

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

0620 CHEMISTRY

0620/06

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

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UNIVERSITY of CAMBRIDGE International Examinations

	Pa	ge 2			Μ		heme:						Sylla			Paper
						IGC	SE – N	lay/Jun	ie 2009				06	20		06
1	(a)	 a) balance (1) stirring/(glass) rod/stirrer (1) not thermometer beaker (1) 								[3]						
	(b)	(i)	exce	ess	(1) noi	t residu	е									[1]
		(ii)			/decaı e/strai	nt (1) n/centr	ifuge									[1]
	(c)	hea	it/eva	apor	ate (1)) to crys	stallising	g point o	or desc	ription	e.g. ι	using	g glass	rod (1))	[2]
2	(a)	to r	each	i roo	n tem	peratu	re/be at	same t	empera	ature c	owtte (1)				[1]
	(b)	insı	ulator	r/to ı	ninimi	se hea	t loss (1)								[1]
	(c)	exo	therm	mic (1)											[1]
	(d)	(i)	40 cr	۲m ³ ۱	volume	e of aci	d (1)									[1]
		(ii)	two	stra	ight lir	nes, mi	ssing er	ror poir	nt (1) e	ktende	ed to in	nters	sect (1)			[2]
		(iii)	22.5	5 +/-	0.5 (1) or rea	ad from	graph o	cm ³ (1)							[2]
3	(a)	add	l dilut	te a	id (1)	fizz, no	o fizz (1) or cor	rect chl	oride	test					[2]
	(b)	litm	us pa	aper	/name	ed indic	ator (1)	turns b	lue (1)	bleacl	ned (1)				[3]
	(c)				oxide/ pitate		nia (solu	ution) (1	l) greer	n (prec	ipitate	e) (1)			[3]
4	(a)	Tab	le of	f res	ults											
		fina	l tem	npera	ature b	ooxes c	comple correctly es corre	[,] comple	eted (2)	24 3	1 3	0 51 8 47 9 49	54		[5]
	(b)	-			ectly p graph		(3), –1 1	for any	incorre	ct						[4]
	(c)	(i)	expe	erim	ent 5	(1)										[1]
		(ii)			ergy o Ilision	•	l) partic	les mov	ve faste	er (1) r	nore k	inet	ic ener	gy = 2		[3]

	Page 3		abus	Paper
		IGCSE – May/June 2009 06	620	06
	(d) idea (of a fair test/to compare effect of changing the temperature (1)		[1]
		value from graph approx 20 (1) unit (1) extrapolation shown (1)		[3]
	(ii) c	curve sketched on grid below original curve (1)		[1]
	• •	ge e.g. use of data logger/colourimeter (1) or use of lagging/insu at experiments or more values/use a burette or pipette	lation	
		anation e.g. timing of reaction more accurate (1) to reduce heat rage readings for times/volumes more accurate	losses	[2]
5	tests on s	solid S		
	(c) (i) b	olue precipitate (1)		[1]
	(ii) b	olue (1) precipitate (1)		[2]
	Ċ	dissolves/clears (1) deep/royal blue (1)		[2]
	(iii) v	white (1) precipitate (1)		[2]
	(f) (i) V	/ is more reactive or converse (1)		[1]
	(ii) c	oxygen (1)		[1]
		yst/transition metal/manganese oxide any two points (2) a better catalyst = 2		[2]
6	crush	water (1) n/mix/warm (1) decant or pipette off liquid/sieve (1)		[3]
	add ii	ndicator solution to acid (and note colour) (1) ndicator solution to alkali or named alkali (and note colour) (1) r lusion e.g. colours should be different owtte (1)	not base	[3]