UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2009 question paper for the guidance of teachers

0620 CHEMISTRY

0620/05 Paper 5 (Practical Test), maximum raw mark 40

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1 observations bubbles/fizz/tube feels hot/magnesium dissolves [1]

lighted splint (1) pops (1) [2]

table of results
initial boxes correctly completed (1)
final boxes correctly completed (1)
comparable to supervisor's results (1) decreasing order (1) [4]

(a) differences correctly completed [1]

(b) all five bars correctly drawn (3), –1 for each incorrect
labelled (1), if points plotted for graph = 1 [4]

(c) **(i)** hydrogen [1]

(ii) exothermic/redox/displacement
not neutralisation/oxidation/reduction [1]

(d) **(i)** experiment 1/A or from student's results ecf [1]

(ii) sulfuric acid was the most concentrated/strongest [1]

(e) **(i)** greater/higher ignore rate [1]

(ii) half the value or half the value from the table/lower/decrease or less [1]

(iii) more/larger volume of acid [1]

(f) one error source from e.g.
heat losses/use of measuring cylinders/magnesium pieces vary in mass/length [1]

2 **(a)** solution **K** colourless
solution **L** colourless
solution **M** colourless (1) for all three correct not white/clear [1]

(b) check pHs from supervisor's results
pH of solution **K** approx 8–12
pH of solution **L** approx 11–14
pH of solution **M** approx 0–3 (2) –1 for any incorrect [2]

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tests on solution K

(c) **(i)** blue precipitate (1)
deep/royal blue solution or precipitate dissolves (1) [2]

(ii) white (1) precipitate (1) [2]

(iii) no reaction/change/colourless solution [1]

tests on solution L

(d) **(i)** blue precipitate (1) [1]

(ii) white precipitate (1) dissolves/clears (1) [2]

(iii) brown (1) [1]

tests on solution M

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

(f) weak (1) alkali/base (1) or ammonia (2) [2]

(g) strong (1) alkali/base/hydroxide (1) or sodium hydroxide (2) [2]

(h) chloride (1) not chlorine ion
acid (1)
or hydrochloric acid (2) [2]

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