

**GCSE Chemistry A (Gateway Science)**

**J248/02 C4-C6 and C7 Foundation (Foundation Tier)**

**Question Set 1**

Multiple Choice Questions

C4: Predicting and identifying reactions and products

- 1 A student adds sodium hydroxide solution to a small sample of copper(II) chloride solution.

A precipitate is made.

What is the colour of the precipitate?

- A Blue
- B Green
- C Orange
- D White

Your answer

A

[1]

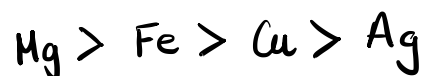
- 2 A student reacts some metals with different salt solutions and records her results.

She places a tick (✓) in her results table if she sees a chemical change and a cross (×) if there is no reaction.

Some of the boxes are blanked out.

	Magnesium chloride	Silver nitrate	Copper(II) sulfate	Iron(II) sulfate
Magnesium		✓	✓	✓
Silver	×		×	×
Copper	×	✓		×
Iron	×	✓	✓	

What is the order of reactivity (**most** reactive to **least** reactive) of these four metals?



- A Iron, silver, magnesium, copper
- B Magnesium, copper, iron, silver
- C Magnesium, iron, copper, silver
- D Silver, copper, iron, magnesium

Your answer

C

[1]

3 Which statement is correct for a Group 1 element?

- A It dissolves in water to form a bleach.
- B It is an inert gas.
- C It is a non-metal.
- D It reacts with water to form hydrogen.

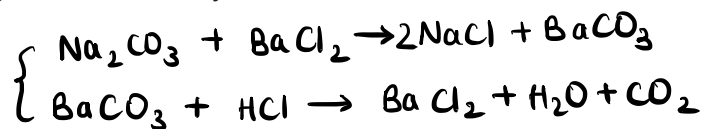
Your answer  D

[1]

4 A student is testing sodium carbonate solution.

She adds barium chloride solution followed by excess dilute hydrochloric acid. Which of these observations would **not** be seen?

- A Colourless solution at the end
- B Gas bubbles when the dilute acid is added
- C White precipitate formed when the barium chloride solution is added
- D White precipitate formed when the dilute acid is added



Your answer  D

[1]

5 Lithium, sodium and potassium are Group 1 elements.

What happens when these elements are added to water?

- A Some float and carbon dioxide gas and an alkaline solution are made.
- B Some float and hydrogen gas and an alkaline solution are made.
- C They all float and hydrogen gas and an acidic solution are made.
- D They all float and hydrogen gas and an alkaline solution are made.

Your answer  D

[1]

6 Damp litmus paper is used to test for chlorine gas.

Which statement describes the correct result of the test for chlorine gas?

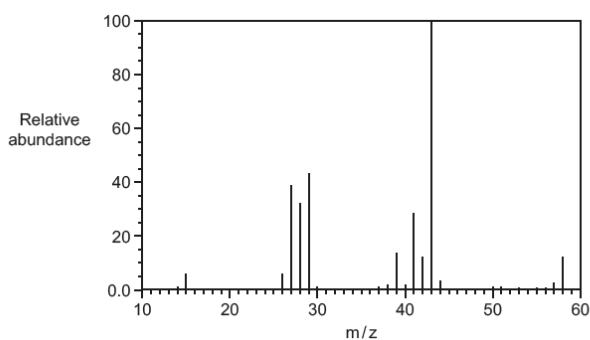
- A Damp blue litmus paper turns red then white.
- B Damp blue litmus paper turns white then red.
- C Damp red litmus paper turns blue then white.
- D Damp red litmus paper turns white then blue.

Your answer

C

[1]

7 Look at the mass spectrum of a carbon compound.



Which carbon compound is the mass spectrum from?

- A  $C_2H_2$
- B  $C_2H_5^+$
- C  $C_3H_7^+$
- D  $C_4H_{10}$

Your answer

D

[1]

8 Which of these elements is a **transition metal**?

- A Calcium
- B Caesium
- C Carbon
- D Cobalt

Your answer

D

[1]

9 Lithium, sodium and potassium all react with water.

In all three reactions the same gas is produced.

What is the name of the gas?

- A Carbon dioxide
- B Chlorine
- C Hydrogen
- D Oxygen

Your answer

C

[1]

10 Which statement describes the test for **chlorine gas**?

- A A lighted splint makes a squeaky pop.
- B Limewater turns milky.
- C A glowing splint re-lights.
- D Damp litmus paper is bleached.

Your answer

D

[1]

11 Which statement describes the properties of **transition metals**?

- A High melting point, shiny when freshly cut and brittle.
- B Good conductors of electricity, low density and low melting point.
- C Good conductors of electricity, strong and malleable.
- D Strong, malleable and low density.

Your answer

C

[1]

- 12 Which statement describes the **advantages** of instrumental methods of analysis?
- A Instruments can analyse very small amounts and carry out the analyses slowly.
  - B Instruments are very accurate and use large amounts of substances.
  - C Instruments are very accurate and carry out the analyses slowly.
  - D Instruments are very accurate and can run all the time.

Your answer

D

[1]

**Total Marks for Question Set 1: 12**

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