## www.papacambridge.com MARK SCHEME for the October/November 2010 question paper

## for the guidance of teachers

## **5070 CHEMISTRY**

5070/41

Paper 4 (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.

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

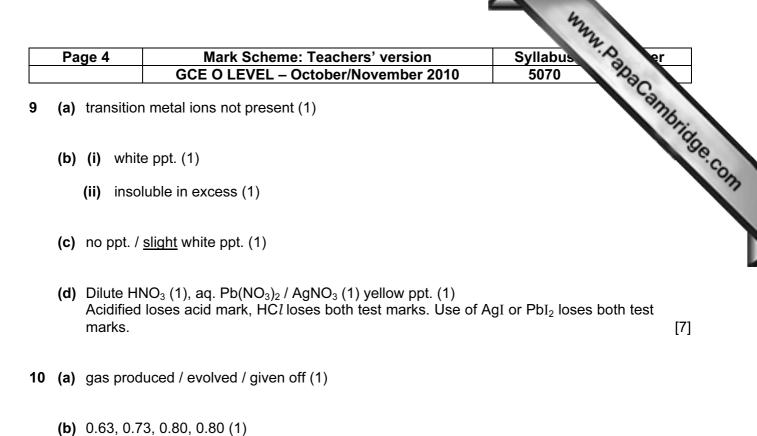
CIE is publishing the mark schemes for the October/November 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

	Page 2		Syllabus of er
		GCE O LEVEL – October/November 2010	5070 232
(	( <b>a)</b> 31.9/25	5.6 (1) 6.3 (1)	Syllabus 5070 Anacannhrige
(	( <b>b)</b> exotherr	nic (1)	.93
(	( <b>c)</b> hydroge	n (1) pops in flame (1)	
(	( <b>d) (i)</b> sodi	ium hydroxide (1)	
	(ii) blue	e (1)	
(		moves around the surface / catches fire / floats / me s / violent or vigorous reaction / disappears / dissolves. Ar	
(	( <b>a)</b> water in/	/out reversed / water flow wrong (1) closed system (1)	
(	( <b>b) (i)</b> frac	tionating column (1)	
	(ii) sepa	arates components/vapours (1)	
	(iii) con	denser (1)	
	(iv) lique	efies vapours, turns vapour to liquid (1)	
1	( <b>c) (i)</b> 69 (	1)	
	(ii) hexa	ane (1)	
	(iii) tem	perature rises (1)	
(	( <b>d)</b> both liqu	iids are flammable (1)	
(	( <b>e)</b> 40/86 =	0.47; 60/100 = 0.60 (1) 0.47/1.07 × 100 = 44% (1)	[12]
(	(a)		[1]
(	(a)		[1]
(	(b)		[1]
(	(c)		[1]
	(a)		[1]

Page 3	Mark Scheme: Teachers' version	Syllabus 7. S er
	GCE O LEVEL – October/November 2010	5070 22
<b>(a)</b> 6.24 (1)		Syllabus 5070 BRCambridge
(b) (i) gre	en/colourless	
<b>(ii)</b> pur	ple/pink (1)	
or colur	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	mark for each correct row
( <b>d</b> ) 0.00044	46 (1)	
(e) 0.00223	3 (1)	
(f) 0.0223	(1)	
<b>(g)</b> 3.39 (1)		
<b>(h)</b> 2.85 (1)		
<b>(i)</b> 0.158 (	1)	
<b>(j)</b> 7.09 (7.	1) (1)	
(k) FeSO <sub>4</sub> .	7H <sub>2</sub> O (1)	
(I) simulta relating	neous oxidation and reduction (1) to $MnO_4^-$ and $Fe^{2+}$ ions (1)	

(m) Fe<sup>3+</sup> cannot be oxidised (1)

[17]



- 0.76, 0.80, 0.80, 0.80 (1)
- (c) all points correctly plotted (1) two smooth curves passing through zero (2)
- (d) reaction is complete / no more gas given off / acid used up (1)
- (e) (i) 0.56 (1)
  - (ii) 90.30 (1)
- (f) reaction is faster (1)

In parts (c) and (e) please read candidate's graph in awarding marks. Read graphs to +/– half small square.

[10]