

**UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**

International General Certificate of Secondary Education

**MARK SCHEME for the November 2005 question paper**

<b>0653 COMBINED SCIENCE</b>		
<b>0653</b>	<b>Paper 5</b>	<b>maximum raw mark 30</b>

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the *Report on the Examination*.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the *Report on the Examination* for this session.

- CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the November 2005 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

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<b>1</b>	<b>(a)</b>	<b>(i)</b>	goes blue/black starch present	<b>2</b>
		<b>(ii)</b>	stays blue/very slight change to green no/very little reducing sugar	<b>2</b>
	<b>(b)</b>	<b>(i)</b>	red colour observed reducing sugar present	<b>2</b>
			no/very little reducing sugar present in seeds sample A reducing sugar present in germinated seeds sample B sugar is needed for respiration/energy for growth starch broken down to sugar in seeds by enzymes sugar produced by shoots/coleoptiles/leaves (if present)	<b>4 max</b>
				<b>total 10</b>
<b>2</b>	<b>(a)(c)(d)(e)</b>		Mass in whole numbers of gms  Masses are about 10 g apart  Times are recorded to whole number of seconds  Time for 1 swing is correct	<b>4</b>
	<b>(b)</b>		Length is recorded between 450 and 550 mm	<b>1</b>
	<b>(f)</b>		Graph axes correct  scale is sensible  plotting correct  line is straight (horizontal)	<b>4</b>
	<b>(g)</b>		makes no difference	<b>1</b>
				<b>total 10</b>

<b>Page 2</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	
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<b>3</b>	<b>(a)</b>	<b>(i)</b>	turns yellow	<b>1</b>
		<b>(ii)</b>	white	<b>1</b>
		<b>(iii)</b>	limewater milky	<b>1</b>
		<b>(iv)</b>	carbon dioxide because limewater milky	<b>1</b>
		<b>(v)</b>	A is a carbonate	<b>1</b>
	<b>(b)</b>	<b>(i)</b>	goes white (1) water evolved (1) smoke (1) goes brown (1) two suitable observations required	<b>max 2</b>
		<b>(ii)</b>	moist blue litmus turns red	<b>1</b>
	<b>(c)</b>		add sodium hydroxide (1) dirty green ppt (1)	<b>2</b>
				<b>total 10</b>