ENGLAND GCSE COMBINED SCIENCE OCR GATEWAY HIGHER · UNIT 12 · 25 QUESTIONS

Global Challenges in Chemistry — 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 **A cup of coffee cools down. Energy is transferred to the surroundings. What type of change is this?**

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

Understand It with Pulse | Flag a mistake

2 **A thermometer is placed in hot water. What happens to the liquid inside the thermometer?**

- A it contracts
- B it evaporates
- C it freezes
- D it expands

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3 **A cheese pizza provides energy. Which nutrient provides most energy?**

- A fat
- B fibre
- C protein
- D vitamins

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4 **Fishing boats float on water. Why do they float?**

A they have sails that catch the wind

B they displace enough water

C they are made of metal, which floats

D they are heavy and sink slowly

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5 **A river is polluted by fertiliser. What grows too fast in the water?**

A fish

B reeds

C algae

D trees

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6 **A castle wall is made of stone. What type of rock is limestone?**

A metamorphic

B igneous

C volcanic

D sedimentary

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7 **How do humans increase carbon dioxide?**

A by using solar power to make electricity

B by planting trees

C by burning fossil fuels

D by recycling waste

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8 **What is the main metal in steel?**

A chromium

B nickel

C carbon

D iron

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9 **What is one effect of climate change on weather?**

A colder summers everywhere

B more extreme weather

C weather stays the same

D less rain everywhere

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10 **A town sends 100 tonnes of waste to landfill per week. How much waste is that in one year?**

- A 10400 tonnes
- B 5100 tonnes
- C 5200 tonnes
- D 5300 tonnes

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11 **An alloy is 75 percent copper. How much copper is in 400 kg of the alloy?**

- A 275 kg
- B 325 kg
- C 600 kg
- D 300 kg

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12 **A sailing ship crosses the sea. What is the sea mostly made of?**

- A salt water
- B fresh water
- C oil
- D sand

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13 **An alkane with 10 carbon atoms is cracked. One product is an alkene with 2 carbon atoms. How many carbon atoms does the other product have?**

- A 9
- B 10
- C 7
- D 8

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14 **A town uses 2000 litres of water per day. How much water does it use in one week?**

- A 14000 L
- B 15000 L
- C 13000 L
- D 28000 L

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15 **Oxygen is 21 percent of the air. How much oxygen is there in 500 litres of air?**

- A 105 L
- B 210 L
- C 115 L
- D 95 L

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16 **What is a problem with disposing of polymers in landfill?**

A most do not biodegrade

B they are too heavy to bury

C they dissolve in the rain

D they burn very easily

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17 **What small molecule is lost in condensation polymerisation?**

A oxygen gas

B hydrogen gas

C water

D carbon dioxide gas

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18 **What is an addition reaction?**

- **A** a reaction where a gas is given off
- **B** a reaction where molecules join together
- **C** a reaction where water is removed
- **D** a reaction where a molecule splits apart into pieces

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19 **What is the formula of ethanol?**

- **A** C_2H_5OH
- **B** CH_3COOH
- **C** C_2H_6
- **D** C_2H_4

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20 **What is poly(ethene) made from?**

- A ethanol
- B ethene
- C ethane
- D ethanoic acid

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21 **An alkane has 5 carbon atoms. How many hydrogen atoms does one molecule have?**

- A 14
- B 12
- C 8
- D 10

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22 **Why do plants need potassium?**

A for strong roots that grow deep down

B for green leaves

C for flowers and fruit

D for tall stems

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23 **A forest is cut down. What happens to the carbon stored in the trees?**

A it disappears

B it turns to oxygen

C it is released

D it is stored forever

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24 **What is the relative formula mass of the alkane C_3H_8?**

- **A** 56
- **B** 42
- **C** 44
- **D** 46

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25 **What is the functional group in a carboxylic acid?**

- **A** the carboxyl group
- **B** the amino group
- **C** the carbonyl group
- **D** the hydroxyl group

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ANSWER KEY

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

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