ENGLAND GCSE COMBINED SCIENCE EDEXCEL FOUNDATION · 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 **A calculator uses a battery. What energy is stored in the battery?**

- A light energy from the Sun
- B chemical energy
- C kinetic energy of motion
- D thermal energy from heat

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

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

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3 **A hot air balloon cools down. What happens?**

- A it bursts
- B it rises faster
- C it stays still
- D it sinks

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4 **Hardcover books are dropped. What happens to their speed as they fall?**

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

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

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

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6 **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

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7 **An atom of calcium loses 2 electrons. What is the charge on the ion formed?**

A +2

B +1

C 0

D -2

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8 **What type of bonding is in sodium chloride?**

A intermolecular forces

B covalent

C metallic

D ionic

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9 **What is the formula of sodium chloride?**

- A Na_2Cl
- B $NaCl$
- C $NaCl_2$
- D Na_2Cl_2

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10 **What is the relative formula mass of sulfuric acid, H_2SO_4?**

- A 114
- B 82
- C 66
- D 98

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11

An atom has 11 protons. How many electrons does the neutral atom have?

A 13

B 12

C 11

D 10

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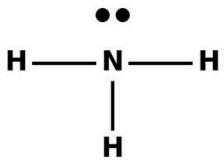
12 **The diagram shows an ammonia molecule. How many covalent bonds does the nitrogen atom form?**



A 3

B 2

C 1

D 4

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13 **What is the mass of 3 moles of a substance with a relative formula mass of 58.5?**

A 185.5 g

B 351 g

C 87.75 g

D 175.5 g

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14 **An element is in period 3 of the periodic table. How many electron shells do its atoms have?**

A 5

B 3

C 2

D 4

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15 **A reaction makes 20 g of useful product from 40 g of reactants in total. What is the atom economy?**

- A 50%
- B 25%
- C 100%
- D 150%

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16 **What did Dalton think an atom was?**

- A a cloud of electrons with no centre
- B a ball of positive charge with electrons in it
- C a small nucleus with shells around it
- D a tiny solid ball

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17 **Which group contains the noble gases?**

A Group 7

B Group 2

C Group 1

D Group 0

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

A Ag

B Si

C Sv

D S

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19 **An element, boron, has isotopes. 20 percent have a mass of 10 and 80 percent have a mass of 11. What is the relative atomic mass of boron?**

A 10.8

B 11.3

C 11.8

D 9.8

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

A their electrons hold them rigid

B their bonds break very easily

C their atoms are far apart

D their layers can slide

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21 **How many electrons can the first shell hold?**

A 1

B 2

C 4

D 8

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22 **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

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

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

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24 **What is a nanotube?**

- A a rolled up sheet of graphene
- B a tiny ball of carbon atoms
- C a hollow tube made of metal
- D a long chain of diamond crystals

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25 **How many electrons are in the outer shell of a Group 1 element?**

A 8

B 2

C 1

D 7

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ANSWER KEY

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

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