



Standardized Test Prep

Answer the following items on a separate piece of paper.

MULTIPLE CHOICE

- Which of the following compounds does not contain a polyatomic ion?
A. sodium carbonate
B. sodium sulfate
C. sodium sulfite
D. sodium sulfide
- The correct formula for ammonium phosphate is
A. $(\text{NH}_4)_3\text{PO}_4$
B. $(\text{NH}_4)_2\text{PO}_4$
C. NH_4PO_4
D. $\text{NH}_4(\text{PO}_4)_2$
- When writing the formula for a compound that contains a polyatomic ion,
A. write the anion's formula first.
B. use superscripts to show the number of polyatomic ions present.
C. use parentheses if the number of polyatomic ions is greater than 1.
D. always place the polyatomic ion in parentheses.
- The correct name for $\text{NH}_4\text{CH}_3\text{COO}$ is
A. ammonium carbonate.
B. ammonium hydroxide.
C. ammonium acetate.
D. ammonium nitrate.
- Which of the following is the correct formula for iron(III) sulfate?
A. Fe_3SO_4
B. $\text{Fe}_3(\text{SO}_4)_2$
C. $\text{Fe}_2(\text{SO}_4)_3$
D. 3FeSO_4
- The molecular formula for acetylene is C_2H_2 .
The molecular formula for benzene is C_6H_6 .
The empirical formula for both is
A. CH.
B. C_2H_2 .
C. C_6H_6 .
D. $(\text{CH})_2$.

- Which of the following shows the percentage composition of H_2SO_4 ?
A. 2.5% H, 39.1% S, 58.5% O
B. 2.1% H, 32.7% S, 65.2% O
C. 28.6% H, 14.3% S, 57.1% O
D. 33.3% H, 16.7% S, 50% O
- Which of the following compounds has the highest percentage of oxygen?
A. CH_4O
B. CO_2
C. H_2O
D. Na_2CO_3
- The empirical formula for a compound that is 1.2% H, 42.0% Cl, and 56.8% O is
A. HClO.
B. HClO_2 .
C. HClO_3 .
D. HClO_4 .

SHORT ANSWER

- When a new substance is synthesized or is discovered experimentally, the substance is analyzed quantitatively. What information is obtained from this typical analysis, and how is this information used?
- An oxide of selenium is 28.8% O. Find the empirical formula. Assuming that the empirical formula is also the molecular formula, name the oxide.

EXTENDED RESPONSE

- What is an empirical formula, and how does it differ from a molecular formula?
- What are Stock system names based on?

Test TIP

Whenever possible, highlight or underline numbers or words critical to answering a question correctly.