ENGLAND GCSE CHEMISTRY OCR TWENTY FIRST CENTURY HIGHER · UNIT 6 · 25 QUESTIONS

Making Useful Chemicals — 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 **Silver coins are made of the element silver. What is the chemical symbol for silver?**

A Ag

B S

C Sv

D Si

Understand It with Pulse | Flag a mistake

2 **A school lunch tray holds a meal with milk. Which nutrient is milk rich in?**

- A fibre
- B iron
- C calcium
- D vitamin C

Understand It with Pulse | Flag a mistake

3 **A castle built of limestone is damaged by acid rain. Which gas causes acid rain?**

- A oxygen
- B carbon dioxide
- C sulfur dioxide
- D nitrogen

Understand It with Pulse | Flag a mistake

4 **Lemons taste sour. What does sour taste show?**

- A a metal is present
- B an alkali is present
- C a salt is present
- D an acid is present

Understand It with Pulse | Flag a mistake

5 **A chocolate cake is baked. Is baking a chemical change?**

- A sometimes
- B never
- C yes
- D no

Understand It with Pulse | Flag a mistake

6 **Paintbrushes are used with paint. What is paint an example of?**

A a compound

B a pure substance

C an element

D a formulation

Understand It with Pulse | Flag a mistake

7 **What is the relative formula mass of magnesium oxide, MgO?**

A 80

B 48

C 40

D 36

Understand It with Pulse | Flag a mistake

8 **A reaction makes 3 moles of gas. What volume does the gas occupy at room temperature and pressure?**

- A 60 dm^3
- B 84 dm^3
- C 72 dm^3
- D 144 dm^3

Understand It with Pulse | Flag a mistake

9 **A solution has a hydrogen ion concentration of 10^{-1}mol per cubic decimetre. What is its pH?**

- A 2
- B 0
- C 3
- D 1

Understand It with Pulse | Flag a mistake

10 **A reaction produces 60 cm cubed of gas in 20 seconds. What is the mean rate of reaction?**

- A 3.5 cm^3/s
- B 2.5 cm^3/s
- C 3 cm^3/s
- D 6 cm^3/s

Understand It with Pulse | Flag a mistake

11 **In a second experiment, 50 cm cubed of gas are made in 15 seconds. What is the rate of the reaction?**

- A 2.8333 cm^3/s
- B 3.3333 cm^3/s
- C 3.8333 cm^3/s
- D 4.8333 cm^3/s

Understand It with Pulse | Flag a mistake

12 **In an experiment, 20 cubic centimetres of gas are made in 20 seconds. What is the rate of the reaction?**

- A 0.5 cm^3/s
- B 1 cm^3/s
- C 400 cm^3/s
- D 2 cm^3/s

Understand It with Pulse | Flag a mistake

13 **A student heats 200 g of water. Its temperature rises by 5 degrees Celsius. The specific heat capacity of water is 4.2 joules per gram per degree Celsius. How much energy is transferred to the water in kilojoules?**

- A 0.42 kJ
- B 42 kJ
- C 8.4 kJ
- D 4.2 kJ

Understand It with Pulse | Flag a mistake

14 **A reaction makes 60 g of useful product from 120 g of reactants in total. What is the atom economy?**

A 50%

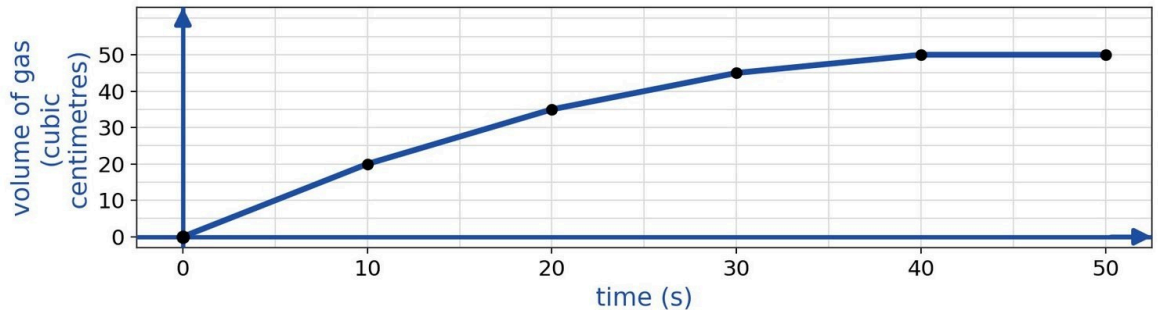
B 100%

C 25%

D 150%

Understand It with Pulse | Flag a mistake

15 **The graph shows the volume of gas made in a reaction. After how many seconds does the reaction finish?**



A 30

B 20

C 40

D 50

Understand It with Pulse | Flag a mistake

16 **What is the minimum energy particles need to react called?**

A thermal energy in the mixture

B bond energy in the molecules

C activation energy

D kinetic energy of the particles

Understand It with Pulse | Flag a mistake

17 **A solution contains 2 moles of solute in 4 cubic decimetres of solution. What is its concentration in moles per cubic decimetre?**

A 1.5 mol/dm³

B 0.25 mol/dm³

C 0.5 mol/dm³

D 1 mol/dm³

Understand It with Pulse | Flag a mistake

18 **A reaction should make 100 g of product but only makes 90 g. What is the percentage yield?**

A 90%

B 180%

C 100%

D 80%

Understand It with Pulse | Flag a mistake

19 **What is the mass of 5 moles of a substance with a relative formula mass of 40?**

A 200 g

B 210 g

C 100 g

D 400 g

Understand It with Pulse | Flag a mistake

20 **What happens to equilibrium if the temperature rises?**

- **A** it moves to take in heat
- **B** it stays in the same place
- **C** it moves to give out heat
- **D** the reaction stops

Understand It with Pulse | Flag a mistake

21 **How many moles are there in 40 g of a substance with a relative formula mass of 40?**

- **A** 3
- **B** 2
- **C** 1
- **D** 0.5

Understand It with Pulse | Flag a mistake

22 **What is the relative formula mass of carbon dioxide, CO_2?**

- A 32
- B 44
- C 40
- D 28

Understand It with Pulse | Flag a mistake

23 **Which acid makes a sulfate salt?**

- A ethanoic acid
- B nitric acid
- C hydrochloric acid
- D sulfuric acid

Understand It with Pulse | Flag a mistake

24 **Why is the filtrate evaporated when making a salt?**

- A to make the salt melt
- B to dissolve the salt again
- C to remove the acid from it completely
- D to get crystals of the salt

Understand It with Pulse | Flag a mistake

25 **What is the Haber process used to make?**

- A nitric acid
- B sulfuric acid
- C ammonia
- D hydrogen

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.