

# Extraction & Uses of Metals

## Question Paper

Level	GCSE
Subject	Chemistry
Exam Board	Edexcel IGCSE
Module	Single Award (Paper 2C)
Topic	Chemistry in Industry
Sub-Topic	Extraction & Uses of Metals
Booklet	Question Paper

**Time Allowed:** 16 minutes

**Score:** /13

**Percentage:** /100

**Grade Boundaries:**

A*	A	B	C	D	E	U
>85%	75%	70%	60%	55%	50%	<50%

1 Iron and aluminium are two important metals extracted from their ores on a large scale.

(a) In the extraction of iron, three different raw materials are put into the top of a blast furnace.

Name the main compound present in the following raw materials.

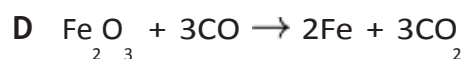
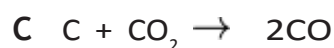
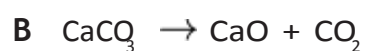
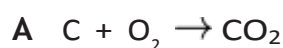
(i) Haematite

(1)

(ii) Limestone

(1)

(b) The following equations represent reactions in the blast furnace.



Choose from the letters **A**, **B**, **C**, **D** or **E** to answer parts (i) – (iv).

Each letter may be used once, more than once or not at all.

(4)

(i) A reaction that is used to produce heat .....

(ii) A neutralisation reaction .....

(iii) A decomposition reaction .....

(iv) A reaction that forms a reducing agent .....

(c) Molten iron and another molten substance collect at the bottom of the blast furnace.

What is the common name of this other molten substance?

(1)

(d) Aluminium is extracted from its ore by electrolysis. This is a more expensive process than using a blast furnace.

(i) Why is a different method used for aluminium?

(1)

(ii) State the major reason for the high cost of extracting aluminium.

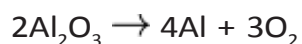
(1)

(e) Coke used in the blast furnace contains carbon. Carbon is also used in the extraction of aluminium, but for a different purpose.

What is this purpose?

(1)

(f) ) The extraction of aluminium can be represented by the chemical equation:



Write the two ionic half-equations that can also be used to represent this extraction.

(3)

Half-equation 1 .....

Half-equation 2 .....

**(Total for Question 1 = 13 marks)**