OCR
Oxford Cambridge and RSA

# AS Level Chemistry A

**H032/01** Breadth in chemistry

## MCQ Question Set 3
## 3.1 The periodic table

Multiple Choice Questions

**1.** Which element has the highest melting point?

**A** silicon → macromolecular – strong covalent bonds

**B** phosphorus

**C** sulfur } simple molecular – weak intermolecular forces

**D** chlorine

Your answer A

**[1]**

**2.** What is the best explanation for the trend in boiling points down the halogens group?

**A** The covalent bonds become stronger.

**B** The hydrogen bonds become stronger.

**C** The permanent dipole–dipole interactions become stronger.

**D** The induced dipole–dipole interactions (London forces) increase.

Your answer D

**[1]**

**3.** Which silver compound is insoluble in concentrated $NH_3(aq)$?

**A** $AgNO_3$

***B*** $AgCl$

**C** AgBr

**D** AgI

Your answer D

**[1]**

**4.** What determines the order of elements in the Periodic Table?

**A** first ionisation energy

**B** number of electrons in the outer shell

**C** number of protons in the nucleus

**D** relative atomic mass

Your answer C

**[1]**

**5.** The first five successive ionisation energies of an element **Y** are shown below.

| 1st | 2nd | 3rd | 4th | 5th |
|---|---|---|---|---|
| 496 | 4563 | 6913 | 9544 | 13352 |

biggest jump

What is the formula of a chloride of **Y**?

**A** **Y**C$l$

**B** **Y**C$l_2$

**C** **Y**C$l_3$

**D** **Y**C$l_4$

Y is in group 1 ⇒ $Y^+$ $Cl^-$

Your answer A

**[1]**

**6.** Which element has induced dipole–dipole interactions (London forces) in its solid lattice?

**A** boron

**B** magnesium

**C** silicon

**D** sulfur

Your answer D

**[1]**

**7.** Which statement about the periodic table is **not** correct?

**A** The elements are arranged in groups with similar chemical properties.

**B** The elements are arranged in periods with repeating trends in properties.

**C** The elements are arranged in order of increasing atomic number.

**D** The elements in the halogen group increase in reactivity down the group.

Your answer D

**[1]**

## Total Marks for Question Set 3: 6