

1 Part of the Periodic Table is shown.

Which element forms an acidic oxide?

2 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
<b>A</b>	metal	metal
<b>B</b>	metal	non-metal
<b>C</b>	non-metal	metal
<b>D</b>	non-metal	non-metal

3 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.

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

This suggests that this element is a .....1..... and therefore its oxide is .....2..... .

Which words correctly complete gaps 1 and 2?

	1	2
<b>A</b>	metal	acidic
<b>B</b>	metal	basic
<b>C</b>	non-metal	acidic
<b>D</b>	non-metal	basic

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

	property 1	property 2
<b>A</b>	acidic	covalent
<b>B</b>	acidic	ionic
<b>C</b>	basic	covalent
<b>D</b>	basic	ionic

6 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
<b>A</b>	X	Y	X
<b>B</b>	X	Y	Y
<b>C</b>	Y	X	X
<b>D</b>	Y	X	Y

7 The diagram shows one period of the Periodic Table.

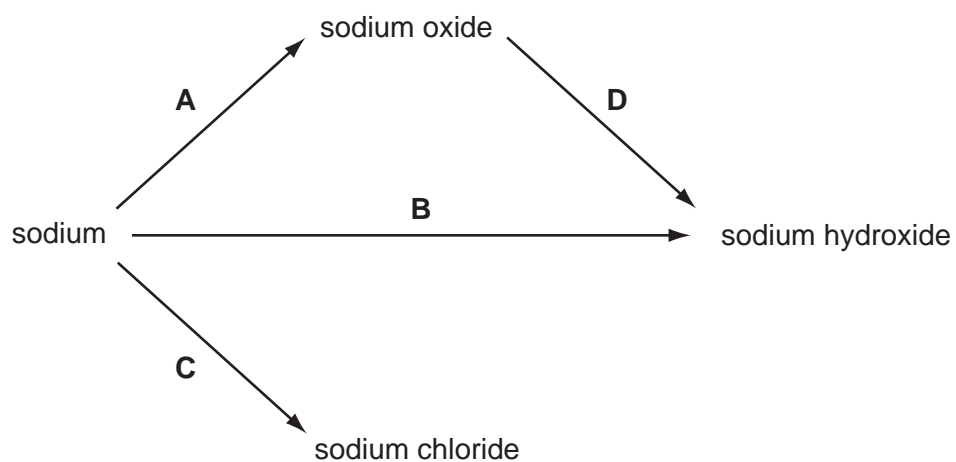
Li	B	B	C	N	O	F	Ne
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Which two elements form acidic oxides?

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

8 Some reactions involving sodium are shown.

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



9 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

10 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.

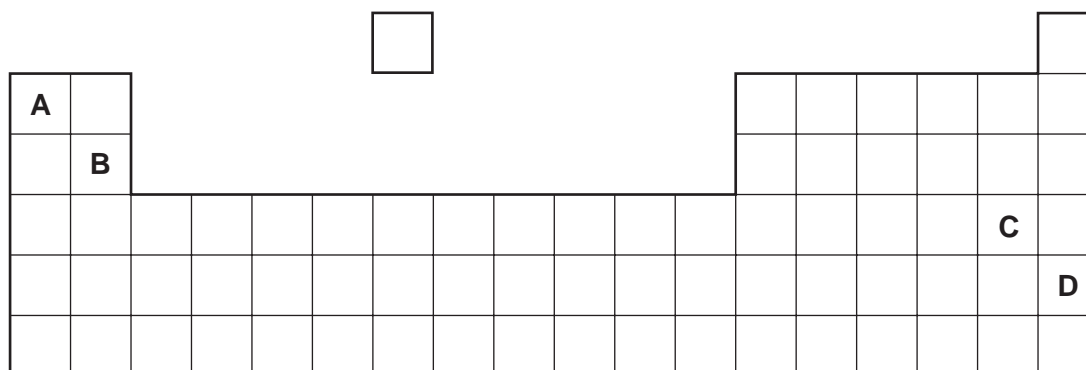
11 Carbon dioxide is an acidic oxide that reacts with aqueous calcium hydroxide.

Which type of reaction takes place?

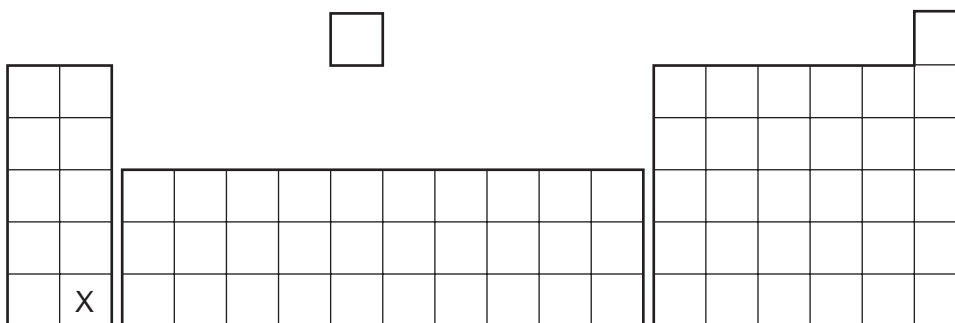
- A decomposition
- B fermentation
- C neutralisation
- D oxidation

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

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



13 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
<b>A</b>	metal	acidic
<b>B</b>	metal	basic
<b>C</b>	non-metal	acidic
<b>D</b>	non-metal	basic