NAME _____ **INDEX NUMBER** _____

SCHOOL_____ **DATE** _____

AIR AND COMBUSTION

1. 1989 Q 11

Explain why a mixture of copper oxide and magnesium reacts when heated while there is no reaction when a mixture of copper and magnesium oxide is heated. (2 Marks)

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2. 1992 Q 18

(a) Write the formula for the oxide of

(i) Magnesium (1 Mark)

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(ii) Chlorine (1 Mark)

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(b) Write an equation for the reaction between the oxide of chlorine and water (1 Mark)

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3. 2001 Q 19

Explain why burning magnesium continue to burn in a gas jar full of sulphur dioxide while a burning splint would be extinguished. (3 Marks)

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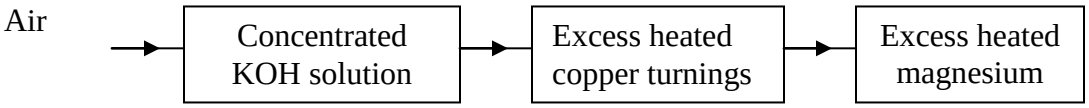
4. 2003 Q 16

Air was passed through several reagents shown in the flow chart below.



(a) Write an equation for the reaction which takes place in the chamber with magnesium powder (1 mark)

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(b) Name one gas, which escapes from the chamber containing magnesium powder. Give a reason for your answer (2 marks).

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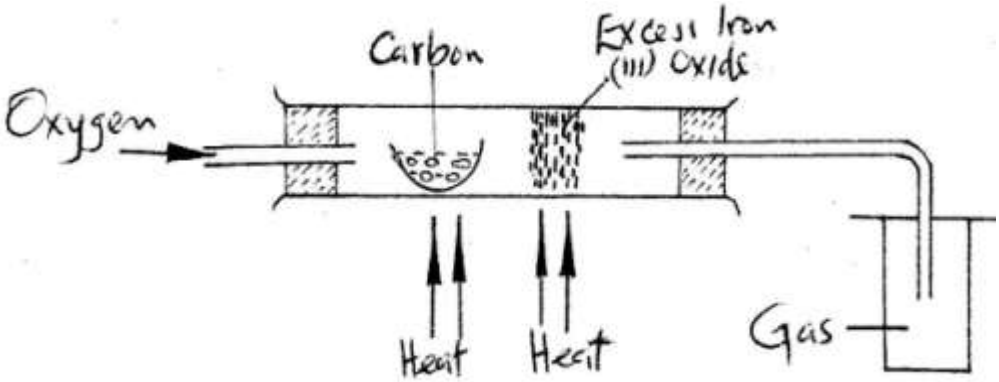
5. 2005 Q 23

The set – up below was used to obtain a sample of iron



Write two equations for the reactions which occur in the combustion tube (2 marks)

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6. 2005 Q 5 PP2

In an experiment, a piece of magnesium ribbon was cleaned with steel wool. 2.4 g of the clean magnesium ribbon was placed in a crucible and completely burnt in oxygen. After cooling, the product weighed 4.0 g

(a) Explain why it was necessary to clean the magnesium ribbon (1 mark)

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(b) What observation was made in the crucible after burning (1 mark)

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(c) Why was there an increase in mass? (1 mark)

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(d) Write the equation for the reaction which took place in the crucible (1 mark)

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(e) The product in the crucible was shaken with water and filtered. Explain the observation which was made when blue and red litmus papers were dropped into the filtrate. (3 marks)

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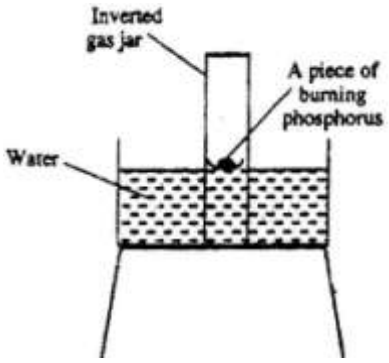
7. 2006 Q 2

The diagram below represents a set-up that was used to show that part of air is used during burning.



a) Given that phosphorus used was in excess, draw a diagram of the set-up at the end of the experiment (when there was no further observable change). (1 mark)

b) Suggest one modification that should be made on the apparatus if the percentage of the air used is to be determined. (1 mark)

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8. 2007 Q 1a

(a) State two factors that should be considered when choosing fuel for cooking (2 marks)

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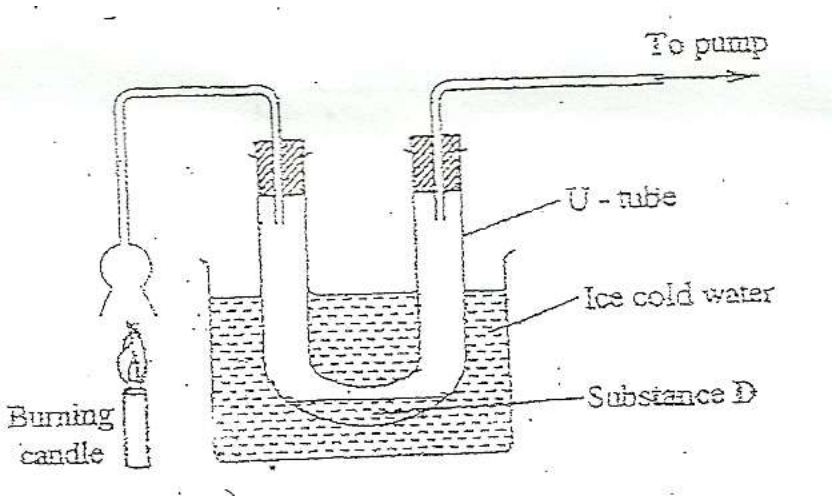
9. 2009 Q 4

An experiment was set up shown in the diagram below.



(a) Identify substance **D**. ……..... (1 mark)

(b) Describe how the other product of the burning candle could be prevented from getting into the environment (2 marks)

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10. 2009 Q 21

Give the name of the product formed when magnesium reacts with phosphorus. (1 mark)

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11. 2012 Q1 P1

Charcoal is a fuel that is commonly used for cooking. When it burns it forms two oxides.

(a) Name the **two** oxides (2 marks)

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(b) State **one** use of the two oxides (1 mark)

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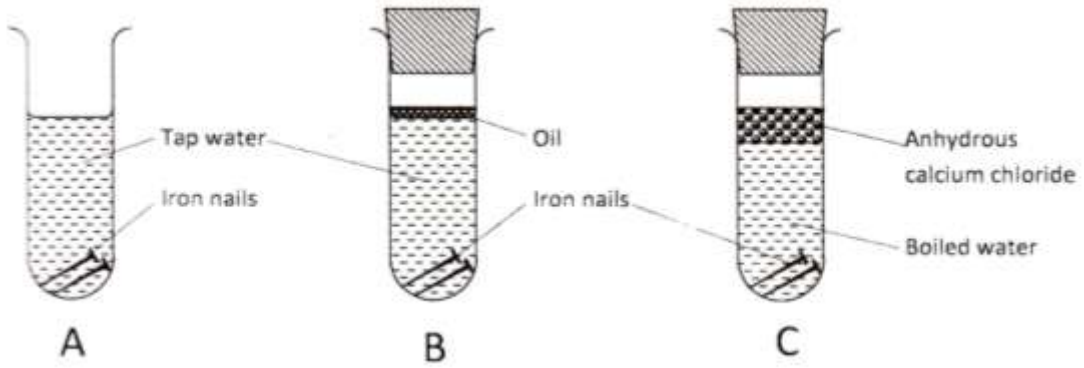
12. 2012 Q24 P1

The following set up of three-tubes was used to investigate rusting of iron. Study it and answer the questions that follow.



(a) Give a reason why rusting did not occur in test-tube C. (1 mark)

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(b) Aluminium is used to protect iron sheets from rusting. Explain **two** ways in which aluminium protects iron from rusting. (2 marks)

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