Chapter Summary Worksheet

Chapter 11
The periodic table: group 7

Print out and complete this worksheet to generate a summary for Chapter 11.

1 Which is a true statement about hydrogen fluoride?

- ☐ **A** It is more acidic than hydrogen chloride.
- ☐ **B** It is oxidised by concentrated sulfuric acid.
- ☐ **C** It disproportionates in water.
- ☐ **D** It forms white fumes with gaseous ammonia.

2 The reaction $OCl^- + Cl^- + 2H^+ \rightarrow Cl_2 + H_2O$ is

- ☐ **A** disproportionation
- ☐ **B** acid–base
- ☐ **C** redox
- ☐ **D** synthesis

3 The oxidation number of sulfur in $Na_2S_4O_6$ is

- ☐ **A** +2
- ☐ **B** +2.5
- ☐ **C** +6
- ☐ **D** +10

4 Which statement is **not** true?

- ☐ **A** Chlorine oxidises bromide ions to bromine.
- ☐ **B** Hydrogen iodide is more polar than hydrogen bromide.
- ☐ **C** Astatide ions, At^-, reduce Fe^{3+} ions to Fe^{2+} ions.
- ☐ **D** Silver chloride is soluble in concentrated aqueous ammonia.

5 Using starch as an indicator, the colour change at the end point in an iodine/thiosulfate titration is from

- ☐ **A** red-brown to colourless
- ☐ **B** blue to colourless
- ☐ **C** colourless to blue
- ☐ **D** yellow to colourless

6 Which mixture gives steamy fumes?

- ☐ **A** hydrogen chloride and ammonia
- ☐ **B** chlorine and potassium bromide
- ☐ **C** concentrated sulfuric acid and silver bromide
- ☐ **D** silver chloride and aqueous ammonia

7 Which statement about hydrogen bromide is **not** true?

- ☐ **A** It gives a brown solution with chlorine water.
- ☐ **B** It gives a cream precipitate with aqueous silver nitrate.
- ☐ **C** It has a higher boiling temperature than hydrogen chloride.
- ☐ **D** It reacts in a disproportionation reaction with cold aqueous sodium hydroxide.

8 In the estimation of the concentration of an oxidising agent, excess potassium iodide is added before titrating with sodium thiosulfate. The reason for this is

- ☐ **A** all the oxidising agent must react
- ☐ **B** the reaction between the oxidising agent and iodide ions is reversible
- ☐ **C** to ensure that the reaction is complete
- ☐ **D** to ensure that all the iodine atoms in the compounds are converted to iodine molecules

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