UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

## WANN, PapaCambridge.com MARK SCHEME for the October/November 2011 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.

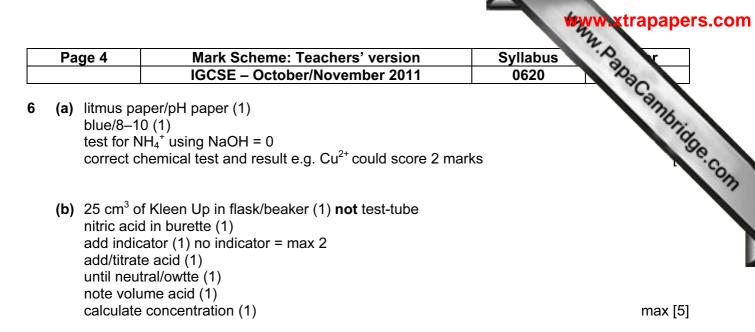
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Pa	Page 2		Mark Scheme: Teachers' versionSyllabusIGCSE – October/November 20110620			
(a)	(i)	wate	$er/H_2O$ inserted into box (1)	a Ca	m	
	(ii)	two	arrows <u>underneath</u> magnesium and wool (1)	Syllabus 0620	Tig	
(b)	ma	gnesi	um oxide (1)		[1]	
(c)			plint (1) pops (1) splint pops = 1		[2]	
(d)	hig	hly/ve	ery exothermic reaction/high temperature reached/su	uck back of water/owtte (1)	[1]	
(a)	vol	umes	results correct (3) -1 for each incorrect 25, 40, 48, 54, 57		[3]	
(b)			otted correctly (3) -1 for each incorrect curve missing anomalous point (1)		[4]	
(c)	(i)	at 2	min (1)		[1]	
	(ii)	from	graph $\pm$ half small square 30 cm <sup>3</sup> (1) indication on $($	grid (1)	[2]	
(d)	(i)	decr	reases/slows down (1) <b>not</b> stops		[1]	
	(ii)	-	rochloric acid used up/hydrochloric acid becomes lea reactants used	ss concentrated (1)	[1]	
(e)	(i)	sket	ch curve to left of original (1) <b>ignore</b> if level is above	e original	[1]	
	(ii)	sket	ch curve to right and below original (1)		[1]	
(a)	to s	speed	up the reaction/owtte (1) <b>not</b> reacts easily		[1]	
(b)	exc	cess c	obalt carbonate/base used (1)		[1]	
(c)	me	metal could react/glass does not react/owtte (1)				
(d)			alt chloride visible/no more fizzing/no more gas (CC olour change	$D_2$ ) produced (1)	[1]	
(e)	cry	stals f	forming (on glass rod/on edge) (1)		[1]	

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Pa	Page 3		Mark Scheme: Teachers' version IGCSE – October/November 2011	Syllabus	×
(f)	anl	hydrou	us cobalt chloride formed/water/steam removed/powder	formed (1) turn blu	Cambri
(a)			results for Experiments 1 and 2 kes completed correctly 0.0, 2.0 (1)	Syllabus 0620 formed (1) turn blu	92
(b)	diff	erence	es completed correctly 23.0, 48.0 (1) es correct 23.0, 46.0 (1) <b>allow</b> ecf to 1 dp (1)		[4]
(c)	to r	remove	e impurities/solution F/owtte (1)		[1]
(d)	as	an ind	licator/to show presence of iodine/owtte (1)		[1]
(e)	) (i)	Expe	eriment 2 (1)		[1]
	(ii)	Expe	eriment 2 2x volume Experiment 1		[1]
	(iii)		tion <b>F</b> more concentrated/stronger (1) <b>allow</b> converse s concentrated (2)		[2]
(f)			e from table result for Experiment 1, 11.5 (1)		
	hal	f volur	me of potassium iodate/iodine/ $\frac{23}{2}$ (1)		[2]
(g)	) (i)	e.g. e acid	sources of error (2) experiment only done once/using a measuring cylinder going past end point/owtte <b>pre</b> reference to temperature or human error	to measure iodate/	[2]
	(ii)		meaningful improvements related to above (2) use a pipette/burette/add smaller volumes e.g. 0.5 cm <sup>3</sup> /	/repeat experiment	[2]
(a)	) (i)	blue	(1)		[1]
(b)	) wh	ite (1)	precipitate (1)		[2]
(c)	(i)	blue	(1) precipitate (1)		[2
	(ii)	blue	precipitate (1) dissolves/solution (1) deep/royal blue (1	)	[3]
(e)	org	janic (*	1) hydrocarbon / flammable / fuel (1)		[2]



[Total: 60]