



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
  - D chlorine
- } simple molecular - weak intermolecular forces

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  $\text{NH}_3(\text{aq})$ ?

- A  $\text{AgNO}_3$
- B  $\text{AgCl}$
- C  $\text{AgBr}$
- D  $\text{AgI}$

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**?



$\text{Y}$  is in group 1  $\Rightarrow \text{Y}^+ \text{Cl}^-$

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**

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