## 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.

• CIE will not enter into discussions or correspondence in connection with these mark schemes.

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	Page 2			Mark Scheme: Teachers' version						5	Syllabus		Paper	
						IGCSE –	May/Ju	ine 200	9			0620		06
1	(a)	<ul> <li>balance (1) stirring/(glass) rod/stirrer (1) not thermometer beaker (1)</li> </ul>								[3]				
	(b)	(i)	exce	ess (1	) not res	sidue								[1]
		(ii)			lecant (′ /strain/c	l) entrifuge								[1]
	(c)	hea	t/eva	porat	e (1) to	crystallis	ing point	t or des	cription	e.g. u	sing g	lass roc	1 (1)	[2]
2	. (a) to reach room temper					ature/be at same temperature owtte (1)								[1]
	(b)	insu	llator	/to m	inimise l	neat loss	(1)							[1]
	(c)	exo	therm	nic (1	)									[1]
	(d)	(i)	40 cr	m³ vc	olume of	acid (1)								[1]
		(ii)	two s	straig	ht lines,	missing	error po	oint (1) e	extende	d to in	tersec	t (1)		[2]
		(iii)	22.5	5 +/- C	).5 (1) or	read fro	m graph	ı cm <sup>3</sup> (1	)					[2]
3	(a)	add	dilute	te acio	d (1) fizz	, no fizz	(1) or co	orrect ch	nloride 1	est				[2]
	(b)	litm	us pa	aper/r	named ir	ndicator (	1) turns	blue (1	) bleacł	ned (1)	)			[3]
	(c)				xide/am itate) (1		olution) (	(1) gree	en (prec	ipitate	) (1)			[3]
4	(a)	Tab	le of	resul	ts									
		final	l tem	perat	ure boxe	es correc	bleted co otly comp prrectly c	pleted (2	2)	24 3 <sup>-</sup>	1 38	51 60 47 54 49 57		[5]
	(b)	5 points correctly plotted (3), –1 for any incorrect smooth line graph (1)						[4]						
	(c)	(i)	ехре	erime	nt 5 (1)									[1]
		(ii)			ergy owtl isions (1		ticles mo	ove fast	ter (1) n	nore ki	netic e	energy =	= 2	[3]

	Page 3		Mark Scheme: Teachers' version	Syllabus	Paper				
			IGCSE – May/June 2009	0620	06				
	<b>(d)</b> ide	(d) idea of a fair test/to compare effect of changing the temperature (1)							
	(e) (i	•	e from graph approx 20 (1) unit (1) apolation shown (1)		[3]				
	(ii	) curv	ve sketched on grid below original curve (1)		[1]				
	• •	(f) change e.g. use of data logger/colourimeter (1) or use of lagging/insulation /repeat experiments or more values/use a burette or pipette							
		•	tion e.g. timing of reaction more accurate (1) to reduce readings for times/volumes more accurate	ce heat losses	[2]				
5	tests o	sts on solid <b>S</b>							
	(c) (i	) blue	e precipitate (1)		[1]				
	(ii	) blue	e (1) precipitate (1)		[2]				
		diss	olves/clears (1) deep/royal blue (1)		[2]				
	(iii	) whit	e (1) precipitate (1)		[2]				
	(f) (i	) V is	more reactive or converse (1)		[1]				
	(ii	<b>)</b> oxyę	gen (1)		[1]				
		-	transition metal/manganese oxide any two points (2 etter catalyst = 2	?)	[2]				
6	cru		er (1) ix/warm (1) cant or pipette off liquid/sieve (1)		[3]				
	ad	d indic	cator solution to acid (and note colour) (1) cator solution to alkali or named alkali (and note colo on e.g. colours should be different owtte (1)	ur) (1) not base	[3]				