UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2007 question paper

0620 CHEMISTRY

0620/06 Paper 6 (Alternative to Practical), maximum raw mark 60

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1 **(a)** **A** thermometer (1)
B beaker (1)
C tripod (1)

(b) to cool / condense the vapour (1) [1]

(c) measure the boiling point (1) [1]

[Total: 5]

2 **(a)** Correct indication of electrodes (1) [1]

(b) bubbles / fizz / effervescence (1) / green gas / level of liquid falls (1)
bulb lights up (1) max 2 [2]

(c) **(i)** chlorine / Cl_2 (1) [1]

(ii) litmus paper / indicator (1) bleaches (1) [2]

[Total: 6]

3 **(a)** does not dissolve in solvent / interfere with results owtte (1) [1]

(b) 1 and 3 (1) [1]

(c) sample 4 (1)
two spots present (1) [2]

(d) to show position of the acids / spots (1) [1]

[Total: 5]

4 Table of results

Experiment 1
final reading box correctly completed, 39.2 (1)

Experiment 2
final reading box correctly completed (1)
differences completed correctly, 39.2 (1) and 20.6 (1) [4]

(a) as an indicator owtte [1]

(b) **(i)** Experiment 1 (1) [1]

(ii) more in Experiment 1 / greater volume (1) [1]

(iii) solution **A** more concentrated / stronger than **B** (1) approx ×2 (1) [2]

(c) 10.3 (1) cm^3 / ml / cc (1) [2]

(d) change e.g. repeat titrations (1)
explanation e.g. average reading more accurate (1) [2]

[Total: 13]

5 **(c)** bubbles / fizz (1) limewater (1) milky (1) [3]

(d) yellow (1) precipitate (1) [2]

(f) carbon dioxide (1) [1]

(g) ammonia (1) [1]

(h) iron (1) (II) (1) ammonium (1) sulphate (1) [4]

[Total: 11]

6 table correctly completed

catalyst **W**	catalyst **X**
0	0
16	29
32	34
36	36
37	37
37	37
all correct (3)	-1 each incorrect

[3]

(b) graph
choice of suitable scale for y-axis (1)
all points correctly plotted (3)
smooth curves (1) labelled (1) [6]

(c) solid **X** (1)
faster reaction / more gas given off at 20/40 s (1) [2]

(d) same volume of hydrogen peroxide used in both experiments (1) [1]

(e) line sketched on grid with steeper slope than for catalyst **X** at 25°C (1)
levelling out at same level (1) [2]

[Total: 14]

7 **(a)** initial temperature of cold water or cement (1)
add cement (1)
using thermometer / in beaker etc. (1)
measure temperature (1)
temperature rise (2) max 4 [4]

NB
no water = 0
no cement = 0
use of heat = 0
wrong chemicals = 0
would not work = 0

(b) sodium hydroxide (1) white precipitate (1) [2]
or flame test (1) red (1)

[Total: 6]