

Fundamental Concepts

Sr	Questions	Answers Choice
1	The largest number of molecules are present in	A. 3.6 g of H_2O B. 4.8 g of $\text{C}_2\text{H}_5\text{OH}$ C. 2.8 g of CO D. 5.4 g of N_2O_5
2	What is the maximum mass of aluminium which can be obtained from 240g of aluminium oxide Al_2O_3 ?	A. 26 g B. 127 g C. 51 g D. 108 g
3	Hemoglobin contains nearly:	A. 10,000 atoms B. 100 atoms C. 1000 atoms D. 1 atom
4	A compound having empirical formula $\text{C}_3\text{H}_3\text{O}$ and its molecular mass is 110.02. Its molecular formula is	A. $\text{C}_3\text{H}_3\text{O}$ B. $\text{C}_6\text{H}_6\text{O}_2$ C. $\text{C}_9\text{H}_9\text{O}_3$ D. $\text{C}_3\text{H}_6\text{O}_2$
5	Ascorbic acid contains 40.92% carbon, 4.58%, hydrogen and 54.4% oxygen. The empirical formula is	A. $\text{C}_3\text{H}_4\text{O}_3$ B. $\text{C}_2\text{H}_4\text{O}_3$ C. $\text{C}_3\text{H}_5\text{O}_4$ D. $\text{C}_2\text{H}_3\text{O}_1$
6	The empirical formula of a liquid compound is known to be $\text{C}_2\text{H}_4\text{O}$. What other information is needed to work out its molecular formula?	A. The percentage composition of the compound B. The relative molecular mass of the compound C. The density of the compound D. The volume occupied by one mole of the compound
7	The number of subatomic particles in atoms sidcovered is more than:	A. 110 B. 100 C. 125 D. 90
8	The wave length of visible light is 500 nm. In S.I. unit this value is	A. $5 \times 10^{-8}\text{m}$ B. $5 \times 10^{-9}\text{m}$ C. $500 \times 10^{-7}\text{m}$ D. $500 \times 10^{-9}\text{m}$
9	Question Image	A. 8 g B. 16 g C. 32 g D. 24 g
10	How many moles of hydrogen atoms does 3.2 g of methane, CH_4 , contain?	A. 0.02 B. 0.2 C. 0.4 D. 0.8
11	Isotopes differ in	A. properties which depend upon mass B. arrangement of electrons in orbitals C. chemical properties D. the extent to which they may be affected in electric fields
12	The relative atomic mass of chlorine is 35.5. What is the mass of 2 mol of chlorine gas	A. 142 g B. 71 g C. 35.5 g D. 18.75 g

A.

13	He Ar and Ne are:	repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">Mono-atomic molecules B. 2×10^{-10} m C. 2×10^{-8} m D. 2×10^{-12} m
14	The diameter of atoms is of the order:	A. 2×10^{-5} m B. 2×10^{-10} m C. 2×10^{-2} m D. 2×10^{-3} m
15	Which has greater number of moles	A. 0.1 g sodium B. 6.02×10^{20} atoms of magnesium C. 20 cm³ of 0.1 mole per dm³ of NaOH D. 12.2 dm³ of nitrogen at standard [A = 23, Mg = 24, O = 16]
16	Formation of a cation is:	A. Exothermic process B. Non-endothermic process C. Endothermic process D. None of above
17	The number of isotopes of gold is	A. 3 B. 1 C. 2 D. 4
18	Isotopes differ in the	A. Number of neutrons B. Number of protons C. Number of electrons D. Number of atoms
19	A compound X contains 50% sulphur and 50% oxygen by mass. What is the empirical formula of compound X?	A. SO B. SO₂ C. SO₃ D. SO₄
20	Isotopes of an element differ in	A. Number of protons B. Number of electrons C. Number of neutrons D. Number of electrons and protons