Assessment

Chemistry: Lesson 11

Question 1

The formula $Ca(NO_3)_2$ has a molar mass of _____ g/mol.

A. 70.1

B. 102.1

C. 116.1

D. 164.1

Question 2

The formula $3(NH_4)_2CO_3$ has a total of _____ hydrogens.

A. 8

B. 24

C. 16

D. 22

Question 3

For C_3H_7COOH, with a molar mass of 88.0 g/mol, carbon's percentage composition is _____

A. 40.9%

B. 54.5%

C. 62.5%

D. 95.5%

Question 4

$(NH_4)_2CO_3$ has a molar mass of 96.0 g/mol. Nitrogen's composition is 29.2%, hydrogen's is 8.3%, and carbon's is 12.5%. What is the percentage composition for oxygen?

A. 36%

B. 37.5%

C. 48%

D. 50%

Question 5

Which compound has the highest percentage composition of carbon?

A. CH_4

B. C_3H_8

C. $C_3H_6O_2$

D. $C_4H_8O_2$

Question 6

A compound has an empirical formula of NO_2 and a molar mass of 138, so its molecular formula is _____.

A. NO_2

B. N_2O_4

C. NO_3

D. N_3O_6

Question 7

C_2H_4 and C_3H_6 have the same empirical formula.

A. True

B. False

Question 8

The empirical formula for C_4H_{10} is CH_5.

A. True

B. False

Question 9

If a compound has an empirical formula of CH_20 and a molar mass of 150 g/mol, its molecular formula is $C_5H_{10}O_5$.

A. True

B. False

Question 10

The letters "s", "l", "g", and "aq" are used to indicate the states of substances in the chemical equations.

A. True

B. False

Question 11

After balancing the equation: $K + O_2 \rightarrow K_2O$ the coefficient for K will be_____.

A. 1

B. 2

C. 3

D. 4