## **UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**International General Certificate of Secondary Education** 

## MARK SCHEME for the October/November 2009 question paper for the guidance of teachers

## 0620 CHEMISTRY

0620/06

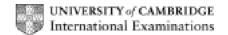
Paper 6 (Alternative to practical), maximum raw mark 60

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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	Page 2		Mark Scheme: Teachers' version IGCSE – October/November 2009	Syllabus	Paper		
			IGCSE – October/November 2009	0620	06		
1	(a)	(conical)	flask (1) (gas) syringe (1)		[2]		
	(b)	(b) to stop loss of gas owtte/stop mixing/so that they don't react					
	(c)	glowing s lighted s	splint (1) relights (1) plint = 0 ignore 'pops'		[2]		
2	(a)		vent rusting or corrosion/more attractive or shiny/so it do less reactive or answers about value	esn't oxidise	[1]		
		` '	er wears off/will need re-coating are references to rusting		[1]		
		(iii) so th	hat silver can coat the spoon/stick to the spoon owtte		[1]		
	(b)	negative	/cathode		[1]		
	(c)	silver			[1]		
3	(a)	add alum	ninium/Devarda's alloy and sodium hydroxide (warm)(	1)			
			a/alkaline gas formed/turns red litmus blue (1) ar miss' in reagents allow a mark for ammonia		[2]		
	(b)	boiling p	oint (1) 100°C (1)		[2]		
	(c)		(water) (1) ourless (1) r		[2]		
4	(a)	Table of	results				
		Initial ten	mperature boxes correctly completed (2) 24 26 25 24 26				
		Highest t	temperature boxes correctly completed (2) 39 37 35 31 29		[4]		
		Difference	ces correctly completed (1) 15, 11, 10, 7, 3, allow	ecf	[1]		

Page 3		Mark Scheme: Teachers' version	Syllabus	Paper			
		IGCSE – October/November 2009	0620	06			
(b)	) all 5 bars correctly drawn (2) - 1 for each incorrect						
	labelled in the centre (1)						
	corre If plo		[4]				
(c)	exoth not		[1]				
(d)	(i)	experiment 1/A		[1]			
	(ii)	sulfuric acid was most concentrated/strongest		[1]			
(e)	(i)	greater/higher ignore reference to rate		[1]			
	` '	half the value/half the value from the table/lower or less allow 7.5 as a temperature change or 31.5 as a final temperature.	rature	[1]			
	(iii)	more/larger volume of acid for magnesium to react in		[1]			
(f)	one e	error source from:					
		losses/use of low accuracy measuring cylinders/magnesiun h or mass	n pieces vary in	[1]			
(b)	рН о	f solution L 11-14		[1]			
(d)	(i)	blue precipitate (1) both for one mark (soluble in excess =	0)	[1]			
		white (1) precipitate (1) dissolves/clears/soluble in excess (1)		[3]			
(c)	weak	(1) alkali/base (1) or ammonia (2)		[2]			
(d)	-	ochloric acid (2) bid (1) chloride ion (1) <b>not</b> chlorine ion		[2]			
(a)	smoo	s plotted correctly (2) - 1 for any incorrect oth curve (1) suitable scale (1) axes labelled (units not es pt plot of loss in mass against time	sential) (1)	[5]			
(b)		graph, 180g (ignore no units) (1) ation on graph (1)		[2]			
(c)	gas g	given off		[1]			

5

6

			IGCSE – October/November 2009	0620	06
	(d)	to prever <b>not</b> loss		[1]	
	(e)	4 minute	S		[1]
	(f)		curve above original (1) out at 174s or heading towards it (1)		[2]
7	(a)	•	ortar/solvent/sand (any three) ater and/or heat		[3]
	(b)	chromato paper (1 apply spo <u>descriptio</u> and sepa If water u If paper of	s can be obtained from a diagram ography or chromatogram (1) ) ot/extract to paper (1) on or name of solvent used (1) aration e.g. spots on paper (1) (max 4) used as solvent (max 3) dipped into extract (max 3) di would not work (max 2)		[4]

Mark Scheme: Teachers' version

Syllabus

Paper

Page 4