#### 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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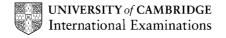
# GCE O Level

# MARK SCHEME

**MAXIMUM MARK: 60** 

SYLLABUS/COMPONENT: 5070/04

CHEMISTRY
Paper 4 (Alternative to Practical)



	Page 1			005.0	Mark Scheme	E 2005	Syllabus	Paper	
	(-)			GCEC	LEVEL – JUN	E 2005	5070	4	
1		syri	[1] [1]						
2	(a)	Wh		[1]					
	(b)	Filtration						[1]	
	(c)	(i)	0.012 (m	oles)				[1]	
		(ii) 0.015 (moles)					[1]		
	(d)	(i) 0.012 (moles)					[1]		
		(ii)	BaSO <sub>4</sub>					[1]	
		(iii)	233 (1) x (ecf on in	[2]					
3	(a)	soli	d does no		[1]				
	(b)	(i)	bromine					[1]	
		(ii) brown gas						[1]	
		(iii) lead						[1]	
		(iv) on the floor of the cell					[1]		
	(c)	(i) chlorine (1), bleaches litmus (1)						[2]	
		(ii) hydrogen (1), pops in a flame or with a lighted splint (1)						[2]	
			versed, 1 out of						
	(d)	molten sodium chloride						[1]	
4 t	8 o.	(a), (c), (b), (d), (d) 1 mark each. [5]							
9	(a)	1.98 (g)						[1]	
	(b)	) pipette						[1]	
	(c)	yellow to orange, red or pink					[1]		
	(d)	25.9	0	48.7 23.3	33.4 7.8	1 mark for ea		ro1	
		25.		25.4	25.6	column		[3]	
	1.3	mean value: 25.5 (cm <sup>3)</sup>					[1]		
	(e)	0.00204 (moles)						[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)					
	(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 and 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)					
		Fe(NO <sub>3</sub> ) <sub>3</sub>		[1]			
11	(a)	32, 55, 69, 80. All correct (2), one error (1)					
	(b)	all points stated in <b>(a)</b> plotted correctly (1) straight line and curved line (1)					
	(c)	Appropriate extrapolations at the lower ends (1) and upper ends (1)					
		<ul><li>(i) potassium chlorate(V) 0.35 g</li><li>(ii) potassium nitrate 3.30 g</li></ul>		[1]			
				[1]			
		(iii) 90 °C  52 g/100 g of water (in parts (c) and (d) candidate's own graph should be read in marking the results)					
	(d)						
	(e)	solution and solid present					
		extrapo	sium chlorate (V) curve is extrapolated through zero, first lation mark is lost but <b>(c)(i)</b> can score ecf from zero <b>(d)</b> , <b>(c)(i)</b> , <b>(ii)</b> and <b>(d)</b> to nearest <u>half</u> a small square				
		(Indicate n	narks awarded for graph at appropriate points)				