UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2007 question paper

0620 CHEMISTRY

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

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.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

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

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1 Table of results

For all Experiments
Initial temperature boxes correctly completed (1)
Final temperature boxes correctly completed (1)
Differences correctly completed (1)
Each experiment comparable to Supervisor ± 3 °C, 4 × 1 = (4) [7]

(a) rapid/fast/violent (1) bubbles/fizz (1) [2]

(b) appropriate scale for y axis (1)
4 bars correctly drawn (2), –1 for incorrect bar, no labels = 1 [3]

(c) compare candidates results

(i) Experiment 1 (1) [1]

(ii) Experiment 4 (1) [1]

(d) correct reference to particle size/surface area (1)
different chemicals used/calcium oxide is more reactive with hydrochloric acid than calcium carbonate (1) [2]

(e) hydrochloric acid (1) solid all gone at end of reaction (1) [2]

(f) temperature changes would be smaller/less (1)
larger volumes of acid (1) [2]

[Total: 20]

2 **(a)**

liquid	colour	pH
P	red/pink	1-3
Q	purple/blue	11-14
R	yellow/orange/red	1-6
S	red	1-3

Colours correct (1), compare supervisor's pH values correct (1) [2]

(b) **(i)** bubbles/fizz (1)
lighted splint (1) pops (1) [3]

(ii)
Q no reaction/change (1)
R bubbles/fizz
S bubbles/fizz (1) [2]

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

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

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

(f) hydrogen (1) [1]

(g) carbon dioxide (1) [1]

(h) hydrochloric acid/HCl (1) [1]

(i) alkali (1) or sodium hydroxide (2) [2]

(j) <u>weak</u> acid (1) [1]

[Total: 20]