1  (c)  bubbles / fizz (1)
    (d)  yellow (1)
    (f)  carbon dioxide (1)
    (g)  ammonia (1)
    (h)  iron (1)  II (1)  ammonium

[Total: 11]

2  (a  (i)  Q  blue/purple (1)  11–14 (1)
    (ii)  Q  no reaction/change (1)
           R  bubbles/fizz (1)
    (c)  bubbles/fizz (1)
           limewater (1)  milky (1)
    (e)  green (1)  precipitate (1)
    (f)  hydrogen (1)
    (g)  carbon dioxide (1)
    (h)  hydrochloric acid/HC\text{I} (1)
    (i)  weak (1)  acid (1)
3 (a) Boxes completed tubes (1) hydrochloric acid (1) electrodes (1) [3]
(b) Electrolysis (1) [1]
(c) Litmus paper (1), bleaches/white (1) [2]

4 (a) To extract the colour owtte (1) [1]
(b) To remove solid/insoluble impurities (1) [1]
(c) Heating/evaporation (1) [1]
(d) Diagram showing spots (1) 3 at different levels (1) [2]

5 (b) (i) white (1), precipitate (1), dissolves/soluble (1) [3]
(ii) white (1), precipitate (1), dissolves/soluble (1) [3]
(d) reference to water (1) e.g. hydrated salt [1]
(e) sulphate (1), not a chloride (1) [2]
(f) carbon dioxide (1), from a carbonate (1) [2]