

Chemical Bonds Test

QUESTION 1:

1.1) Which one of the following compounds is an ionic bond?

- A.) MgCl_2 .
- B.) H_2O .
- C.) CH_3Cl .
- D.) NH_4Cl .

1.2) SO_3 (sulfite) can be represented by resonance structures. Which characteristic of a resonance structure is correct?

- A.) Sulfite's single pairs switch and surround the central atom with 8 electrons.
- B.) Block brackets are used with double arrows.
- C.) A and B.
- D.) None of the above.

1.3) The electron negativity of a polar covalent bond like HCl is:

- A.) $< 2,1$.
- B.) $> 2,1$.
- C.) A en D.
- D.) $0 < \text{EN} < 1$.

1.4) In an ionic bond like NaCl; which element will donate an electron?

- A.) Sodium.
- B.) Chlorine.
- C.) Both.
- D.) None of the above.

1.5) Which half reaction is the correct reaction for the metal Magnesium?

- A.) $\text{Mg} \longrightarrow \text{Mg}^{2+} + 2\text{e}^-$.
- B.) $\text{Mg} + 2\text{e}^- \longrightarrow \text{Mg}^{2+}$.
- C.) $\text{Mg}^{2+} + 1\text{e}^- \longrightarrow \text{Mg}$.
- D.) None of the above.

QUESTION 2:

2.1) Define the term Dative Covalent Bond.

2.2) Indicate the Dative Covalent Bond of how Ammonium forms.

2.3) Draw the forming of NaCl using Lewis Diagrams.

QUESTION 3:

3.1) Name a characteristic that causes ammonia to be polar.

3.2) Draw Lewis diagrams to illustrate the forming of Magnesium oxide.

3.3) Give the energy level diagram for the carbon atom.

3.4) Draw the Lewis diagram for Methane (CH_4).