

CHAPTER-3 | ATOMS AND MOLECULES

QUIZ
PART-05

1. Percentage of boron in the compound is:

- A. 20%
B. 30%
C. 40%
D. 60% (C)

Explanation: $0.096/0.24 \times 100 = 40\%$
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2. Percentage of oxygen in the compound is:

- A. 40%
B. 50%
C. 60%
D. 70% (C)

Explanation: $0.144/0.24 \times 100 = 60\%$
 $0.144/0.24 \times 100 = 60\%$

3. When 3 g carbon burns in excess oxygen, carbon dioxide formed is:

- A. 8 g
B. 11 g
C. 42 g
D. 50 g (B)

Explanation: 3 g carbon reacts with only 8 g oxygen to form 11 g carbon dioxide.

4. The law used in the carbon dioxide question is:

- A. Law of conservation of mass
B. Law of constant proportions
C. Law of multiple proportions
D. Avogadro's law (B)

Explanation: Carbon and oxygen combine in a fixed ratio by mass.

5. A polyatomic ion is a:

- A. Neutral atom
B. Group of atoms with charge
C. Single atom with no charge
D. Molecule of an element (B)

Explanation: It is a group of atoms carrying a positive or negative charge.

6. Which is a polyatomic ion?

- A. Na^+
B. Cl^-
C. NH_4^+
D. H^+ (C)

Explanation: Ammonium is a charged group of atoms.

7. Formula of magnesium chloride is:

- A. MgCl
B. MgCl_2
C. Mg_2Cl
D. Mg_2Cl_2 (B)

Explanation: Magnesium has valency 2 and chlorine has valency 1, so the formula is MgCl_2 .

8. Formula of calcium carbonate is:

- A. CaCO_2
B. $\text{Ca}(\text{CO}_3)_2$
C. CaCO_3
D. Ca_2CO_3 (C)

Explanation: Calcium combines with carbonate to form CaCO_3 .

9. Molecular mass of HCl is:

- A. 35.5 u
B. 36.5 u
C. 37.5 u
D. 63 u (B)

Explanation: $1 + 35.5 = 36.5$

10. Molecular mass of HNO_3 is:

- A. 28 u
B. 36.5 u
C. 63 u
D. 124 u (C)

Explanation: $1 + 14 + 3 \times 16 = 63$
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