

(Metals and non-metals)

Q1. (2018)

Iron is a transition metal.

Sodium is a Group 1 metal.

Give **two** differences between the properties of iron and sodium.**[2 marks]**

1 _____

2 _____

Q2. (2019)

Hydrogen peroxide decomposes in the presence of a catalyst.

Which elements are often used as catalysts?

[1 mark]Tick (✓) **one** box.

Alkali metals

☐

Halogens

☐

Transition metals

☐

Q3. (2020)

This question is about metals and the reactivity series.

Which **two** statements are properties of most transition metals?**[2 marks]**Tick (✓) **two** boxes.

They are soft metals.

☐

They form colourless compounds.

☐

They form ions with different charges.

☐

They have high melting points.

☐

They have low densities.

☐

Q4.a) (2021)

This question is about elements, compounds and mixtures.

Substance **A** contains only one type of atom.

Substance **A** does **not** conduct electricity.

Which type of substance is **A**?

[1 mark]

Tick (✓) **one** box.

Compound

☐

Metallic element

☐

Mixture

☐

Non-metallic element

☐

Q4.b) (2021)

Substance **B** contains two types of atoms.

The atoms are chemically combined together in fixed proportions.

Which type of substance is **B**?

[1 mark]

Tick (✓) **one** box.

Compound

☐

Metallic element

☐

Mixture

☐

Non-metallic element

☐

Q5.(2022)

This question is about elements, compounds and mixtures.

Which type of substance is hydrogen?

[1 mark]

Tick (✓) **one** box.

Element

☐

Compound

☐

Mixture

☐

Q6.a)(2022)

This question is about metals and non-metals.

Figure 15 shows an outline of part of the periodic table.

Figure 15



Element **Q** is a dull solid with a melting point of 44 °C.

Element **Q** does not conduct electricity.

Which section of the periodic table in **Figure 15** is most likely to contain element **Q**?

[1 mark]

Tick (✓) **one** box.

A ☐

B ☐

C ☐

D ☐

Q6.b)(2022)

Element **R** forms ions of formula R^{2+} and R^{3+}

Which section of the periodic table in **Figure 15** is most likely to contain element **R**?

[1 mark]

Tick (✓) **one** box.

A ☐

B ☐

C ☐

D ☐

Q7. (2023)

This question is about carbon.

Which type of substance is carbon?

[1 mark]

Tick (✓) **one** box.

Compound

☐

Element

☐

Mixture

☐

Q.8.(2023)

Platinum is used to make jewellery.

Suggest **one** reason why platinum is used to make jewellery.

[1 mark]

Q9.(2023)

Copper is a transition element.

Sodium is a Group 1 element.

What are **two** differences between copper and sodium?

[2 marks]

Tick (✓) **two** boxes.

Copper has a lower melting point.

☐

Copper is harder.

☐

Copper is less dense.

☐

Copper is less reactive.

☐

Copper is less strong.

☐

Q10.(2023)

Atomic Structure and the Periodic Table

<http://www.pcfgstudy.com>

The metals aluminium and copper can be used to make pans for cooking.

Table 2 shows information about the two metals.

The higher the value for thermal conductivity, the better the metal conducts thermal energy.

Table 2

	Aluminium	Copper
Thermal conductivity in arbitrary units	250	400
Density in g/cm ³	2.7	8.9
Cost of metal per kg in £	1.50	7.00

Evaluate the use of pans made of aluminium and of copper.

Use **Table 2**.

[4 marks]

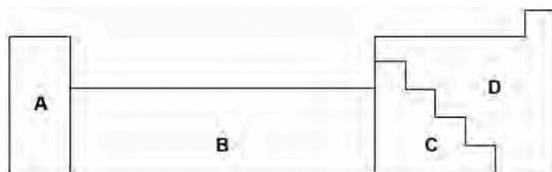
Q11.(2024)

Elements are metals or non-metals.

Figure 2 shows an outline of the periodic table.

The periodic table is divided into sections.

Figure 2



Where are metals found in the periodic table?

[1 mark]

Tick (✓) **one** box.

Section **A** only

☐

Sections **A, B** and **C**

☐

Sections **B, C** and **D**

☐

Section **D** only

☐

Q12.(2024)

Which **two** of the following are typical properties of a transition metal?

[2 marks]

Tick (✓) **two** boxes.

Can be bent and shaped

☐

Good conductor of electricity

☐

Low density

☐

Low melting point

☐

Poor conductor of heat

☐