CALIFORNIA CHEMISTRY · UNIT 2 · 25 QUESTIONS

Bonding and Chemical Reactions — 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 to let Brett know so he can fix it.

1 **An ionic bond is best described as the attraction between**

- A Oppositely charged ions
- B Two neutral atoms
- C Shared pairs of electrons
- D Two nuclei

Understand It with Pulse | Flag a mistake

2 **A covalent bond forms when atoms**

A Share electrons

B Lose neutrons

C Gain whole shells

D Transfer protons

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3 **In the balanced equation**
_____ $H_2 + O_2 \rightarrow 2\ H_2O$,
the coefficient of hydrogen is

ANSWER

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4 **The shape of a carbon dioxide molecule is**

- **A** Linear
- **B** Trigonal planar
- **C** Bent
- **D** Tetrahedral

Understand It with Pulse | Flag a mistake

5 **Which molecule is polar**

- **A** H_2
- **B** N_2
- **C** O_2
- **D** HCl

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6 **The strongest intermolecular force between hydrogen fluoride molecules is**

A Hydrogen bonding

B Metallic bonding

C London dispersion forces

D Ionic bonding

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7 **The name of the compound Na_2O is**

A Sodium dioxide

B Sodium oxide

C Sodium monoxide

D Disodium oxygen

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8 **The formula of magnesium chloride is**

A $MgCl_2$

B Mg_2Cl_2

C Mg_2Cl

D $MgCl$

Understand It with Pulse | Flag a mistake

9 **The oxidation number of sulfur in sulfuric acid, H_2SO_4 , is**

ANSWER _____

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10 **In the reaction**
$Zn + 2\ HCl \rightarrow ZnCl_2 + H_2$,
the reaction type is

A Synthesis

B Combustion

C Single displacement

D Decomposition

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11 **The reaction**
$2\ Na + Cl_2 \rightarrow 2\ NaCl$
is an example of

A Neutralization

B Double displacement

C Synthesis

D Decomposition

Understand It with Pulse | Flag a mistake

12 **The reaction**
$CaCO_3 \rightarrow CaO + CO_2$
is an example of

- A Combustion
- B Single displacement
- C Decomposition
- D Synthesis

Understand It with Pulse | Flag a mistake

13 **When a hydrocarbon burns completely in oxygen, the products are**

- A Hydrogen and oxygen
- B Carbon and water
- C Carbon monoxide only
- D Carbon dioxide and water

Understand It with Pulse | Flag a mistake

14 **The oxidation number of nitrogen in nitrogen dioxide, NO_2 , is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **Metallic bonding is best described as metal ions in a sea of**

A Water

B Protons

C Delocalized electrons

D Neutrons

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16 **Which compound is ionic**

A H_2O

B MgO

C CH_4

D CO_2

Understand It with Pulse | Flag a mistake

17 **Nitrogen has atomic number 7 How many valence electrons does a nitrogen atom have**

A 7

B 5

C 3

D 2

Understand It with Pulse | Flag a mistake

18 **The two oxygen atoms in an oxygen molecule are joined by a**

A Ionic bond

B Triple bond

C Single bond

D Double bond

Understand It with Pulse | Flag a mistake

19 **The total number of valence electrons in a water molecule, H_2O , is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **Which element is the most electronegative**

- A O
- B Cl
- C F
- D N

Understand It with Pulse | Flag a mistake

21 **Which substance has only London dispersion forces between its molecules**

- A NH_3
- B H_2O
- C H_2
- D HCl

Understand It with Pulse | Flag a mistake

22 **The name of the compound CO is**

A Carbon monoxide

B Carbon oxide

C Dicarbon monoxide

D Carbon dioxide

Understand It with Pulse | Flag a mistake

23 **A double displacement reaction is best described as two compounds**

A Combining into one compound

B Breaking apart only

C Exchanging ions to form two new compounds

D Burning in oxygen

Understand It with Pulse | Flag a mistake

24 **In a balanced chemical equation, the number of atoms of each element is**

- **A** Zero on both sides
- **B** The same on both sides
- **C** Greater on the reactant side
- **D** Greater on the product side

Understand It with Pulse | Flag a mistake

25 **The coefficient needed to balance**

____ $Fe + O_2 \rightarrow 2\ Fe_2O_3$

for iron is

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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