



MORE QUESTIONS SOLVED

I. Multiple Choice questions

Choose the correct option:

1. The atomicity of $K_2Cr_2O_7$ is

- (a) 9 (b) 11
(c) 10 (d) 12

2. The formula for quick lime is

- (a) $CaCl_2$ (b) $CaCO_3$
(c) $Ca(OH)_2$ (d) CaO

3. The symbol of cadmium is

- (a) Ca (b) Cu
(c) Cm (d) Cd

4. All noble gas molecules are

- (a) monoatomic
(c) triatomic

5. The valency of nitrogen in NH_3 is

- (a) 1 (b) 3
(c) 4 (d) 5

6. The formula of ethanol is C_2H_5-OH . Its molecular mass is

- (a) 46 u (b) 34 u
(c) 34 g (d) 46 g

7. How many moles are present in 28 g of nitrogen atoms?

- (a) 1 mole (b) 2.3 moles
(c) 0.5 mole (d) 2 moles

8. The molecular mass of x is 106. x among the following is

- (a) $CaCO_3$ (b) SO_3
(c) Na_2CO_3 (d) $NaCl$

9. Which among the following is not a postulate of Dalton's atomic theory?

- (a) Atoms cannot be created or destroyed.
(b) Atoms of different elements have different sizes, masses and chemical properties.
(c) Atoms of same elements can combine in only one ratio to produce more than one compound.
(d) Atoms are very tiny particles which cannot be divided further.

10. Pick up the wrong pairs/combination

- (a) 6.022×10^{23} molecules of oxygen = 32 g of oxygen
(b) 6.022×10^{23} ions of sodium = 23 g of Na
(c) 6.022×10^{23} atoms of C = 24 g of carbon
(d) 6.022×10^{23} atoms of H = 1 g of H atoms

Answer. 1—(b), 2—(d), 3—(d), 4—(a), 5—(b), 6—(a), 7—(d), 8—(c), 9—(c), 10—(c).

II. Very Short Answer Type Questions

Question 1. Define law of conservation of mass.

Answer: In a chemical reaction mass can neither be created nor destroyed.

E.g., $2Na + Cl_2 \rightarrow 2NaCl$

$2 \times 23 + 2 \times 35.5 \rightarrow 2(23 + 35.5)$

Question 2. Explain law of constant proportion.

Answer: In a chemical substance the elements are always present in definite proportions by mass.

E.g., In water, the ratio of the mass of hydrogen to the mass of oxygen H : O is always 1:8

Question 3. Who coined the term atom?

Answer: John Dalton coined the term atom.

Question 4. Define atom.

Answer: The smallest particle of matter, which can take part in a chemical reaction is called atom.

Question 5. Define molecule.

Answer: The smallest particle of an element or compound which can exist independently is called molecule.

Question 6. Define atomicity.

Answer: The number of atoms constituting a molecule is known as its atomicity.

Question 7. What is atomic mass unit?

Answer: The sum of the atomic masses of all the atoms in a molecule of the substance is expressed in atomic mass unit. E.g.,
 $\text{H}_2\text{O} = 1 \times 2 + 16 = 18 \text{ amu}$

Question 8. How do atoms exist?

Answer: Atoms exist in the form of atom, molecule or ions.

Question 9. Give the atomicity of phosphorous and nitrogen.

Answer. The atomicity of phosphorus is P_4 i.e., 4.

The atomicity of nitrogen is N_2 i.e., 2.

Question 10. What is an ion?

Answer: Charged atom is called as an ion. The ion can be positively charged called cation or negatively charged called anion.

Question 11. Give one example of cation and anion.

Answer: Cation $\Rightarrow \text{Na}^+$

Anion $\Rightarrow \text{Cl}^-$

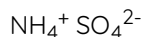
Question 12. Give one difference between cation and anion.

Answer: Cations are positively charged ion.

Anions are negatively charged ion.

Question 13. Give the chemical formula for ammonium sulphate.

Answer: Ammonium sulphate



Chemical formula $\rightarrow (\text{NH}_4)_2\text{SO}_4$.

Question 14. What is Avogadro's constant?

Answer: The Avogadro's constant (6.022×10^{23}) is defined as the number of atoms that are present in exactly 12 g of carbon-12.

Question 15. Find the molecular mass of H_2O .

Answer: Molecular mass of H_2O

$$= (2 \times 1) + (16)$$

$$= 2 + 16 = 18 \text{ u}$$

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