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 cm\(^3\) ±5  
   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 cm\(^3\) ±5
   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
   (ii) acid C more concentrated (1)
        stronger (1)
        more collisions (1) max [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]

(c) (i) white (1)
     precipitate (1)
     with excess dissolves/clears (1) [3]
(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]