ENGLAND GCSE CHEMISTRY OCR TWENTY FIRST CENTURY HIGHER · UNIT 1 · 25 QUESTIONS

Air and Water — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **An ice cream cone melts. What is the melting point of the ice cream?**

- A around 100 degrees Celsius
- B around minus 20 degrees Celsius
- C around 37 degrees Celsius
- D around 0 degrees Celsius

Understand It with Pulse | Flag a mistake

2 **A forest provides a habitat. What does habitat mean?**

- A when an organism sleeps
- B what an organism eats
- C where an organism lives
- D how an organism breeds

Understand It with Pulse | Flag a mistake

3 **A cup of coffee cools down. Energy is transferred to the surroundings. What type of change is this?**

- A a reversible reaction
- B a neutralisation
- C an energy transfer
- D a chemical change

Understand It with Pulse | Flag a mistake

4 **A swimming pool holds water. Why does a person float in the pool?**

- A their density is close to water
- B the water pushes them down
- C they are heavier than water and sink
- D they are made of air

Understand It with Pulse | Flag a mistake

5 **A sunflower turns its head to follow the Sun. What is this a response to?**

- A gravity
- B water
- C touch
- D light

Understand It with Pulse | Flag a mistake

6 **A river flows to the sea. What is this part of?**

- A the carbon cycle
- B the rock cycle
- C the nitrogen cycle
- D the water cycle

Understand It with Pulse | Flag a mistake

7 **What is the main gas in the air today?**

A argon

B carbon dioxide

C oxygen

D nitrogen

Understand It with Pulse | Flag a mistake

8 **What does chlorination do to drinking water?**

A it kills bacteria

B it adds fluoride to it

C it makes it taste better

D it removes solid bits

Understand It with Pulse | Flag a mistake

9 **In the combustion of methane, the energy needed to break the bonds is 800 kJ and the energy released when new bonds form is 1200 kJ. What is the overall energy change?**

- A 1200 kJ
- B -400 kJ
- C 400 kJ
- D -800 kJ

Understand It with Pulse | Flag a mistake

10 **On a reaction profile, what is the difference between the reactants and the products?**

- A the rate of the reaction over time
- B the overall energy change
- C the activation energy
- D the temperature change

Understand It with Pulse | Flag a mistake

11 **What damages the ozone layer?**

A CFCs

B oxygen

C carbon dioxide

D nitrogen

Understand It with Pulse | Flag a mistake

12 **Oxygen is 21 percent of the air. How much oxygen is there in 100 litres of air?**

A 11 L

B 21 L

C 31 L

D 42 L

Understand It with Pulse | Flag a mistake

13 **What is happening to sea levels?**

A they stay the same

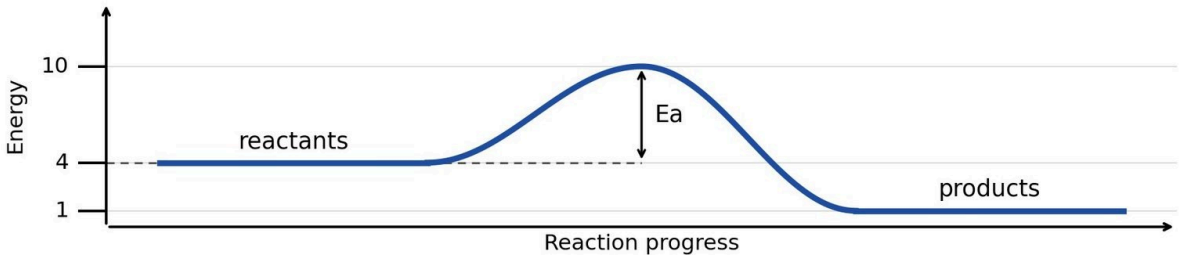
B they are falling

C they rise and fall equally

D they are rising

Understand It with Pulse | Flag a mistake

14 **The diagram shows the energy profile for a reaction. The reactants are at energy 4, the peak is at 10 and the products are at 1. What is the activation energy?**



A 14

B 9

C 6

D 3

Understand It with Pulse | Flag a mistake

15 **What do catalytic converters change nitrogen oxides into?**

A ammonia and water

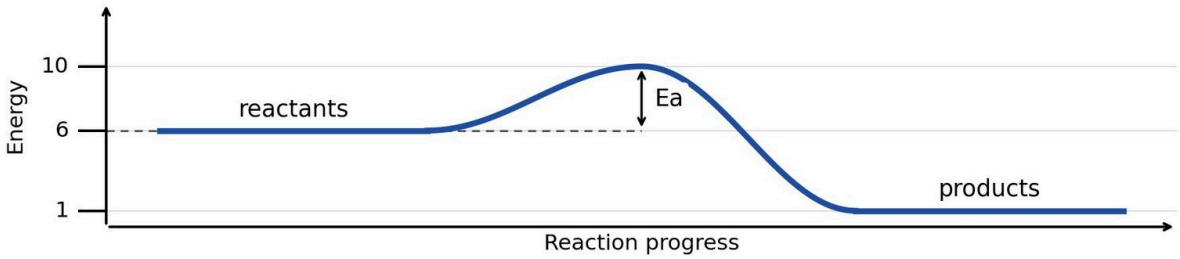
B sulfur dioxide

C carbon dioxide and water

D nitrogen and oxygen

Understand It with Pulse | Flag a mistake

16 **The diagram shows the energy profile for a reaction. The reactants are at energy 6 and the products are at 1. Is the reaction exothermic or endothermic?**



A exothermic, energy is taken in

B endothermic, energy is given out

C exothermic, energy is given out

D endothermic, energy is taken in

Understand It with Pulse | Flag a mistake

17 **In a reaction, the energy needed to break bonds is 1200 kJ and the energy released making bonds is 1600 kJ. What is the overall energy change?**

A -1200 kJ

B 400 kJ

C 1600 kJ

D -400 kJ

Understand It with Pulse | Flag a mistake

18 **What is the carbon cycle?**

A the movement of nitrogen between the soil and the air

B the movement of water between the sea, the air, the land and living things

C the movement of carbon between living things and the air

D the movement of oxygen between plants and animals

Understand It with Pulse | Flag a mistake

19 **How did the oceans form?**

A the Earth cooled and cracked open

B ice melted at the poles long ago over time

C water vapour condensed and fell as rain

D rivers filled the low land

Understand It with Pulse | Flag a mistake

20 **Which gases are greenhouse gases?**

A nitrogen and argon

B oxygen and nitrogen in the air

C carbon dioxide and methane

D oxygen and water vapour only

Understand It with Pulse | Flag a mistake

21 **A factory emits 10 tonnes of carbon dioxide per day. How much does it emit in one week?**

- A 70 tonnes
- B 60 tonnes
- C 80 tonnes
- D 140 tonnes

Understand It with Pulse | Flag a mistake

22 **What happens to the temperature during an endothermic reaction?**

- A it falls
- B it stays the same
- C it rises then falls
- D it rises

Understand It with Pulse | Flag a mistake

23 **Nitrogen is 78 percent of the air. How much nitrogen is there in 1000 litres of air?**

- A 770 L
- B 1560 L
- C 780 L
- D 790 L

Understand It with Pulse | Flag a mistake

24 **In a reaction, the energy needed to break bonds is 1000 kJ and the energy released making bonds is 800 kJ. Is the reaction exothermic or endothermic?**

- A exothermic, more energy is given out
- B endothermic, more energy is given out
- C exothermic, more energy is taken in
- D endothermic, more energy is taken in

Understand It with Pulse | Flag a mistake

25 **In the combustion of methane, the energy needed to break the bonds is 1000 kJ and the energy released when new bonds form is 1400 kJ. What is the overall energy change?**

A -400 kJ

B -1000 kJ

C 400 kJ

D 1400 kJ

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	D	**10.**	B	**19.**	C
2.	C	**11.**	A	**20.**	C
3.	C	**12.**	B	**21.**	A
4.	A	**13.**	D	**22.**	A
5.	D	**14.**	C	**23.**	C
6.	D	**15.**	D	**24.**	D
7.	D	**16.**	C	**25.**	A
8.	A	**17.**	D		
9.	B	**18.**	C		

© 2026 Brett Robbins. All Rights Reserved.