UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2011 question paper

for the guidance of teachers

0620 CHEMISTRY

0620/52 Paper 5 (Practical), maximum raw mark 40

Mark schemes must be read in conjunction with the question papers and the report on the examination.

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

Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

1 **(a)** Table of results for Experiment 1
initial volume box, at time = 0 completed correctly (1)
volume boxes correctly completed in ascending order (1)
allow maximum of 2 consecutive identical numbers
comparable to Supervisor's results (1) ±15 at 180s [3]

(b) Table of results for Experiment 2
initial volume box, at time = 0 completed correctly (1)
volume boxes correctly completed in ascending order (1)
allow maximum of 2 consecutive identical numbers
comparable to Supervisor's results (1) ±10 at 180s [3]

(c) all points correctly plotted (3), –1 for any incorrect including t = 0
two smooth line graphs (2)
lines clearly labelled (1) [6]

(d) **(i)** experiment 1 (1) **not** ecf [1]

(ii) acid X stronger/more concentrated or converse (1) **allow** ecf from **(d)(i)** [1]

(e) reaction finished (1) **note** 'reactants used up' scores this mark
all the acid used up (1) **not** all Mg used up [2]

(f) value from graph (1) ± half small square (1.5s)
tie line/indication shown (1) [2]

(g) to prevent air being displaced into the measuring cylinder/owtte (1)
causing inaccurate reading/volume measurement (1) [2]

(h) advantage e.g. convenient/easy/quick to use/fairly accurate (1)
disadvantage e.g. reference to inaccurate measurement (1) [2]

2 **(a)** white (1) [1]

(b) any three from:
pH paper turns blue/pH >7 (1)
description of sublimate e.g. solid formed on sides of tube (1)
reference to smell of the gas (1)
description of condensate (1) max [3]

(c) **(i)** white (1) precipitate (1) [2]

(ii) paper turns blue/pH>7 (1) [1]

(iii) no precipitate/no reaction/no change/colourless/stays clear (1) [1]

(d) effervescence/bubbles/fizz (1) limewater (1) milky/cloudy (1) [3]

(e) **(i)** white (1) precipitate (1) [2]

(ii) no/thin/slight precipitate/no reaction (1) [1]

(f) ammonium (1) chloride (1) [2]

(g) calcium (1) carbonate (1) [2]

[Total: 40]