Mole Calculations-Review

1. Calculate the mole of the following substances. Use periodic table to get the molar masses of the elements.

A. 2.25g of $ZnBr_2$

B. 15.75 L of N_2O_5 at STP

C. 1.4448 molecules of C_4H_{10}

D. 51 g of $AgNO_3$

2. Perform the following conversions.

A. 0.4 mol of $FeCl_2$ = …… g $FeCl_2$

B. 15.2 g of CS_2 = …….. L of CS_2 at STP

C. 11.9 g of $NiCO_3$ = …….. molecules of $NiCO_3$

D. 13.44 L of CCl4 at STP = …… molecules of CCl_4

E. $0.7224x10^{23}$ molecules of NO = …… L of NO at STP

F. 0.14 mol of SiO = …… molecules of SiO

G. 12.32 L of N_2H_4 at STP = …… g of N_2H_4

H. 51.1 g of SF_6 = …….. L of SF_6 at STP

3. Calculate the mass percentage of oxygen in the following compounds.

A. $CaCO_3$ B. H_3PO_4

4. 50 g of $CuSO_4.5H_2O$ is given, calculate;

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B. mole of Cu,

C. mass of H_2O

D. number of Oxygen atoms,

E. Total number of atoms.

5. 15 g of Al_2X_3 contains 5.4 g of Al. Determine the element X in the compound.

6. A compound contains 31.58% oxygen and the rest is chromium. Find the empirical formula of the compound.

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