UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2011 question paper for the guidance of teachers

0620 CHEMISTRY

0620/61

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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1	(a)	(i)	(gas) syringe (1)	[1]
		(ii)	arrow indication under copper (1)	[1]
	(b)	spat	rula (1)	[1]
	, ,			F.4.7
	(c)	blac	K (1)	[1]
	(d)	to re	eturn to room/initial temperature (1)	
	` '		ect volume of gas (1)	[2]
2	(a)	noin	to platted correctly (2)	
2	(a)	•	ts plotted correctly (2) oth line graph missing anomalous point (1)	[3]
	(b)	poin	t at 15 cm ³ /pH 2.6/third point (1)	[1]
	(c)	(i)	12.6 (1)	[1]
	(-)			
		(ii)	pH 1 (1) extrapolation shown (1)	[2]
	(d)	(i)	7 (1)	[1]
		(ii)	25 (1)	[1]
	(e)	repeat experiment (1) stop when 25 cm ³ added/when pH7 (1) evaporate/heat (1) use same volumes (1)		
		-	rystallising point/until saturated (1)	max [3]
3	(a)) chromatography (1)		[1]
	(b)	line	drawn on diagram below origin (1)	[1]
	(-)	0		[.]
	(c)	doe	s not interfere with results/owtte (1)	[1]
	(d)		rence as more/3 colours/ B has less/2 colours/ B contains F but A doesn't/ A contains C /	
			ut B does not (1)	
			larity contain same colour/ E (1)	ເວາ
		ווטע	Contain Same Coloui/L (1)	[2]

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	Pa	ge 3	Mark Scheme: Teachers' version	Syllabus	Paper
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	(e)	C, D and	d E (1)		[1]
4	(a)	tempera	f results for Experiment 1 ature boxes completed correctly (3) 21, 32, 39, 42, 44, 45, 45		[3]
	(b)	tempera	f results for Experiment 2 sture boxes completed correctly (3) 21, 24, 32, 36, 37, 38, 38		[3]
	(c)		s correctly plotted (3) -1 for each incorrect smooth line graphs (1)		[5]
	(d)	value fro	om graph ≈28°C ± half small square (1) unit (1) show	vn clearly (1)	[3]
	(e)	exotherr	mic/redox/displacement (1)		[1]
	(f)	(i) tem	perature rises greater/faster in Experiment 1 (1) all	ow converse	[1]
		(ii) zinc	c is more reactive (1)		[1]
	(g)	•	ature changes would be same/faster/owtte (1) metal ature changes would be greater (1) lower volume (1)	` ,	[2]
	(h)		ould react slower/temperature rises would be slower surface area (1)	(1)	[2]
5	(a)	(i) P	colourless, no smell (1)		[1]
		(ii) P	pH 1–3 (1)		[1]
	(b)		es/effervescence/bubbles (1) splint pops (1) not hydrogen		[2]
	(c)	white (1) precipitate (1)		[2]
	(e)	weak ac	cid (1) ethanoic acid (2)		[2]
	(f)	water (1)		[1]

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6 measured volume of seawater (1)
using measuring cylinder (1)
into evaporating dish/beaker (1)
pre-weighed (1)
evaporate/heat (1)
to dryness/constant mass (1)
re-weigh (1)
indication of calculation method (1)

max [6]

would not work = max 0

[Total: 60]