ENGLAND GCSE CHEMISTRY EDEXCEL FOUNDATION · 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 **A chocolate cake rises in the oven. What makes it rise?**

- A the flour melts
- B the sugar freezes
- C the egg evaporates
- D a gas is made

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

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

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3 **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 stays the same
- C it increases
- D it becomes zero

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

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

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5 **An ice cream cone melts. What is the melting point of the ice cream?**

A around minus 20 degrees Celsius

B around 100 degrees Celsius

C around 0 degrees Celsius

D around 37 degrees Celsius

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

A watts

B kilograms

C joules

D newtons, the unit of force

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7 **What is the mass of 2 moles of a substance with a relative formula mass of 20?**

A 80 g

B 40 g

C 50 g

D 20 g

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8 **Which of these is a typical property of a metal?**

A it is brittle

B it does not conduct heat

C it is dull

D it conducts electricity

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9 **What is the relative formula mass of sodium chloride, NaCl?**

- A 23
- B 58.5
- C 81.5
- D 35.5

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10 **An atom has atomic number 11 and mass number 23. How many neutrons does it have?**

- A 11
- B 12
- C 23
- D 34

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11 **What did the few alpha particles that bounced back show?**

- A the nucleus is large and empty
- B electrons fill the whole atom
- C there is a small dense nucleus
- D the atom is a solid ball throughout

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

- A 20
- B 6
- C 8
- D 14

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13 **The maximum possible mass of product is 40 g. A student makes 36 g. What is the percentage yield?**

- A 100%
- B 180%
- C 90%
- D 80%

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14 **What is the charge on a chloride ion?**

- A Cl
- B Cl^{2-}
- C Cl^{+}
- D Cl^{-}

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

A magnesium, which has two outer electrons

B chlorine, which has seven outer electrons

C argon, which has a full outer shell

D sodium

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16 **Which group contains the halogens?**

A Group 0

B Group 1

C Group 7

D Group 2

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

A 2

B 3

C 1

D 0.5

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18 **An element is in period 2 of the periodic table. How many electron shells do its atoms have?**

A 4

B 3

C 1

D 2

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19 **A calculator runs on a small current. What is current measured in?**

- A amperes
- B volts, the unit of voltage
- C watts, the unit of power
- D ohms, the unit of resistance

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20 **An element, chlorine, has isotopes. 75 percent have a mass of 35 and 25 percent have a mass of 37. What is the relative atomic mass of chlorine?**

- A 35.5
- B 36.5
- C 36
- D 34.5

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

- A 2
- B 12
- C 14
- D 7

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22 **Glass marbles are used to model atoms. What is a limitation of the model?**

- A marbles are the wrong colour for atoms
- B marbles are too small to see properly
- C marbles are much bigger than atoms
- D marbles cannot be counted accurately at all

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23 **An atom has 6 protons and 8 neutrons. What is its mass number?**

- A 14
- B 16
- C 6
- D 8

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24 **Why does diamond not conduct electricity?**

- A it is made of ions not atoms
- B it has no covalent bonds at all
- C it has no free electrons
- D its atoms are too far apart

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25 **What is the relative formula mass of ammonia, NH_3?**

A 17

B 25

C 34

D 13

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ANSWER KEY

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

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