The Periodic Table – Exam Questions

2012 - Higher

- Describe the reaction of a named alkali metal with water and name a product of the reaction.

2012 - Higher

- Alloy car wheels are made from an alloy of aluminium or magnesium. Name another alloy and give a use for it.

2012 - Higher

- Using their atomic symbols, arrange the metals, copper, calcium, zinc and magnesium in order of decreasing reactivity with dilute hydrochloric acid.

- Name two non-metallic elements.

2012 - Ordinary

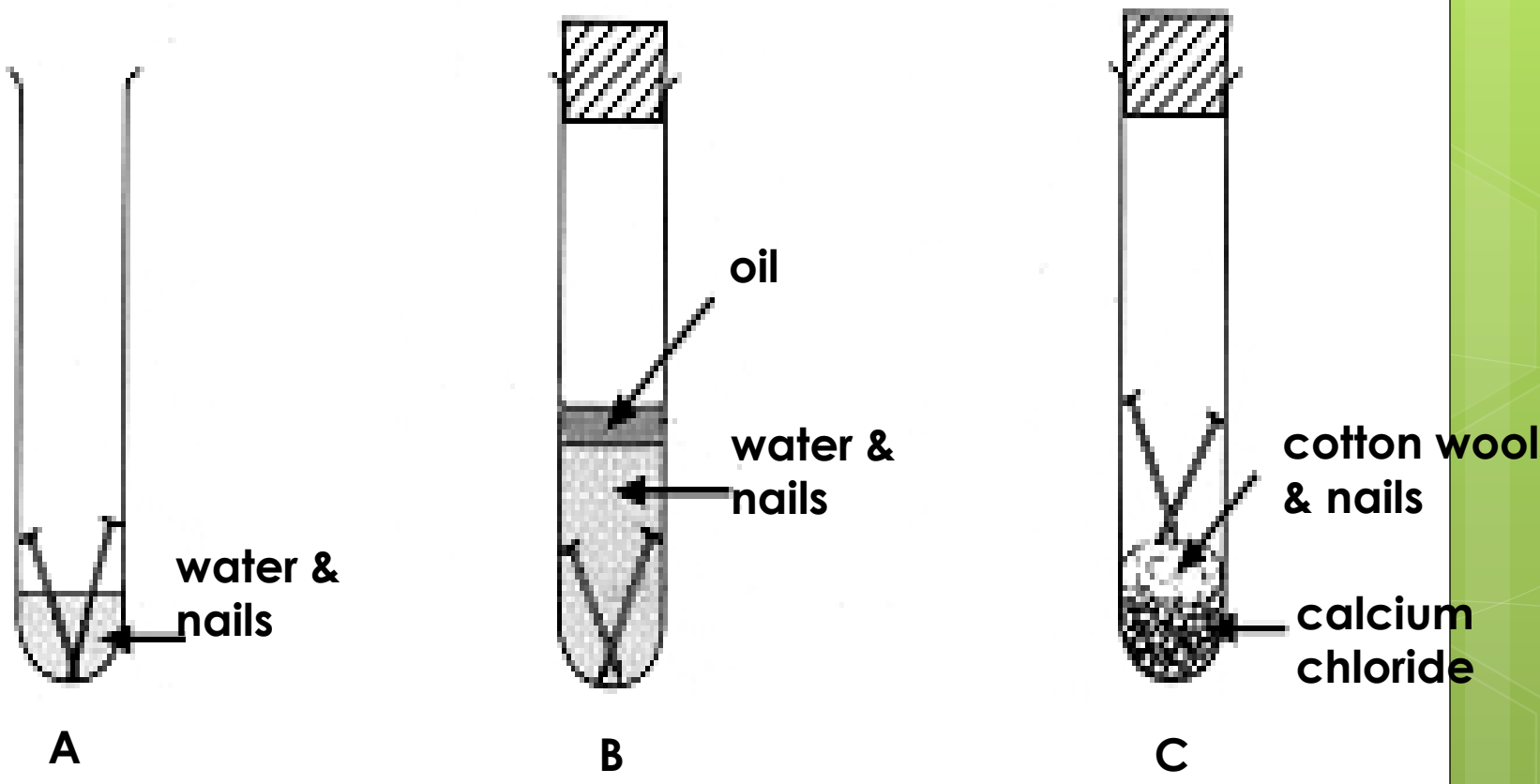
- **Calcium** is a member of the **Group II** elements in the Periodic Table. What **name** is given to the Group II elements?

2012 - Ordinary

- Some elements are **non-metals**. In the table write the letter **N** beside the names of **two non-metals**.

	Copper
	Nitrogen
	Sulfur
	Magnesium

- **Zinc metal reacts with hydrochloric acid**, **HCl**. Bubbles of gas are given off.
- **Name** the gas given off.
- Give the **test** for this gas.

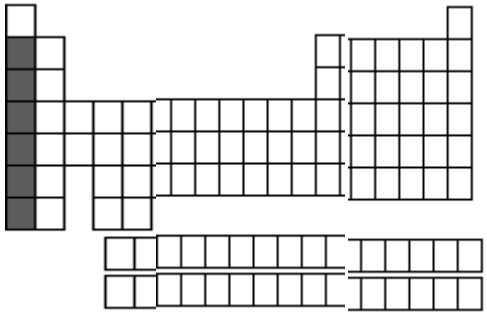

water &
nails
A
oil
water &
nails
B
cotton wool
& nails
calcium
chloride
C

- The diagram shows an apparatus set up by a student to investigate **the rusting of iron nails**. Nails were placed in the test tubes as shown.
- After a number of days the nails in test tube **A** only, had a coating of rust.

- Name **two conditions** necessary for rusting of iron to occur.

- Name one method that can be used to **prevent** the rusting of iron.

2011 - Higher



- The diagram is of the periodic table Name the group of elements that is shaded.

- Give a chemical property that elements in this group have:

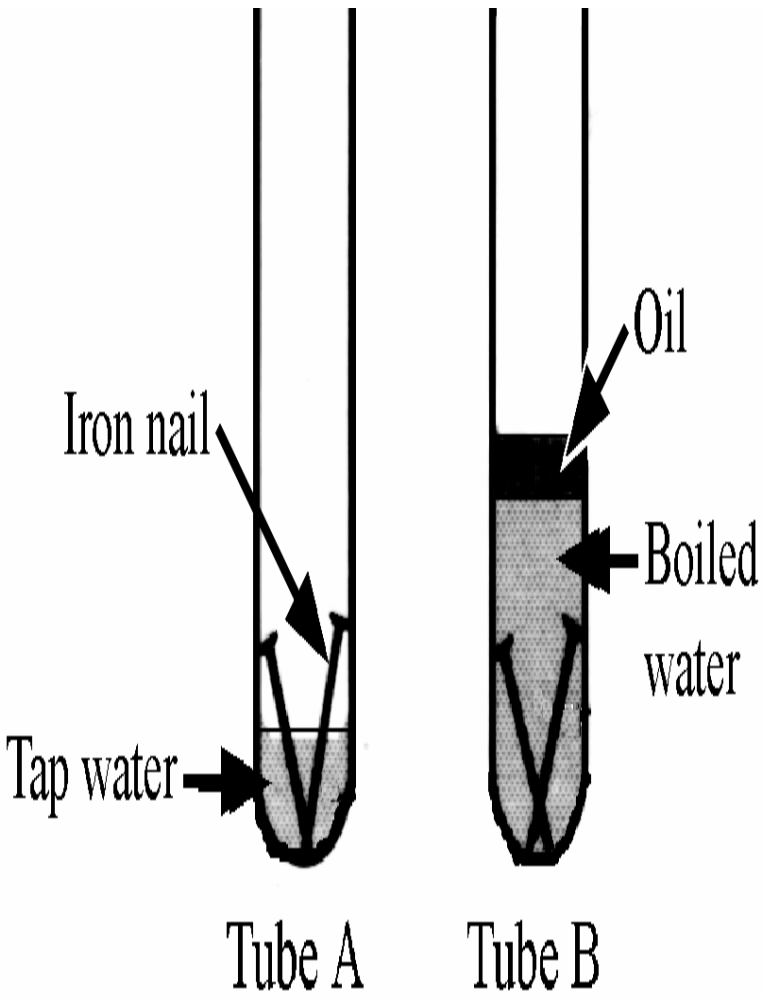
2011 - Higher

- Give one condition necessary for rusting to occur
- Describe a method of preventing rusting

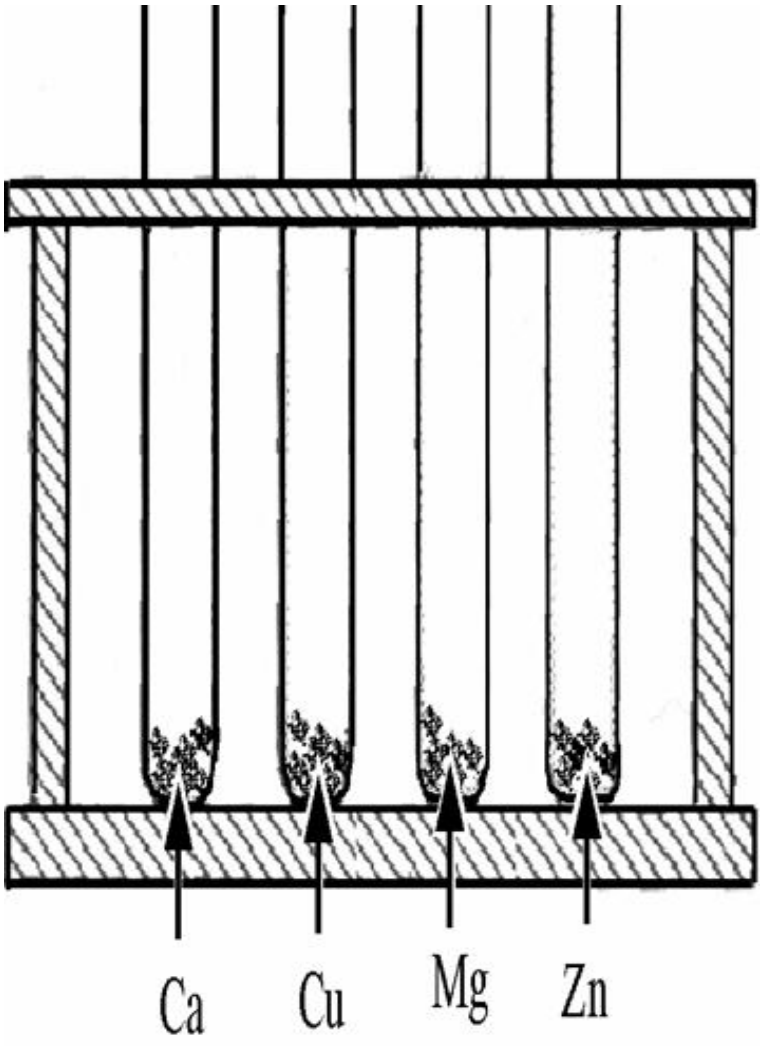
2010 - Higher

- Metals conduct two forms of energy very well. Name the **two *forms of energy***.

- In ***which tube*** did the nails ***rust***?
- Why was ***boiled water*** used in tube B?
- What is the ***function*** of the oil in tube B?
- What ***conclusion*** can be drawn from this experiment?



- When a metal reacts with water or a dilute acid it produces a gas.
- The water in this experiment was added to the metal at room temperature.



- Name the ***gas*** produced by the reaction of a metal used in this experiment with water or a dilute acid.
- Name a ***dilute acid suitable*** for use in this experiment.
- Name a ***metal***, used in this experiment that ***reacts with water*** at room temperature.
- Name a ***metal***, used in this experiment that ***does not react*** with the ***dilute acid*** that you have named above.
- List the ***metals*** used in this experiment in ***decreasing order of reactivity with the dilute acid*** named (most reactive first).
- Give **one *safety precaution*** that you would take when performing this experiment.

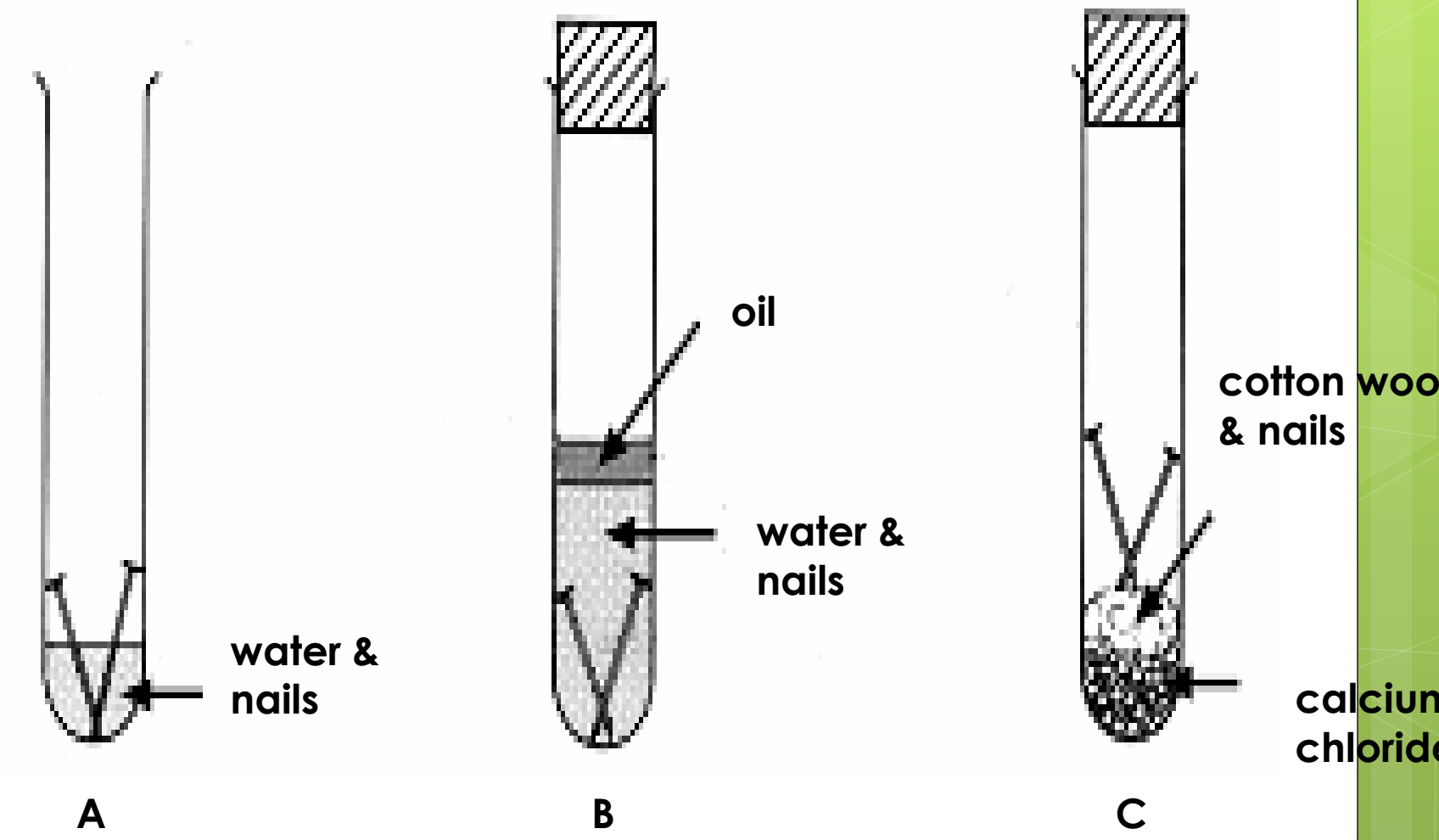
2010 - Ordinary

- Choose two **properties of metals** from the list

Dull in colour
Shiny
Can be stretched

- Choose an alloy from the list.
- Give one use for this alloy.

Gold
Bronze
Iron
Solder


water &
nails
A
oil
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B
cotton woo
& nails
calciun
chloride
C

- **In which** test tube **A**, **B or C** did the nails rust?
- What is the purpose of the **layer of oil** in test tube **B**?
- **Name** one method that can be used to prevent the rusting of iron.

- **Zinc metal reacts with hydrochloric acid**, **HCl**. Bubbles of gas are given off.
- **Name** the gas given off.
- Give the **test** for this gas.

2009 - Higher

- What is an ***alloy***?

- Name an ***alloy***, other than bronze, and give
- ***one use*** for it.

- Metals are malleable and ductile. Explain the underlined terms.

2009 – Ordinary

- In each case write the **symbol** of the metallic element beside its name in the table on the right

	Aluminium
	Copper

2008 - Higher

- By what ***name*** are group two metals known?

- Why are the ***noble gases***, group 8/0, ***very chemically unreactive***?

2008 - Higher

- The following *metals* were reacted with *dilute acid*: **copper**, **magnesium**, **calcium** and **zinc**. The *reactivity* of *each metal* was noted. List these metals in ***order of decreasing reactivity***.

- Name a ***method*** of treating iron that helps ***prevent rusting***.

- How does the ***method*** that you have named ***work***?

2008 - Ordinary

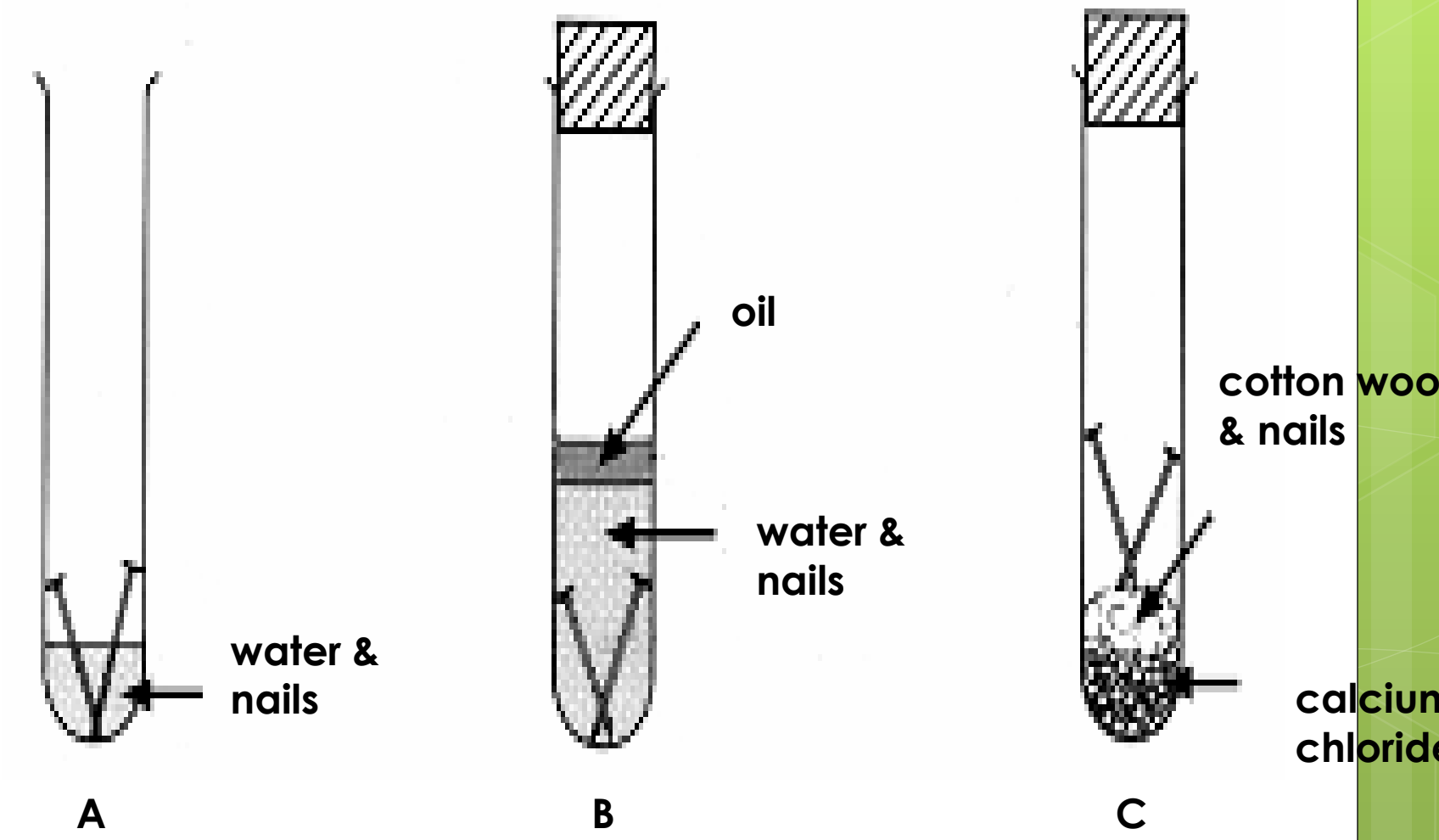
- Solids can be metals or non-metals. Identify **two non-metals** from the elements whose symbols are shown on the right

Cu	S
N	Ag

- Metals have certain characteristics.

- In the table, write **M** beside each of **two** characteristics of metals

	Dull
	Can be stretched
	Shiny


water &
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A
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cotton woo
& nails
calciun
chloride
C

- **Why** did the nails in test tube **A** rust?
- **Why** did the nails in **B** not rust?
- **Name** one method that can be used to prevent the rusting of iron.

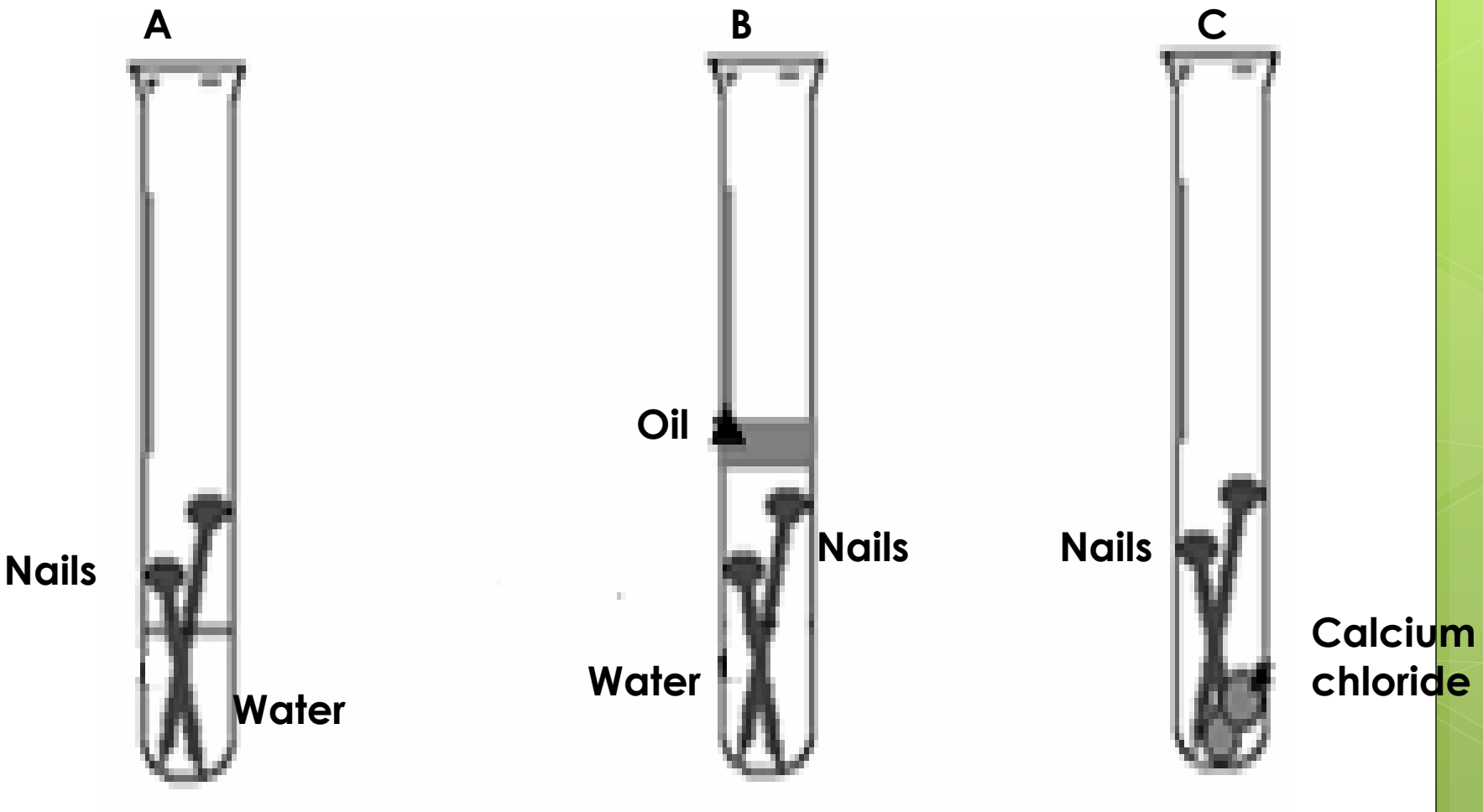
2007 - Higher

- Give **two** properties of alkali metals.

2007 - Ordinary

- In the table on the right write the letter **A** beside the name of each of the **two alloys** listed.

	Aluminium
	Brass
	Diamond
	Iron
	Solder


A
Nails
Water
B
Oil
Nails
Water
C
Nails
Calcium chloride

- In which test tube, **A**, **B** or **C**, will the nails rust?

- Why is the water in test-tube B **boiled** and **cooled** and then **covered with a layer of oil**?

2006 - Higher

- Name an ***alkaline earth metal***.

2006 - Higher

- Reactivity tests were carried out on calcium, copper, magnesium and zinc in four test tubes containing an acid.

- State ***one thing*** you would do ***to make the tests fair***.

- List the **four *metals in order of reactivity with the acid***, starting with the ***most reactive***.

2006 - Higher

- Iron and steel are can suffer from ***corrosion***. Iron and steel show ***visible signs of***
- ***corrosion***. **Give one visible sign of corrosion.**

- Oxygen and water together are necessary for the corrosion of iron or steel. Describe, with the aid of labelled diagrams, experiments to show that:

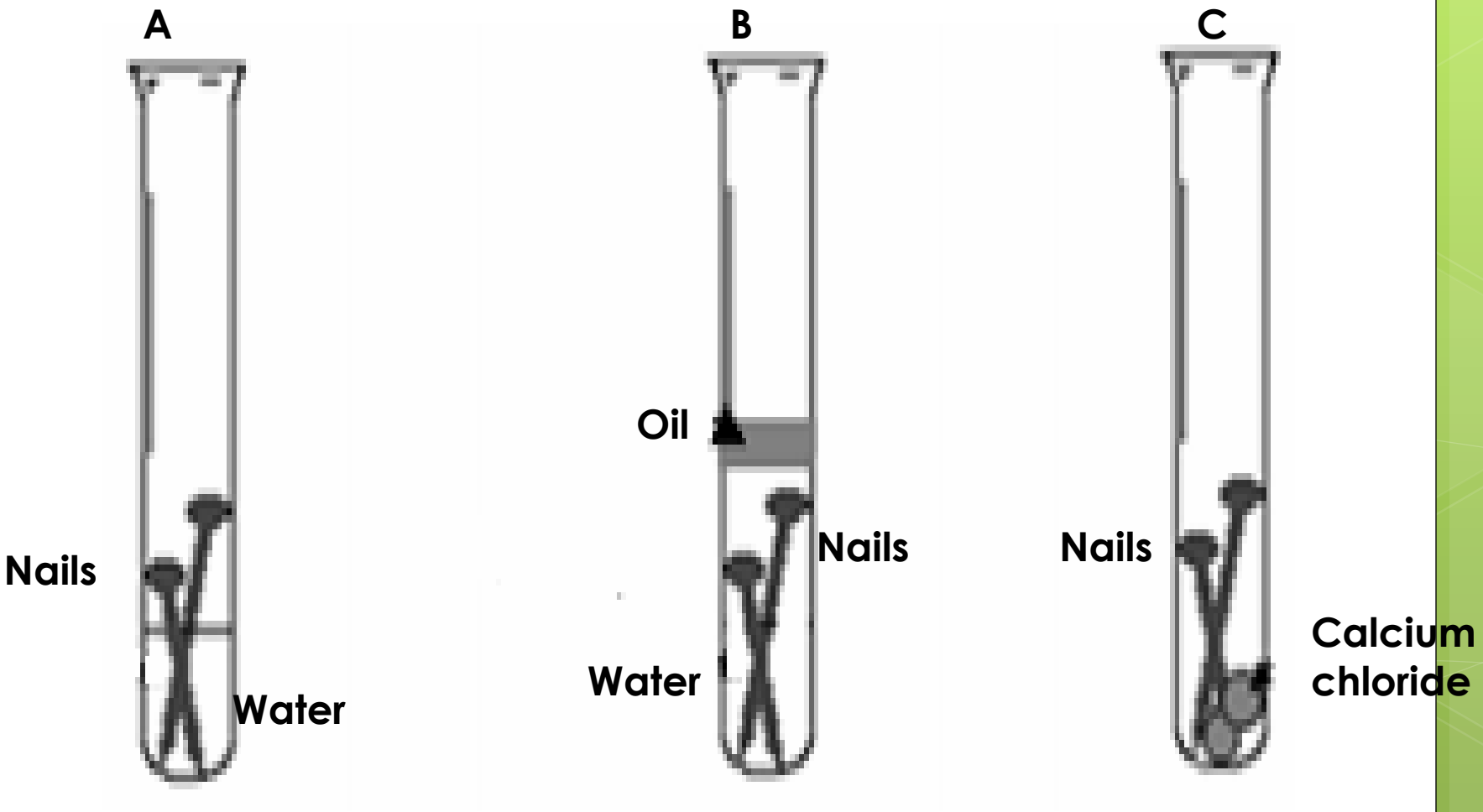
(*i*) ***oxygen alone***, will ***not*** lead to the ***corrosion of iron (or steel)***

(*ii*) ***water alone*** will ***not*** lead to the ***corrosion of iron (or steel)***.

2006 - Ordinary

- In which test tube **A**, **B**, or **C** will the nail rust?

- **What** is the function of the calcium chloride in test tube **C**?


A
Nails
Water
B
Oil
Nails
Water
C
Nails
Calcium chloride