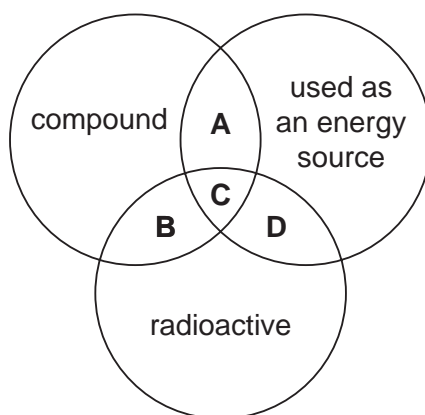


1 The diagram shows some properties that substances may have.

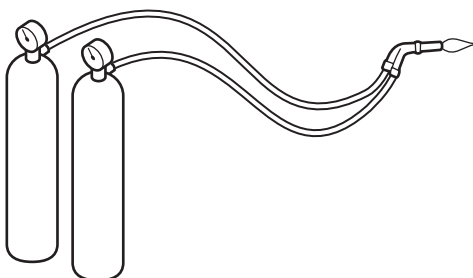
To which labelled part of the diagram does ^{235}U belong?



2 Which reaction is endothermic?

- A** acid neutralising alkali causing a temperature increase
- B** adding magnesium to hydrochloric acid
- C** calcium carbonate decomposing when heated
- D** combustion of fossil fuels

3 Metals are welded by using the heat produced by burning a gas in oxygen.



Which gas could **not** be used for this purpose?

- A** ethene
- B** hydrogen
- C** helium
- D** methane

4 The elements hydrogen and uranium are used as fuels.

The compound ethanol is also used as a fuel.

Which fuels require oxygen in order to produce heat energy?

	hydrogen	uranium	ethanol
A	✓	✓	✓
B	✓	✓	x
C	✓	x	✓
D	x	✓	✓

5 Which substance does **not** use oxygen to produce energy?

- A coal
- B hydrogen
- C natural gas
- D uranium

6 A power station was designed to burn gaseous fuels only.

Which two substances could be used?

- A carbon dioxide and hydrogen
- B carbon dioxide and ^{235}U
- C hydrogen and methane
- D methane and ^{235}U

7 Which fuel does **not** produce air pollution when it burns?

- A coal
- B diesel oil
- C hydrogen
- D gasoline (petrol)

8 Power stations produce electrical energy from different fuels.

Which fuel causes least pollution to the atmosphere?

- A coal
- B fuel oil
- C natural gas
- D radioactive isotopes

9 Which fuel does **not** produce carbon dioxide when it burns?

- A coal
- B hydrogen
- C methane
- D petrol

10 Which substance could **not** be used as a fuel to heat water in a boiler?

- A ethanol
- B hydrogen
- C methane
- D oxygen

11 Which substance is not a fossil fuel?

- A coal
- B kerosene
- C gasoline
- D wood

12 Which substance does **not** require oxygen in order to produce energy?

- A coal
- B hydrogen
- C natural gas
- D ^{235}U

13 Statement 1 Hydrogen is used as a fuel.

Statement 2 When hydrogen burns in the air to form water, heat energy is produced.

Which is correct?

- A Both statements are correct and statement 2 explains statement 1.
- B Both statements are correct but statement 2 does not explain statement 1.
- C Statement 1 is correct but statement 2 is incorrect.
- D Statement 2 is correct but statement 1 is incorrect.

14 Which substance does **not** produce carbon dioxide when it burns in oxygen?

- A butane
- B ethanol
- C ethene
- D hydrogen

15 Three processes are listed.

burning methane in air

radioactive decay of ^{235}U

reacting hydrogen with oxygen.

Which statements about these processes are correct?

1 Hydrogen and methane are being used as fuels.

2 All the processes involve oxidation.

3 All the processes are used to produce energy.

A 1 and 2 only **B** 1 and 3 only **C** 2 and 3 only **D** 1, 2 and 3

16 Butane, ethanol and hydrogen are fuels.

Which substances produce **both** carbon dioxide and water when used as a fuel?

	butane	ethanol	hydrogen
A	✓	✓	✓
B	✓	✓	x
C	✓	x	✓
D	x	✓	x

17 Substance X requires oxygen in order to produce energy.

It does **not** form carbon dioxide as a result of this energy production.

What is substance X?

- A hydrogen
- B natural gas
- C petrol
- D ^{235}U

18 The diagram shows some properties that substances may have.

To which labelled part of the diagram does ^{235}U belong?

