UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

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for the guidance of teachers

0654 CO-ORDINATED SCIENCES

0654/52 Paper 52 (Practical), maximum raw mark 45

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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CIE is publishing the mark schemes for the May/June 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page 2		ge 2		llabus 700 r	
				PC -	
(ä		measurements entered correctly; and clearly in mm;			
				19	
()	b)	correct	method for calculating average;	Ilabus 0654 Racambrida [2]	
`	•		answer according to candidate's data;	[2]	
((c)	(i) cor	rect numbers of leaves in each range according to can	didate's own data entered	
•	-,	• •	arly;	[2]	
		• •	rect scales;		
			rect plotting; rect drawing of bars (should be even width);	[3]	
(0	d)	range c	alculated correctly according to student's data;	[1]	
	-)				
(€		correct	number of complete squares; number of greater-than-half incomplete squares;		
		correct	calculation of area;	[3]	
(1	F)	anv suit	table factor + explanation		
(-	-	e.g.			
			n in light intensity/carbon dioxide; ifferent rates of photosynthesis;		
			o have different water/mineral availability	[2]	
				[Total: 15]	
(;	a)	mass of	f can to nearest gram;	[1]	
(•	-,			L '.	
(b)	recorde	d to nearest 0.5 °C;	[1]	
(0	C)	(i) ser	nsible temperature measured to 0.5 °C;	[1]	
		(ii) ser	nsible volume of water;	[1]	
	((iii) ma	ss of water correctly calculated;	[1]	
14	4)	each co	prrectly calculated;;	[2]	
1	~,	54011 00		[4]	

	ge 3	Mark Scheme: Teachers' version	abus	
		IGCSE – May/June 2010 06	54 22	
(e)	rear	ect substitution; ranging the equation; ect calculation; parison with supervisor +/- 1 J;	n Syllabus 0654 anacambrida [1]	
	(ii) corre	ect conversion to J kg ⁻¹ °C ⁻¹ ;	[1]	
(f)	mass of power of time hea	heater;	[3]	
			[Total: 15]	
(a)		ngs for 5 experiments;; k if any space in the timing columns	[2]	
(b)		cross table increase; own each column decrease;	[2]	
(c)	correct c	ompletion of third column in table;	[1]	
(d)	axes cor sensible plotting c suitable	scale;	[4]	
(e)		eases with concentration; s at any given time with the 2 M;	[2]	
(f)	gas still b	peing released;	[1]	
(g)	amount of	xperiment using powder Mg, must use same mass of Mg; of gas at each time will be greater;		
	greater s	surface area is the reason;	[3]	