UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

General Certificate of Education Ordinary Level

MARK SCHEME for the June 2005 question paper

5070 CHEMISTRY

5070/04

Paper 4 (Alternative to Practical), maximum mark 60

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the *Report on the Examination*.

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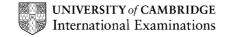
GCE O Level

MARK SCHEME

MAXIMUM MARK: 60

SYLLABUS/COMPONENT: 5070/04

CHEMISTRY
Paper 4 (Alternative to Practical)



	Pag	e 1		Mark Scheme S GCE O LEVEL – JUNE 2005			Syllabus	Paper
	(-)			GCE O	LEVEL - JUN	E 2005	5070	4
1		syri	[1] [1]					
2	(a)	White						[1]
	(b)	Filtration						[1]
	(c)	(i)	0.012 (m	oles)				[1]
		(ii)	0.015 (m	oles)				[1]
	(d)	(i)	0.012 (m	oles)				[1]
		(ii)	BaSO ₄					[1]
		(iii)	` '		.796 (2.80) (1) swer for (d)(i) a	g and incorrect form	ula (d)(ii)	[2]
3	(a)	soli	d does no	t conduct a	a current (or sir	nilar)		[1]
	(b)	(i)	bromine					[1]
		(ii)	brown ga	ıs				[1]
			, •	apour mus gas is acc		in either (i) or (ii))	
		(iii)	lead					[1]
		(iv)	on the flo	or of the c	ell			[1]
	(c)	(i) chlorine (1), bleaches litmus (1)						[2]
		(ii)	hydroger	n (1), pops	in a flame or w	ith a lighted splint	(1)	[2]
			versed, 1 out of					
	(d)	mo	lten sodiur	m chloride				[1]
4 to 8		(a),	(c), (b), (d	d) , (d) 1 m	nark each.			[5]
9	(a)	1.9	8 (g)					[1]
	(b)	pipe	ette					[1]
	(c)	yellow to orange, red or pink					[1]	
	(d)	25.	0	48.7 23.3	33.4 7.8	1 mark for ea		.
		25.		25.4	25.6	column		[3]
	(-)			25.5 (cm ³⁾				[1]
	(e)	0.0	0204 (mol	es)				[1]

Page 2	Mark Scheme	Syllabus	Paper
	GCE O LEVEL – JUNE 2005	5070	4

	(f)	0.00102 (moles)					
	(g)	0.0102 (moles)					
	(h)	106 (g)					
	(i)	1.081 (g)	[1]				
	(j)	0.899 (0.90) (g)					
	(k)	4.90 (5) (accurate answer must be seen to gain this mark)					
10	1. 2 3 4	coloured solution (no compounds) red-brown precipitate (1) insoluble in excess (1) red-brown precipitate (1) insoluble in excess (1) aq sodium hydroxide (1) aluminium foil <u>and</u> warm (1) ammonia or gas evolved (1) which turns red litmus blue (1) (or alternative test for ammonia) (if acid is used instead of NaOH in test, 1 mark lost if ammonia is used in test, 2 marks lost)	[1] [2] [2] [2]				
		Fe(NO ₃) ₃	[1]				
11	(a)	 32, 55, 69, 80. All correct (2), one error (1) all points stated in (a) plotted correctly (1) straight line and curved line (1) 					
	(b)						
	(c)	Appropriate extrapolations at the lower ends (1) and upper ends (1)					
		(i) potassium chlorate(V) 0.35 g					
		(ii) potassium nitrate 3.30 g					
		(iii) 90 °C					
	(d)	52 g/100 g of water(in parts (c) and (d) candidate's own graph should be read in marking the results)					
	(e)	solution and solid present					
		Note: (i) if potassium chlorate (V) curve is extrapolated through zero, first extrapolation mark is lost but (c)(i) can score ecf from zero (ii)mark (a), (c)(i), (ii) and (d) to nearest half a small square					
		(Indicate marks awarded for graph at appropriate points)					