub>S</sub> calculated correctly ;	1
2(c)(ii)	combined power $P_{\mathbb{S}}$ calculated correctly ;	1
2(d)(i)	both $I$ and $V$ recorded for lamp $f L$ in parallel	1
	AND V similar to V in (a)(i);	
2(d)(ii)	I recorded to 2 d.p. <b>AND</b> ≤ 1 A for lamp <b>M</b> in parallel ;	2
	V recorded to at least 1 d.p. <b>AND</b> ≤ 3 V ;	
2(e)(i)	both resistances calculated ;	1
2(e)(ii)	correct total for $R_P$ ;	2
	$R_{\rm P} < R_{\rm S}$ ;	
2(f)(i)	both powers calculated correctly ;	1
2(f)(ii)	correct total for $P_P$ ;	1
2(g)	values of $R_S$ and $R_P$ are too far apart to be explained by experimental error / wtte ;	1
2(h)	lamps glowed brighter in parallel circuit than in series ;	1

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