

**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

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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]**