MORE QUESTIONS SOLVED

I. Very Short Answer Type Questions
Question 1. What is the SI unit of molarity?
Answer: SI unit of molarity = mol dm^{-3}

Question 2. What do you understand by stoichiometric coefficients in a chemical equation?
Answer: The coefficients of reactant and product involved in a chemical equation represented by the balanced form, are known as stoichiometric coefficients.
For example, $N_2(g) + 3H_2(g) \rightarrow 2\ NH_3(g)$
The stoichiometric coefficients are 1, 3 and 2 respectively.

Question 3. Give an example of a molecule in which the ratio of the molecular formula is six times the empirical formula.
Answer: The compound is glucose. Its molecular formula is $C_6H_{12}O_6$, while empirical formula is CH_2O.

Question 4. What is an atom according to Dalton's atomic theory?
Answer: According to Dalton's atomic theory, an atom is the ultimate particle of matter which cannot be further divided.

Question 5. Why air is not always regarded as homogeneous mixture?
Answer: This is due to the presence of dust particles.

Question 6. Define the term 'unit' of measurement.
Answer: It is defined as the standard of reference chosen to measure a physical quantity.

Question 7. Define law of conservation of mass.
Answer: It states that matter can neither be created nor destroyed.

Question 8. How is empirical formula of a compound related to its molecular formula?
Answer: Molecular formula = (Empirical formula)n where n is positive integer.

Question 9. How many oxygen atoms are there in 18 g of water?
Answer: Molar mass of water is 18 g/mol.
Number of oxygen atoms is 18 g of water = 6.02×10^{23}

Question 10. Name two factors that introduce uncertainty into measured figures.
Answer: (i) Reliability of measuring instrument.
(ii) Skill of the person making the measurement.

Question 11. State Avogadro's law.
Answer: Equal volumes of all gases under the conditions of same temperature and pressure contain the same number of molecules.

Question 12. How are 0.5 ml of NaOH differents from 0.5 M of NaOH?
Answer: 0.5 ml of NaOH means 0.5 mole (20.0 g) of NaOH, 0.5M of NaOH means that 0.5 mole (20.0g) of NaOH are dissolved in 1L of its solution.

Question 13. What is one a.m.u. or one 'u'?
Answer: 1 a.m.u. or 1 u = 1/12 th mass of an atom of carbon 12.

Question 14. What is the number of significant figures in 1.050×10^{4}?
Answer: Four.

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