ENGLAND GCSE CHEMISTRY EDEXCEL HIGHER · UNIT 1 · 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 **Silver coins are made of the element silver. What is the chemical symbol for silver?**

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

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

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

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3 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

- A impossible to tell
- B above normal
- C below normal
- D exactly normal

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4 **Glass marbles in a tray are used as a model for particles in a solid. What do the marbles show?**

- A particles move freely through space
- B particles are far apart from each other
- C particles flow past each other easily
- D particles vibrate in fixed positions

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

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

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6 **Hardcover books are stacked on a table. What force pulls them down?**

- A tension
- B air resistance
- C friction
- D gravity

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7 **An element is in period 4 of the periodic table. How many electron shells do its atoms have?**

- A 5
- B 4
- C 3
- D 6

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8 **An atom has 17 protons. How many electrons does the neutral atom have?**

- A 19
- B 16
- C 17
- D 18

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9 **What is the electronic structure of sodium (atomic number 11)?**

A 2,8,2

B 2,8,1

C 2,7,2

D 2,8,8

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10 **In a reaction, 10 g of A reacts with 6 g of B. What mass of product is made?**

A 16 g

B 6 g

C 10 g

D 4 g

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11 **What is the relative formula mass of hydrogen chloride, HCl?**

- A 32.5
- B 36.5
- C 73
- D 44.5

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12 **The maximum possible mass of product is 40 g. A student makes 24 g. What is the percentage yield?**

- A 120%
- B 70%
- C 60%
- D 50%

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

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

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14 **Paintbrushes apply paint to a wall. What is the paint made of?**

- A pure water with nothing in it
- B a single element, nothing else
- C a single compound, nothing else
- D a mixture of substances

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15 **What is the electronic structure of magnesium (atomic number 12)?**

A 2,8,2

B 2,7,3

C 2,8,8

D 2,8,1

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16 **Who discovered the neutron?**

A Thomson, who found the electron

B Chadwick

C Dalton, who first described atoms

D Bohr, who described shells

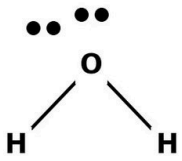
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17 **What is the relative formula mass of carbon dioxide, CO_2?**

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

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18 **The diagram shows a water molecule. How many lone pairs of electrons does the oxygen atom have?**



- **A** 3
- **B** 2
- **C** 4
- **D** 1

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19 **What is the mass of 2 moles of a substance with a relative formula mass of 16?**

- A 64 g
- B 42 g
- C 32 g
- D 16 g

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

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

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21 **How many covalent bonds does an oxygen atom form in a water molecule?**

A 4

B 3

C 2

D 1

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

A 14

B 8

C 6

D 20

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23 **What does the atomic number tell you?**

- A the number of electrons and neutrons
- B the mass of the atom
- C the number of protons
- D the number of neutrons

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24 **An atom has 8 protons and 20 neutrons. What is its mass number?**

- A 8
- B 30
- C 28
- D 20

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25 **Why did other scientists not accept Newlands' Law of Octaves?**

A it worked for every element known

B he had arranged them by atomic number

C he had left too many gaps in it

D it only worked for the first elements

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ANSWER KEY

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

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