



Centre Number

71

Candidate Number

General Certificate of Secondary Education
2010–2011

Science: Double Award (Modular)

Using Materials and Understanding Reactions
End of Module Test

Foundation Tier

B

[GDB01]



WEDNESDAY 10 NOVEMBER 2010, AFTERNOON

TIME

45 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
Write your answers in the spaces provided in this question paper.
Answer **all twelve** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 50.
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.
A Data Leaflet, which includes a Periodic Table of the elements, is provided for your use.

For Examiner's
use only

Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

Total
Marks



3 Copper and aluminium are both metals. They have different uses.

(a) Give **two** reasons why cooking foil is made from aluminium.

Image of aluminium foil is not available due to copyright

1. _____

2. _____

_____ [2]

(b) Give **two** reasons why hot water tanks are made from copper.

Image of copper hot water tank is not available due to copyright

1. _____

2. _____

_____ [2]

Examiner Only	
Marks	Remark

- 4 Read the following passage carefully and then answer the questions which follow.

Common names for substances can be misleading. Pencil lead is actually graphite, which is a form of carbon, not lead. Tin foil is made from aluminium, not tin. Dry ice is not solid water but solid carbon dioxide. When we think of salt we usually mean sodium chloride but sea salt contains many different compounds.

From the passage give the name of:

- (a) a non-metallic element

_____ [1]

- (b) a metallic element

_____ [1]

- (c) an ionic compound

_____ [1]

One of the compounds in sea salt contains the elements potassium and iodine only.

- (d) Give the name for this compound.

_____ [1]

Examiner Only

Marks Remark

6 In parts of Northern Ireland the water is described as **hard**.

(a) What effect has hard water on

(i) soap? _____

(ii) detergent? _____

_____ [2]

(b) Give **one** method of removing hardness from water.

_____ [1]

7 This question is about chemical formulae.

You may find your Data Leaflet helpful.

(a) What is the chemical symbol for potassium?

_____ [1]

(b) Glucose has the formulae $C_6H_{12}O_6$.

How many atoms are present in a glucose molecule?

_____ [1]

(c) Ethanoic acid has the formula CH_3COOH .

How many **different** elements are present in an ethanoic acid molecule?

_____ [1]

(d) Name the substance whose formula is $Ca(HCO_3)_2$.

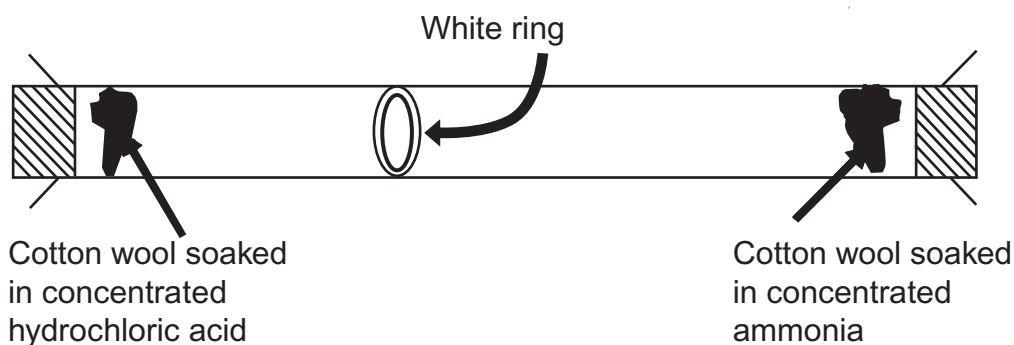
_____ [1]

Examiner Only

Marks

Remark

- 8 The apparatus below is used in a warm room to investigate the movement of particles.



After about **5 minutes**, a white ring of ammonium chloride forms.

- (a) What **word** is used to describe the movement of particles shown by using this apparatus?

_____ [1]

- (b) If this experiment was repeated in a **colder** room what effect would this have on the formation of the white ring?

_____ [1]

- (c) Why is the white ring formed closer to the cotton wool soaked in concentrated hydrochloric acid?

_____ [1]

- (d) What is the formula of ammonium chloride? (You may find your Data Leaflet useful.)

_____ [1]

Examiner Only

Marks Remark

9 The table below shows the atomic number, mass number and electronic arrangement (configuration) of four particles.

(a) Complete the table by filling in the blank spaces.
(You will need your Data Leaflet to find the missing mass numbers.)

Particle	Atomic Number	Mass Number	Electronic arrangement
A	6		2,4
B	1	2	1
C			2,3
D	1	3	

[4]

(b) (i) Which of the particles, A, B, C or D are isotopes?

_____ and _____ are isotopes [1]

(ii) Explain your answer to (b)(i).

_____ [1]

Examiner Only	
Marks	Remark

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