## MARK SCHEME for the May/June 2012 question paper

## for the guidance of teachers

## 0620 CHEMISTRY

0620/62

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.

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

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	Ра	ige 2		1	Aark Sche					Syllabu	s	Paper	
1	(a)	beal	ker (1	1)	IGCS	E – May/	June 20	)12		0620		[1]	
	(b)	any through tube with (only) two open ends (1) outer tube with 'water' labelled and a way in and out (1)											
	(c)	turns red/pink (1) reversible/rehydration/owtte/CoC $l_2$ going pink is the test for water (1)											
	(d)				at top of t ot tube/wa	• • •	CoC <i>l</i> ₂ g€	enerates he	eat/owt	te (1) <b>not</b>	: suck ba	ck [2] [Total: 7]	
2	(a)	smo	oth c	curve sta	rting at ori	gin and r	nissing	anomalous	point (	1)		[1]	
	(b)	poir	nt at 1	1.5 min/4	Ith point/0	.32g (1)	ignore	: 3rd point				[1]	
	(c)	) reaction finished/no more gas (1) magnesium carbonate used up (1)											
	(d)		• •		ch curve b ).25g (1)	elow the	original	/less steep	(1)			[2]	
												[Total: 6]	
3	(a)	bulb	/lamp	p lights/v	vater level	falls/gree	en-yello	w gas (1)				[1]	
	(b)			•				le or + – or es labelled	the ele	ctrodes or	Pt (1)	[1]	
	(c)	(i)	hydr	ogen (1)								[1]	
			-	-	(1) if C <i>l</i> <sub>2</sub> in /thing othe			for damp lit	mus/in	dicator pap	ber		
			note	. ,	are condi			ched/white/ the result i			the test,	[2] i.e. glowing	
	(d)	chlo	rine (	(1) solub	le/dissolve	es/reacts	(1)					[2]	
												[Total: 7]	

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4	(a)	fizzir	ng/bi	ubbles stopped/no more gas produced (1)		[1]		
	(b)		X Y <b>note</b> pena	little/no effect/slight increase (1) no effect/(slight) decrease (1) speeds up reaction (1) e: The question is about rate, if candidates quote alise first then allow the 'correct' answers (-11s, +2 ust be clear that the increase in rate is less for W that	s, –199s).			
		(ii)	Y (1	)		[1]		
	(c)	repe	at ex	xperiments (1) take average/compare results/see if	there is a differen	ce (1) [2] [Total: 7]		
5	(a)	temp	perat	ture boxes correctly completed (2) 21, 25, 26, 27, 27	7, 26, 25	[2]		
	(b)	tem	pera	ture boxes completed correctly (2) 20, 19, 18, 17, 1	7, 18, 19	[2]		
	(c)	-	oth li	s correctly plotted (3), –1 for any incorrect ine graphs (2) )		[6]		
	(d)	(i)	valu	e from graph (1) allow: ±1/2 small square shown c	learly (1)	[2]		
		(ii)	valu	e from graph (1) allow: ±1/2 small square shown c	learly (1)	[2]		
	(e)	endo	other	rmic (1) <b>ignore</b> : temperature decreases		[1]		
	(f)	lowe	er ter	nperature (change)/halved (1) <b>ignore</b> : reference to	rate/time	[1]		
	(g)	roon reac	1) <b>ignore</b> : 25°C	[2]				
	(h)	more can	e reli spot	adings/more points (1) able/more accurate (1) ignore: precise anomalous points or errors (1) r graph/owtte (1)		any [2] <b>[Total: 20]</b>		

	Pa	ge 4	Mark Scheme: Teachers' version Sylla					llabus		Paper				
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6	(d)	appearai smell	nce		olourless negar/pi				1) <b>igno</b> i	r <b>e</b> : swee	et/strong			[2]
	(e)	pH 2–6 (	1)											[1]
	(f)	carbon dioxide (1)									[1]			
	(g)	) copper/Cu <sup>2+</sup> (1) carbonate/CO <sub>3</sub> <sup>2-</sup> (1)									[2]			
														[Total: 6]
7	(a)	use Univ	ersa	al/p⊦	l indicat	or/pH r	neter (	1) igno	ore: litm	us/indic	ator			[1]
	(b)	note: Th	is ca	an b	e marke	d via th	nree ro	utes.						
		If they us use full b (air-tight) syringe/ii heat/sha until no r measure any 6	oottle ) cor nver ke (′ nore	e (1) nnec rted (1) e gas	ctions (1 measur s given o	ng cylii off (1)	nder/gi	raduat	ed tube	to colle	ct gas (1	)		
		If they us use mea (air-tight) syringe/in heat/sha until no r measure multiply t max 6	sure ) cor nver ke (' nore volu	ed vo nneo rted (1) e gas lume	blume (1 ctions (1 measur s given of gas	) ing cylii off (1) (1)		raduat	ed tube	to colle	ct gas (1	)		
		If they do weigh the heat/sha until no r reweigh use dens max 5	e bo ke (′ nore bottl	ottle/ (1) e gas tle (1	sample s given ( )	(1) off (1)	(1)							[6]

[Total: 7]