UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2011 question paper for the guidance of teachers

0620 CHEMISTRY

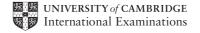
0620/61

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

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.

Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



Page		ge 2	Mark Scheme: Teachers' version	Syllabus	Paper	
			IGCSE – May/June 2011	0620	61	
1	(a)	beaker (1)		[1]	
	(b)	(i) (arrow) labelled heat in correct position under shaded crystals (1)				
		(ii) arro	w labelled water in test-tube at or below the level of the ice	(1)	[2]	
	(c)	to cool/c	ondense the water or steam/owtte (1)		[1]	
	(d)	physical test ignore chemical tests boiling point/freezing point (1) 100/0°C (1)				
2	(a)	voluconvolutemprinsam	variables max 2 me centration of acid allow amount me of sodium thiosulfate/total volume of solution perature ted sheet he size flask eference to pressure/catalyst/surface area/light		max [2]	
	(b)	straight line drawn with a ruler, missing anomalous point but touching all other po not multiple lines			s (1) [1]	
	(c)	 qua qua reco plot tem con 	sensible errors that could be from same category max 2 lified measurement error e.g. volume lified timing error ording error ting error perature variation tamination from previous experiment ematic error		max [2]	
	(d)	0.056–0	.064 range (1) indication on graph (1)		[2]	
	(e)	more pa	rticles/particles closer together (1) more collisions (1)		[2]	
	(f)	sketch <u>s</u>	traight line to the LEFT of the original (1)		[1]	

	Page 3	Mark Scheme: Teachers' version	Syllabus	Paper			
		IGCSE – May/June 2011	0620	61 [1]			
3	(a) chromatography (1)						
	(b) water	(1)		[1]			
	(c) origin/		[1]				
	sweet allow	C has 4 colours (1) D has 3 colours (1) C has one more colour/more colours than D for one mark urs are the same (1)		[3]			
4	Experimen	t 1					
	(a) and (b) initial and final volumes completed correctly (1) 0.0, 32.0						
	Experiment 2						
	initial and final volumes completed correctly (1) 19.0, 35.0						
	_	s in both experiments to 1 decimal place (1) ences correctly calculated (1)		[4]			
	(c) oxyge	n(1)		[1]			
	(d) (i) co	plourless not clear to purple/pink (1) or reverse		[1]			
		otassium manganate is coloured/owtte (1) ccept is not an acid/alkali reaction		[1]			
	(e) (i) e>	speriment 1(1) allow ecf		[1]			
	(ii) ex	xperiment 1 2× volume of experiment 2		[1]			
	· ,	olution B more concentrated/stronger (1) or converse as concentrated (2)		[2]			
		lue from table result for experiment 2 / 8 (1) cm ³ (1) lume of peroxide used (1)		[3]			
	(g) advan disadv	tage easy to use/quick/convenient/ <u>fairly</u> accurate (1) antage not accurate owtte (1)		[2]			

Page 4		ge 4			Syllabus	Paper	
			IGCSE -	- May/June 2011	0620	61	
5	(a)	(a) (ii) colourless (1) allow yellow no smell (1)					
	(b)	(ii) extir		[1]			
	(d)	(d) yellow (1) precipitate (1)					
	(e)	organic (fuel/alco		[2]			
6	(a)	diagram of a filter paper in a funnel (1) label funnel/filter paper (1)					
	(b)	0.45, 0.9	5, 1.40, 1.90, 2.35 and 2	2.35 (2), -1 for each incorrect up to	2	[2]	
	(c)	(c) all points plotted correctly (2), -1 for each incorrect point up to 2 two intersecting straight lines (1) ignore origin					
	(d)	5 cm ³ (1)) ignore unit			[1]	
7	(a)	e.g. pH pape named n	netal salt solution/ion c	1–14 or correct colour correct colour precipitate mmonia/owtte		[2]	
	(b)	fizzy drinks may be acidic/contain carbon dioxide (1) chlorine formed (1) toxic (1)				max [2]	
	(c)		nswer connected to health and safety (1) low to affect the environment/to clean it			[1]	
	(d)	litmus/pH/UI paper (1) bleached owtte (1)				[2]	
						[Total: 60]	