Chemical Equations – Numerical Practice Worksheet

Q1. Balance the equation: $H_2 + O_2 \rightarrow H_2O$

Q2. Balance the equation: $Fe + O_2 \rightarrow Fe_2O_3$

Q3. Balance the equation: $Al + O_2 \rightarrow Al_2O_3$

Q4. If 4 g of Hydrogen reacts completely with Oxygen, how many grams of Oxygen are required? ($2H_2 + O_2 \rightarrow 2H_2O$)

Q5. Calculate the mass of water formed when 32 g of Oxygen reacts completely with Hydrogen. ($2H_2 + O_2 \rightarrow 2H_2O$)

Q6. In the reaction $C + O_2 \rightarrow CO_2$, how many grams of CO_2 are formed when 12 g of Carbon burns completely?

Q7. 56 g of Iron reacts with Oxygen to form Iron(III) oxide. Calculate the mass of Fe_2O_3 formed.

Q8. In the reaction $2Mg + O_2 \rightarrow 2MgO$, how many grams of MgO are formed from 24 g of Magnesium?

Q9. If 10 g of Calcium reacts with water ($Ca + 2H_2O \rightarrow Ca(OH)_2 + H_2$), calculate the mass of Hydrogen gas produced.

Q10. According to the Law of Conservation of Mass, if 15 g of Hydrogen reacts with 120 g of Oxygen, what will be the total mass of products formed?

Answer Key

1. $2H_2 + O_2 \rightarrow 2H_2O$

2. $4Fe + 3O_2 \rightarrow 2Fe_2O_3$

3. $4Al + 3O_2 \rightarrow 2Al_2O_3$

4. 32 g Oxygen

5. 36 g Water

6. 44 g CO_2

7. 80 g Fe_2O_3

8. 40 g MgO

9. 0.5 g Hydrogen

10. 135 g