Building Blocks for Understanding — 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 **Paintbrushes apply paint to a wall. What is the paint made of?**

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

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

A sugar

B eggs

C flour

D water

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

A it freezes

B it evaporates

C it contracts

D it expands

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4 **An ice cream cone is put in a freezer. What happens to the liquid?**

A it evaporates

B it freezes

C it boils

D it condenses

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5 **Silver coins are made of a metal. Which property do metals have?**

A they conduct electricity

B they do not conduct electricity at all

C they dissolve in water

D they are brittle

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

A an alkali is present

B a metal is present

C an acid is present

D a salt is present

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

A 4

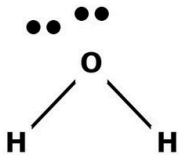
B 3

C 2

D 1

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



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

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9 **Which particle has a positive charge?**

- **A** the nucleus
- **B** the electron
- **C** the proton
- **D** the neutron

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10 **What is the pH of a neutral solution?**

A 14

B 0

C 7

D 1

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11 **What is a period in the periodic table?**

A a group

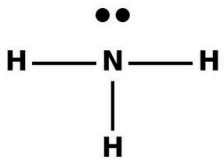
B a block

C a row

D a column

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



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

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

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

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14 **How many moles are there in 24 g of a substance with a relative formula mass of 40?**

- A 1.8
- B 0.6
- C 1.2
- D 0.3

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15 **What is the electronic structure of chlorine (atomic number 17)?**

- A 2,8,8
- B 2,8,6
- C 2,8,7
- D 2,7,8

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16 **What is the charge on a sodium ion?**

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

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17 **Which transition metal is used as a catalyst in the Haber process?**

- A copper
- B platinum
- C nickel
- D iron

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18 **Which of these is a simple covalent molecule?**

- A CO_2
- B MgO
- C NaCl
- D $CaCl_2$

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19 **Which of these is endothermic?**

- A photosynthesis
- B neutralisation
- C respiration
- D burning a fuel

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20 **Which group contains the halogens?**

- A Group 2
- B Group 1
- C Group 0
- D Group 7

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21 **What is the relative formula mass of methane, CH_4?**

- A 16
- B 20
- C 12
- D 14

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22 **How many moles are there in 8 g of a substance with a relative formula mass of 40?**

A 0.2

B 0.4

C 0.1

D 0.6

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23 **What is the electronic structure of oxygen (atomic number 8)?**

A 2,8

B 2,6

C 2,7

D 2,4

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

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

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25 **Which piece of apparatus measures the volume of acid in a titration?**

- **A** a measuring cylinder
- **B** a pipette
- **C** a burette
- **D** a beaker

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ANSWER KEY

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

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