CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2014 series

0654 CO-ORDINATED SCIENCES

0654/63 Paper 6 (Alternative to Practical), maximum raw mark 60

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 will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2014 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



	Page 2		1	Mark Scheme	Syllabus	Paper 63	
				IGCSE – May/June 2014	0654		
1	(a)	(i)		d quality drawing ; el, stamen and at least two petals drawn ;		[2]	
		(ii)		nen correctly labelled ; el correctly labelled ;		[2]	
	(b)	(i)	corre	ect measurement from photograph – 68 (mm) ;		[1]	
		(ii)	corre	ect measurement of drawing given ;		[1]	
	(c)	magnification calculated by dividing the length of drawing by the length of the petal in photo (ensure both in the same units);					
	(d)	stigma labelled Z ;					
	(e)	select <u>anther</u> (allow top of stamen); squash/cut to open anther;					
		use a microscope to observe ;				[max 2]	
						[Total: 10]	
2	(a)	(i)	A an	d F (both required, either order);		[1]	
		(ii)		oles with sodium carbonate ; eaction with hydrochloric acid ;		[2]	
	(b)	copper(II) chloride: blue ppt;					
	()			becomes (dark) blue solution;		701	
		aqueous ammonia: no change / no reaction ;		[3]			
	(c)	(i)	no o	bservable change/no ppt ;		[1]	
		(ii)	sulfu				
				sulfate: no change/no ppt ; um chloride: white ppt ;		[3]	
				marks is hydrochloric acid is used)		[-]	
						[Total: 10]	
3	(a)	(a) 73.5;					
		71. <u>0</u> ;				[2]	
	(b)) axes correct and labelled and use of grid ; points (allow 1 error) ; smooth curve ;					
						[3]	
				•		r-1	

Page 3	B Mark Scher		Scheme	Syllabus	Paper	
		IGCSE – N	lay/June 2014	0654	63	
(c) (i)		res from graph/90 ; ounding ;			[2]	
(ii)	value les	ss than (i) ;			[1]	
` '	ernal tem	er/surface area of w perature ;	vater/volume of water ;			
	erial of b	eaker ;			[max 2]	
					[Total:10]	
4 (a) incre	n) increases ;					
(b) (i) _						
	pulse ra	te/beats per min				
	104					
	80					
	72] ;;			
	(3 corre	ct = 2 marks, 2 corre	ect = 1 mark)		[max 2]	
(ii)	beats =	256 ;			[1]	
	93.75/9 ₄ 9ss rating	4/93.8 ; g: excellent ;			[2]	
(d) (i)	twin A : 4	400 AND twin B : 39	3 ;			
(ii)	twin A : p	poor AND <i>twin</i> B : av	verage ;		[1]	
(iii)	experim arbitrary	ording to Table 4.3/ ental error ; cut off ; ns from minute to mi				
	AVP;	io nom minuto to mi	nate in near rate ,		[max 2]	
					[Total: 10]	

	_		IGCSE – May/June 2014	0654	63
5	(a) (i)	use	s correct and labelled ; of grid ; ts (allow 1 error) ; e ;		[4]
	(ii)		candidate's graph (about 15) ; iracy/extrapolation ;		[2]
	(iii)	lowe	ers it;		[1]
	(iv)	from = 90	graph 132 – 42 (marking on candidate's graph) ; ;		[2]
	(b)	slow	er process/heating at one position ;		[1]
					[Total: 10]
6	(a) (i)	voltn	neter in series ; neter in parallel ; ect cell ;		[3]
	(ii)	A = 0	0.35 ; 1.55 ;		[2]
	(iii)		stance = 4.43; (ecf) = Ω (allow ohm);		[2]
	(b) (i)	(amr	meter reading) decreases AND (brightness) not as br	ight/dimmer	

Mark Scheme

Syllabus

Paper

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(both required);

(ii) brighter as more current flows;

then 'blows' as filament melts;

[1]

[2]