

ECAT Chemistry Chapter 1 Basic Concepts

Sr	Questions	Answers Choice
1	A compound X contains 50% sulphur and 50% oxygen by mass. What is the empirical formula of compound X?	<p>A. SO B. SO_2 C. SO_3 D. SO_4</p>
2	The value of R (General Gas Constant) is	<p>A. $8.3134 \text{ JK}^{-1}\text{mol}^{-1}$ B. $1.987 \text{ Cal K}^{-1}\text{mol}^{-1}$ C. Both a and b D. $1.987 \text{ JK}^{-1}\text{mol}^{-1}$</p>
3	Which of the following compounds contains the highest percentage by mass of nitrogen?	<p>A. Ammonia, NH_3 B. Ammonium carbamate, $NH_2CO_2NH_4$ C. Ammonium carbonate, $(NH_4)_2CO_3$ D. Hydrazine, N_2H_4</p>
4	What is the volume in cm^3 of 3.01×10^{23} molecules of O_2 gas at S.T.P	<p>A. 1000 cm^3 B. 11000 cm^3 C. 1120 cm^3 D. 11200 cm^3</p>
5	Which statement about an atom is true ?	<p>A. The number of neutrons is not equal to number of electrons B. Mass number is less than atomic number</p>

		<p>C. All the elements have only one mass number</p> <p>D. Mass number can be equal to atomic number</p>
6	Isotopes differ in the	<p>A. Number of neutrons</p> <p>B. Number of protons</p> <p>C. Number of electrons</p> <p>D. Number of atoms</p>
7	The diameter of atoms is of the order:	<p>A. $2 \times 10^{-5} \text{ m}$</p> <p>B. $2 \times 10^{-10} \text{ m}$</p> <p>C. $2 \times 10^{-2} \text{ m}$</p> <p>D. $2 \times 10^{-3} \text{ m}$</p>
8	Question Image	<p>A. 84.84 %</p> <p>B. 89.89%</p> <p>C. 81.81%</p> <p>D. 90.90%</p>
9	The empirical formula of a compound is CH_2O . What may be the compound	<p>A. $\text{C}_2\text{H}_5\text{OH}$</p> <p>B. $\text{C}_6\text{H}_5\text{OH}$</p> <p>C. HCOOH</p>
10	Question Image	<p>A. N_2O_4 is limiting reactant</p> <p>B. N_2H_4 is the limiting reactant</p> <p>C. Reactants are completely converted to the products</p> <p>D. Reactions is reversible</p>
11	Smallest particle of an element which may or may not have independent existence is known as:	<p>A. A molecule</p> <p>B. An ion</p> <p>C. An atom</p> <p>D. An electron</p>
12	How many moles of oxygen, O_2 are needed for the complete combustion of two moles of butane C_4H_{10} ?	<p>A. 2</p> <p>B. 8</p> <p>C. 10</p> <p>D. 13</p>
13	The atomic mass is measured in atomic mass unit (a.m.u.) which is equal to	<p>A. $1.661 \times 10^{-27} \text{ Kg}$</p> <p>B. $1.661 \times 10^{-24} \text{ Kg}$</p> <p>C. $1.661 \times 10^{-27} \text{ g}$</p> <p>D. $1.661 \times 10^{-24} \text{ mg}$</p>
14	Hemoglobin is 68000 times heavier than:	<p>A. Oxygen atom</p> <p>B. Nitrogen atom</p> <p>C. Carbon atom</p> <p>D. Hydrogen atom</p>
15	When an electron is added to a uni positive ion we get:	<p>A. Cation</p> <p>B. Molecule</p> <p>C. Neutral atom</p> <p>D. Anion</p>
16	First atomic theory was put forward by an English school teacher:	<p>A. Maxewell</p> <p>B. Newton</p> <p>C. Sanger</p> <p>D. John Dalton</p>
17	Question Image	<p>A. 8 g</p> <p>B. 16 g</p> <p>C. 32 g</p> <p>D. 24 g</p>
18	The mass of Al_2S_3 formed when 20 grams Al reacts completely with S is	<p>A. 60 g</p> <p>B. 50 g</p> <p>C. 50.55 g</p> <p>D. 55.55 g</p>
19	Atoms and molecules can either gain or lose electrons, forming charge particles called:	<p>A. Positrons</p> <p>B. Photons</p> <p>C. Ions</p> <p>D. Electrons</p>
20	The number of moles of CO_2 which contain 8.0 g of oxygen	<p>A. 0.25</p> <p>B. 0.50</p> <p>C. 1.0</p> <p>D. 1.50</p>