

**Q1.** Which one of the following is a correct procedure for isolating a sample of hydrated copper(II) sulphate from a mixture of hydrated copper(II) sulphate and barium sulphate?

- A filter, crystallise filtrate, dry the crystals
- B filter, dry the solid on the filter paper
- C add water, filter, dry the solid left on the filter paper
- D add water, filter, crystallise filtrate, dry the crystals

**(Total 1 mark)**

**Q2.** Which one of the following is the electron arrangement of the strongest reducing agent?

- A  $1s^2 2s^2 2p^5$
- B  $1s^2 2s^2 2p^6 3s^2$
- C  $1s^2 2s^2 2p^6 3s^2 3p^5$
- D  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$

**(Total 1 mark)**

**Q3.** Which one of the following statements is correct?

- A The first ionisation energies of the elements in Period 3 show a general decrease from sodium to chlorine.
- B The electronegativities of Group 2 elements decrease from magnesium to barium.
- C The strength of the intermolecular forces increases from hydrogen fluoride to hydrogen chloride.
- D The ability of a halide ion to act as a reducing agent decreases from fluoride to iodide.

**(Total 1 mark)**

**Q4.** Which one of the following solutions would **not** give a white precipitate when added to barium chloride solution?

- A** silver nitrate solution
- B** dilute sulphuric acid
- C** sodium sulphate solution
- D** sodium nitrate solution

**(Total 1 mark)**

**Q5.** An aqueous solution of a sodium salt gave no precipitate when treated with either silver nitrate solution or barium chloride solution. Which one of the following could be the formula of the sodium salt?

- A** NaI
- B**  $\text{Na}_2\text{SO}_4$
- C** NaBr
- D** NaF

**(Total 1 mark)**