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.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.
1 (a) table of results for experiment 1
   initial temperature box completed correctly (1)
   other temperature boxes correctly completed (1)
   comparable to supervisors (1) [3]

   (b) table of results for experiment 2
       initial temperature box completed correctly (1)
       other temperature boxes correctly completed (1)
       comparable to supervisors (1) [3]

   (c) all points correctly plotted (3), –1 for any incorrect
       best fit smooth line graphs (2)
       labels (1) [6]

   (d) value from graph (1) shown clearly (1) [2]

   (e) exothermic (1) [1]

   (f) (i) experiment identified from results obtained (1) [1]
       (ii) acid H is more concentrated/stronger (1) [1]

   (g) room/initial temperature from table (1)
       reaction finished owtte (1) [2]

2 (a) green [1]

   (b) green (1) (precipitate)
       turns brown/rusty at top (1) [2]

   (c) effervescence/fizz/bubbles (1)
       glowing splint (1) glows brighter/relights/burns (1) [3]

   (d) green precipitate (1) [1]

   (e) no reaction/change (1) [1]

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

   (g) blue (1) [1]
(h) green/white/blue (1) according to supervisor's precipitate (1)
    turns green (1) [3]

(i) fizz/bubbles/ammonia (1)
    litmus/indicator paper blue/purple (1) [2]

(j) iron(1) (II) (1)
    sulfate (1) [3]

(k) transition metal (1)
    nitrate (1) [2]

[Total: 40]