ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 10 · 25 QUESTIONS

Key Concepts 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 **An ice cream cone melts in the Sun. What is happening to the particles in the ice cream?**

- A they lose energy and slow down a lot
- B they get smaller
- C they stop moving
- D they gain energy and move more

Understand It with Pulse | Flag a mistake

2 **Hardcover books have mass. What is mass measured in?**

- A joules
- B newtons, the unit of force
- C watts
- D kilograms

Understand It with Pulse | Flag a mistake

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

A a formulation

B a compound

C a pure substance

D an element

Understand It with Pulse | Flag a mistake

4 **A thermometer measures temperature in degrees Celsius. What is the freezing point of water on this scale?**

A 32

B 100

C 10

D 0

Understand It with Pulse | Flag a mistake

5 **Lemons contain citric acid. What is the pH of lemon juice likely to be?**

A 7

B 14

C 2

D 12

Understand It with Pulse | Flag a mistake

6 **A calculator uses a battery. What energy is stored in the battery?**

A light energy from the Sun

B thermal energy from heat

C kinetic energy of motion

D chemical energy

Understand It with Pulse | Flag a mistake

7 **What is the mass of 3 moles of a substance with a relative formula mass of 40?**

A 120 g

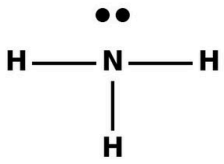
B 130 g

C 240 g

D 60 g

Understand It with Pulse | Flag a mistake

8 **The diagram shows an ammonia molecule. How many covalent bonds does the nitrogen atom form?**



A 1

B 3

C 2

D 4

Understand It with Pulse | Flag a mistake

9 **A hot air balloon rises because the air inside it is less dense than the air outside. What happens to the density of air when it is heated?**

- A it decreases
- B it increases
- C it stays the same
- D it becomes zero

Understand It with Pulse | Flag a mistake

10 **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

11 **Which element has the electronic structure 2,8,1?**

- **A** argon, which has a full outer shell
- **B** chlorine, which has seven outer electrons
- **C** sodium
- **D** magnesium, which has two outer electrons

Understand It with Pulse | Flag a mistake

12 **Silver coins are made of the element silver. What is the chemical symbol for silver?**

- **A** S
- **B** Ag
- **C** Sv
- **D** Si

Understand It with Pulse | Flag a mistake

13 **How many moles are there in 40 g of a substance with a relative formula mass of 20?**

A 1

B 4

C 6

D 2

Understand It with Pulse | Flag a mistake

14 **What is the formula of methane?**

A CH_3

B C_2H_4

C CH_2

D CH_4

Understand It with Pulse | Flag a mistake

15 **What happens to the reactant that is not limiting?**

A some of it is left over

B it evaporates away completely

C it is all used up as well

D it turns into the catalyst

Understand It with Pulse | Flag a mistake

16 **A chocolate cake is made from flour, sugar and eggs. Which ingredient provides protein?**

A eggs

B sugar

C water

D flour

Understand It with Pulse | Flag a mistake

17 **An atom of aluminium loses 3 electrons. What is the charge on the ion formed?**

A -3

B 0

C +3

D +2

Understand It with Pulse | Flag a mistake

18 **Why did Mendeleev leave gaps in his periodic table?**

A for gases that cannot be stored

B for elements not yet found

C for elements that do not exist

D to make the table look tidy

Understand It with Pulse | Flag a mistake

19 **A solution has 10 g of salt in 2 cubic decimetres of water. What is its concentration?**

- A 20 g/dm³
- B 2 g/dm³
- C 5 g/dm³
- D 12 g/dm³

Understand It with Pulse | Flag a mistake

20 **How many moles of gas occupy 72 cubic decimetres at room temperature and pressure?**

- A 2
- B 3
- C 4
- D 6

Understand It with Pulse | Flag a mistake

21 **Why can metals be drawn into wires?**

A their layers can slide

B their electrons hold them rigid

C their atoms are far apart

D their bonds break very easily

Understand It with Pulse | Flag a mistake

22 **What is the mass number of an isotope with 6 protons and 8 neutrons?**

A 6

B 14

C 8

D 20

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

24 **How does reactivity change down Group 1?**

- A it increases
- B it stays the same
- C it decreases
- D it stops

Understand It with Pulse | Flag a mistake

25 **What are fullerenes?**

A solid blocks of carbon atoms

B molecules of carbon in hollow shapes

C long chains of carbon atoms in a row

D flat sheets of carbon one atom thick

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.