

8.2 Types of Oxides

Question Paper

Level	IGCSE
Subject	Chemistry (0620)
Exam Board	Cambridge International Examinations (CIE)
Topic	Acids Bases and Salts
Sub-Topic	8.2 Types of Oxides
Booklet	Question Paper

Time Allowed: 19 minutes

Score: /16

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

4 The oxide of element X forms a solution with pH4.

The oxide of element Y forms a solution that turns Universal Indicator blue.

Which row correctly classifies elements X and Y?

	element X	element Y
A	metal	metal
B	metal	non-metal
C	non-metal	metal
D	non-metal	non-metal

5 Which statement about oxides is correct?

- A** A solution of magnesium oxide will have a pH less than 7.
- B** A solution of sulfur dioxide will have a pH greater than 7.
- C** Magnesium oxide will react with nitric acid to make a salt.
- D** Sulfur dioxide will react with hydrochloric acid to make a salt.

6 Only two elements are liquid at 20°C. One of these elements is shiny and conducts electricity.

This suggests that this element is a1..... and therefore its oxide is2..... .

Which words correctly complete gaps 1 and 2?

	1	2
A	metal	acidic
B	metal	basic
C	non-metal	acidic
D	non-metal	basic

7 Element X forms an oxide, XO, that neutralises sulfuric acid.

Which row describes X and XO?

	element X	nature of oxide, XO
A	metal	acidic
B	metal	basic
C	non-metal	acidic
D	non-metal	basic

8 Which of the following are properties of the oxides of non-metals?

	property 1	property 2
A	acidic	covalent
B	acidic	ionic
C	basic	covalent
D	basic	ionic

9 Two oxides, X and Y, are added separately to dilute sulfuric acid and dilute sodium hydroxide.

X reacts with dilute sulfuric acid but Y does not react.

Y reacts with aqueous sodium hydroxide but X does not react.

Which type of oxide are X and Y?

	acidic oxide	basic oxide	metallic oxide
A	X	Y	X
B	X	Y	Y
C	Y	X	X
D	Y	X	Y

10 The diagram shows one period of the Periodic Table.

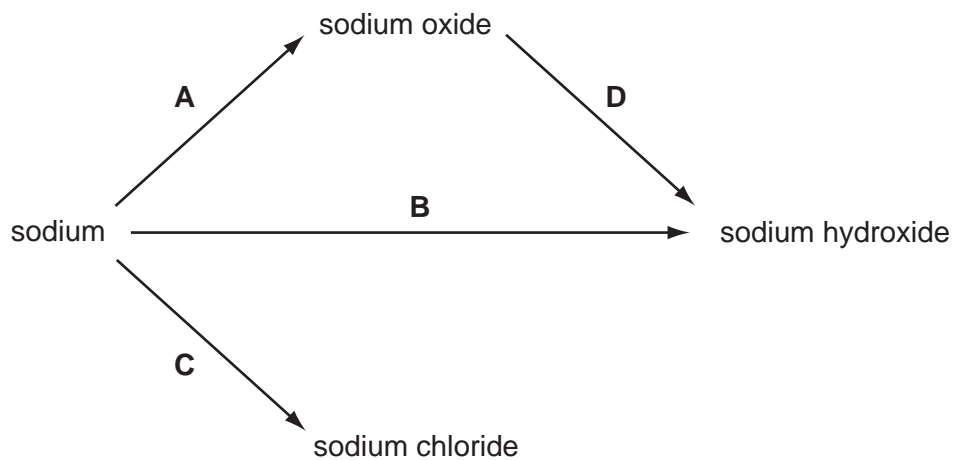
Li	B	B	C	N	O	F	Ne
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Which two elements form acidic oxides?

- A carbon and lithium
- B carbon and neon
- C carbon and nitrogen
- D nitrogen and neon

11 Some reactions involving sodium are shown.

Which reaction does **not** involve the formation of a base?



12 Five elements have proton numbers 10, 12, 14, 16 and 18.

What are the proton numbers of the three elements that form oxides?

- A** 10, 12 and 14
- B** 10, 14 and 18
- C** 12, 14 and 16
- D** 14, 16 and 18

13 Which property is **not** characteristic of a base?

- A** It reacts with a carbonate to form carbon dioxide.
- B** It reacts with an acid to form a salt.
- C** It reacts with an ammonium salt to form ammonia.
- D** It turns universal indicator paper blue.

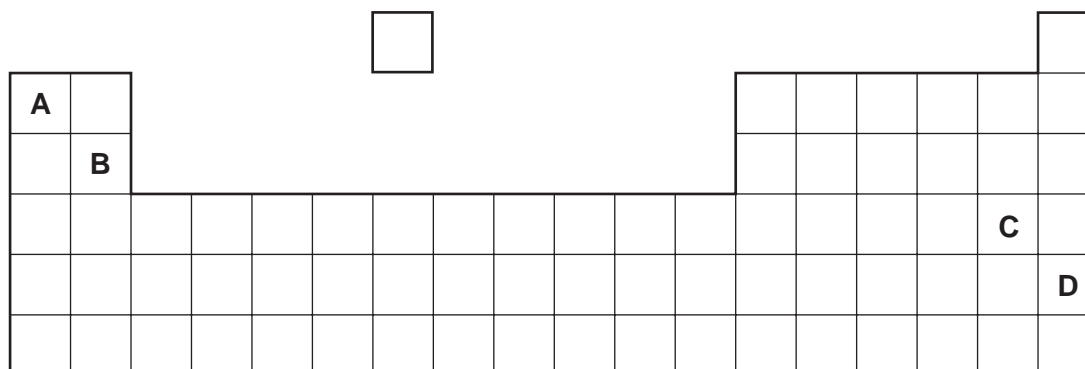
14 Carbon dioxide is an acidic oxide that reacts with aqueous calcium hydroxide.

Which type of reaction takes place?

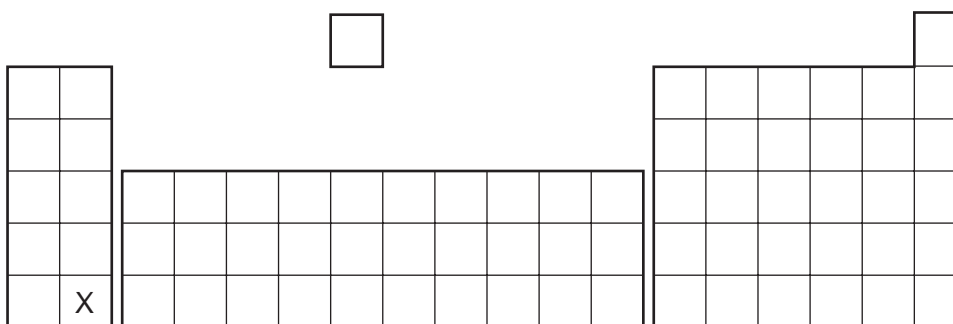
- A** decomposition
- B** fermentation
- C** neutralisation
- D** oxidation

15 The positions in the Periodic Table of four elements are shown.

Which element is **most** likely to form an acidic oxide?



16 The diagram shows the position of an element X in the Periodic Table.



What is the correct classification of element X and its oxide?

	X	oxide of X
A	metal	acidic
B	metal	basic
C	non-metal	acidic
D	non-metal	basic