UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the November 2004 question paper

0620 CHEMISTRY

0620/06

Paper 6 (Alternative to Practical), maximum mark 60

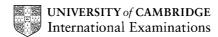
This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking 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*.

• CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the November 2004 question papers for most IGCSE and GCE Advanced Level syllabuses.



Grade thresholds taken for Syllabus 0620 (Chemistry) in the November 2004 examination.

	maximum mark available	minimum mark required for grade:				
		А	С	Е	F	
Component 6	60	46	37	29	23	

The threshold (minimum mark) for B is set halfway between those for Grades A and C. The threshold (minimum mark) for D is set halfway between those for Grades C and E. The threshold (minimum mark) for G is set as many marks below the F threshold as the E threshold is above it.

Grade A* does not exist at the level of an individual component.



PMT

November 2004

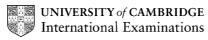
INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 60

SYLLABUS/COMPONENT: 0620/06

CHEMISTRY Alternative to Practical



Page 1	Mark Scheme Sylla		Paper		
	IGCSE – November 2004	0620	6		
(a) A mea	asuring cylinder (1)				
B flas	k (1)		(2		
(b) boxes o	completed correctly, zinc and hydrochloric acid	(1)	(1		
(c) lighted	splint (1) pops (1)				
second	mark consequential i.e. glowing splint = 0		(2		
(a) smooth	line/curve (1)		(1		
(b) result a	t 60s (1) not on curve or sin	milar (1)	(2		
(c) calcium carbonate is being used up/acid gets more dilute (1)					
(a) to absorb/hold/contain the liquid (1)					
(b) crackin	g (1)		(1		
(c) bromin	e (water) (1) colourless (1)		(2		
(d) remove	the delivery tube from the water (1)				
to prev	ent suck-back or similar effect (1)		(2		

4 Table of results

initial temp.	24	23.5	24.5	23	22.5	23
final temp 20		20.5	17.5	14	11	7.5
All 11 temperatures recorded correctly (5), -1 for each incorrect						
(a) Graph poin	ts plotted co	orrectly (3),	-1 for ea	ach incorrec	t	
strai	ght line (1)					(4)
(b) (i) temperatu	ire from gra	oh (1)	e.g. 12.5°C	\pm 0.5		(1)
indication (1) °C (1)						(2)
(ii) temperatu	ire from gra	oh (1)	e.g. 4°C \pm	0.5		
extrapolation shown (1)						(2)
(c) endothermic (1)						
(d) temperature	changes wo	ould be sma	ller (1)			
more water	(1)					(2)
(e) larger surfact	e area (1)		reacts/disso	olves faster/	easier (1)	(2)

	Page 2		ark Scheme	Syllabus	Paper
		IGCSE	– November 2004	0620	6
((f) 22 - 24	°C/room temperature	(1) reaction finished (1)		(2)
((g) use a l	ourette/pipette instead	l of measuring cylinder/insulatio	on/lids/lags (´	1) (1)
5 (a) white	(1)	crystals/solid (1)		(2)
((c) (i) whit	.e (1)	precipitate (1)		(2)
	(ii) whi	.e (1)	precipitate (1)		(2)
	(iii) refe	rence to smell (1)	alkaline/blue (1) pH 9 \rightarrow	12 (1)	2 max (2)
((d) ammon	ia (1)			(1)
(e) alkaline	gas/ammonia given o	off (1)		
	acid ga	s/hydrogen chloride g	iven off (1)		(2)
6 ((a) litmus/ii	ndicator (1)			
	bleache	d in chlorine, no effec	t with sodium chloride (1)		(2)
(b) sodium	hydroxide (1)			
	green (precipitate) with iron(I	l), brown (precipitate) with iron(III) (1)	(2)
((c) add hyd	drochloric acid (1)			
	fizz/bub	bles with carbonate, r	no reaction with sulphate (1)		(2)
	alternat	ive with HC <i>l</i> and t	parium chloride (1)		
		white precipita	te with sulphate, not carbonate	(1)	
7 (chromatogi	aphy (1)	apply inks/spots to pap	er (1)	
C	organic sol	vent/water (1)	rises up paper (1)		
	book boid	nta/nanitiana of anota	(1) compare to find ink from	n hanknoto ((1)
C	check heigi	hts/positions of spots	(1) compare to find ink from	ii balikiible ((1) (6)

Total marks for paper 60