

CHAPTER 4 PRACTICE QUESTIONS

Directions: Review what you just learned in this chapter and test your comprehension with these practice questions. Answers can be found directly after the questions.

Types of bonds

- Which of the following compounds is an ionic compound?
 - O_2
 - H_2O
 - $CHCl_2$
 - $CaCl_2$

- When a metal and a nonmetal react to form a _____ bond, electrons are transferred from the _____ to the _____.
 - covalent; metal; nonmetal
 - covalent; nonmetal; metal
 - ionic; metal; nonmetal
 - ionic; nonmetal; metal

Predicting charges for ions

- What is the charge on the iron ion in the compound $FeCl_3$?

Dipoles

- In which of the following molecules does oxygen contain a positive dipole?
 - OCl_2
 - OF_2
 - H_2O
 - O_2

- The electrons in a nonpolar covalent compound are:
 - transferred
 - delocalized
 - shared equally
 - shared unequally

Nomenclature

- What is the correct formula for magnesium hydroxide?
 - $MgOH$
 - $MnOH$
 - $MgOH_2$
 - $Mg(OH)_2$
- What is the correct formula for lead (II) nitrate?
 - Pb_3N_2
 - Pb_2N_2
 - Pb_2NO_3
 - $Pb(NO_3)_2$

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Lewis Dot Diagrams

8. Draw the correct Lewis dot diagram for nitrogen gas, N_2 .

Intermolecular forces

9. CO_2 is a small molecule contained in carbonated soda that easily escapes when the soda is left open and exposed to the air. What physical property is being demonstrated by CO_2 escaping the soda?