UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2009 question paper for the guidance of teachers

0654 CO-ORDINATED SCIENCES

0654/05

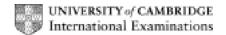
Paper 5 (Practical), maximum raw mark 45

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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		•	IGCSE – May/June 2009	0654	05				
1	(a)	 a) readings reasonable (clearly in mm) and entered correctly in column for tis readings reasonable and entered correctly in column for tissue B; value for 5 mins in A must not be greater than 80 mm 			; [2]				
	(b)	(b) points plotted accurately for tissue A; allow 1 error smooth curve drawn through points; points plotted accurately for tissue B; allow one error smooth curve drawn through points;							
	(c)		r/tissue C ; est rate of production of oxygen ; OWTTE		[2]				
		(ii) animals liver has many chemical reactions/produce more hydrogen peroxide; therefore it is removed more rapidly/it is removed before poison build up;							
	(d)	(d) (i) 82 mm;							
		(ii) 8 m	m;		[2]				
	(e)	e) hydrogen peroxide is running out/has been converted/concentration is falling;							
	(f)	leave de	;	[2]					
					[Total: 15]				
2	(a), (b) (i) (ii) Table								
	5 sets for h and V ; h clearly in mm								
	1 st value of h is between 20–40 mm ; last value of h is between 100–140 mm ;								
	(c)	100 – V	is correct; do not award if V is incorrect		[1]				
	(d)	axes co scale;	rrectly labeled ;						
		plotting; allow one error line; ignore use of origin							
	(e)	(e) show how found; allow if both figures are written down and correct correct evaluation on candidate's figures;							

Mark Scheme: Teachers' version

Syllabus

Paper

Page 2

	Page 3				Syllabus	Paper
				IGCSE – May/June 2009	0654	05
	(f)	correctly evaluated to at least 1 dp but no more than 2 dp ; accuracy on $\textbf{V}_{\textbf{w}}$ corrected if necessary ; value between 20–23				[2]
	(g)	g) wind string around tube & measure ; winding several times ; circumference to diameter ;				[3]
				,		[Total: 15]
3	(a)	red	, brov	vn or similar ; allow black if recognizes some brown	particles	[1]
	(b)	(i)	blac	k residue ; if (a) is black then allow black or no char	nge	[1]
		(ii)	gree	olves ; en solution ; s blue ;		[3]
	(c)	(i)		brown ; te is blue ;		[2]
		(ii)		ki colour (colour similar to khaki) accept yellow/gree e or grey ppt. ; milky is allowed	n etc ;	[2]
	((iii)		vn/black solid ; ur fades to colourless or lighter blue, allow 'fizzing' ;		[2]
	(d)	(d) brown fumes or notes brown solid; dissolves;				
				ution;		[3]
	(e)	сор	per (d	do not allow 2⁺ oxidation state) do not allow any cop	oper compound ;	[1]

[Total: 15]