

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME for the May/June 2010 question paper
for the guidance of teachers

0620 CHEMISTRY

0620/51

Paper 51 (Practical), 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, which would have considered the acceptability of alternative answers.

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- 1 volume for indicator to change colour completed Expt 1 $5-10 \text{ cm}^3 \pm 5$ [1]
- Table of results for Experiment 1
- initial temperature box completed correctly (1)
other temperature boxes correctly completed (1) i.e. increasing then decreasing
comparable to supervisors (1) [3]
- volume for indicator to change colour completed Expt 2 $15-20 \text{ cm}^3 \pm 5$ [1]
- Table of results for Experiment 2
- initial temperature box completed correctly (1)
other temperature boxes correctly completed (1) i.e. increasing then decreasing
comparable to supervisors (1) [3]
- (a) all points correctly plotted (3), -1 for any incorrect
smooth line graphs or two intersecting straight lines (2)
labels (1) [6]
- (b) value from graph (1)
shown clearly (1) [2]
- (c) pink to colourless **not** clear [1]
- (d) (i) experiment 1 [1]
- (ii) acid C more concentrated (1)
stronger (1)
more collisions (1) max [2] [2]
- (e) room temperature or initial temperature from table (1)
reaction finished owtte (1) [2]
- 2 Tests on solid E
- (a) white/colourless (solid) [1]
- (b) melts/turns into a liquid/drops of liquid at top of test-tube/steam (1)
pH paper turns red/pH 1-4 (1)
brown/yellow gas (1) max [2] [2]
- (c) (i) white (1)
precipitate (1)
with excess dissolves/clears (1) [3]

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- (ii) white precipitate (1)
insoluble/does not dissolve/no change (1) [2]
- (iii) pH 1–4 (1)
no reaction owtte (1) [2]
- (iv) effervescence/fizz/bubbles (1)
pH paper blue/purple/dark green (1) [2]
- (d) acid (1)
not a sulfate (1) [2]
- (e) ammonia (1) [1]
- (f) aluminium (1)
nitrate (1)
hydrated salt/contains water (1) [3]

[Total: 40]