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## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

**International General Certificate of Secondary Education** 

## MARK SCHEME for the October/November 2009 question paper for the guidance of teachers

## 0653 COMBINED SCIENCE

0653/05

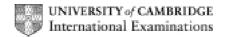
Paper 5 (Practical Test), maximum raw mark 30

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 must be read in conjunction with the question papers and the report on the examination.

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Page 2		ge 2	Mark Scheme: Teachers' version	Syllabus	Paper	
			IGCSE – October/November 2009	0653	05	
1	(a)	good qua	ality of drawings ; yll label ;			[2]
	(c)	leaf A on	nd <b>C</b> same shape as in part <b>(a)</b> ; ally one containing starch, correctly labelled; ignore s of starch matches chlorophyll pattern in <b>(a)</b> ;	small traces of sta	irch in <b>B</b> and	d <b>C</b> [3]
	(d)	light and	tarch present) carbon dioxide both needed (for photosynthesis); nly found where chlorophyll is;			
		•	synthesis because carbon dioxide is absent ; low if stated that water also absent			
		leaf <b>C</b> no photo	synthesis because light is absent ;			[4]
	(e)	to remov	e carbon dioxide ; OWTTE			[1]
					[Total:	10]
2	(a)	recording	g the refractive index ;			[1]
	(d)		e drawings ;; e ONE mark if only 4		(2)	
			f <b>i</b> are about 60°, 55°, 40°, 30° and 20° and <b>r</b> values E mark if only 4 values	;;;	(2)	
			f <b>r</b> decrease appropriately ;		(1)	[5]
		J. J. J.	, , , , , , , , , , , , , , , , , , ,		( ' )	[-]
	(e)	Graph scale plott suita				[3]
	(f)	correctly	read from graph ;			[1]
	(*)	30 Ooliy			[Total:	
					L - 2 to	- 1

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[1] (a) accept anything between 0.03 and 0.08; (c) results for all three; value for **B** is half **A** within 2 drops; value for C is half B within 2 drops; [4] value for C within 2 drops of Supervisors value; (d) most concentrated is A; [2] needs the largest number of drops; (e) brown ppt.; [1] (f) green ppt.; [1] (g) one mark for iron(II); [1] [Total: 10]