

# EXERCISE

## Choose the Correct Option.

1. The mass of an atom(element) compared with the mass of one atom of C is called,
- One mole
  - Gram atomic mass
  - Atomic number
  - Relative atomic mass
2. Which of the following is not true for a mole?
- It is a counting unit
  - It is the gram atomic or gram formula mass of a substance
  - It contains  $6.023 \times 10^{23}$  particles
  - It contains different number of particles for different substances
3. What is the mass (in grams) of 5 moles of water ( $H_2O$ )?
- 90g
  - 36g
  - 18g
  - 100g
4. The number of molecules in 22g of  $CO_2$  is
- $6.023 \times 10^{23}$
  - $3.011 \times 10^{23}$
  - $6.023 \times 10^{21}$
  - $6.023 \times 10^{22}$
5. What will be the values of temperature and pressure at standard cond (STP),
- $100^\circ C$ , 1 atm
  - 298K, 1atm
  - 273K, 760mm Hg
  - $0^\circ C$ , 760cm Hg
6. The molar volume of  $SO_2$  gas at STP is,
- $64 dm^3$
  - $24 dm^3$
  - $22.4 dm^3$
  - $22.4 cm^3$
7. The percentage of Ca in  $CaCO_3$  is,
- 12%
  - 10%
  - 48%
  - 40%
8. Given the equation:  $CO_{2(g)} + C_{(s)} \longrightarrow 2CO_{(g)}$   
Which of the following equivalences is not correct for the reaction,
- $1 \text{ mol } CO_2 \cong 2 \text{ mol } CO$
  - $1 \text{ mol } C \cong 56 \text{ g } CO$
  - $44 \text{ g } CO_2 \cong 28 \text{ g } CO$
  - $44 \text{ g } CO_2 \cong 12 \text{ g } C$
9. A limiting reactant is one
- Which is present in maximum amount
  - Which produces minimum No. of moles of product
  - Which produces maximum No. of moles of product
  - Does not affect the amount of product

10. Efficiency of chemical reaction can be checked by calculating
- Actual yield
  - Theoretical Yield
  - Percentage Yield
  - Amount of the reactant unused
11. Actual yield will reach the ideal (theoretical) value if the % yield of the reaction is,
- 10%
  - 50%
  - 90%
  - 100%
12. The maximum No. of moles are present in
- 11.2 dm<sup>3</sup> of H<sub>2</sub> gas at STP
  - 44.8 dm<sup>3</sup> of N<sub>2</sub> gas at STP
  - 67.2 dm<sup>3</sup> of CO<sub>2</sub> gas at STP
  - 22.4 dm<sup>3</sup> of O<sub>2</sub> gas at STP

### Short Questions

- What is gram atom? Why the concept of gram atom is useful in chemistry?
- Explain why balanced chemical equations are used in stoichiometry?