

ST. LAWRENCE HIGH SCHOOL A JESUIT CHRISTIAN MINORITY INSTITUTION WORKSHEET-10(CLASS-11) **TOPIC- SOME BASIC CONCEPT OF CHEMISTRY** SUBTOPIC- BASIC CHEMICAL CALCULATION



SUBJECT – CHEMISTRY **DURATION – 30 mins**

F.M. - 15 DATE -25.06.20

1.1 Elements X and Y combine to form two compounds XY and X₂Y. Find the atomic weight of X and Y, if the weight of 0.1 moles of XY is 10g and 0.05 moles of X₂Y is 9g-

(a) 30, 20 (b) 80, 20 (c) 60, 40 (d) 20, 30

1.2 Which one will have maximum numbers of water molecules? (a) 18 molecules of water (b) 1.8 grams of water (c) 18 grams of water (d) 18 moles of water

1.3 The number of atoms present in 0.1 moles of a triatomic gas is-

a) 1.806×10^{23} b) 1.806×10^{22} c) 3.600×10^{23} d) 6.026×10^{22}

1.4 Find the volume of O₂ required to burn 1 L of propane completely, measured at 0°C temperature and 1 atm pressure-

a) 10 L b) 7 L c) 6 L d) 5 L

1.5 A gas X has C p and C v ratio as 1.4, at NTP 11.2 L of gas X will contain number of atoms-

a) 1.2×10^{23} b) 3.01×10^{23} c) 2.01×10^{23} d) 6.02×10^{23}

1.6 Which of the species is not paramagnetic? a) As⁺ b) Cl⁻ b) Ne²⁺ d) Be⁺

1.7 Pressure has the same dimension as _____ a) Energy per unit volume b) Energy c) Force per unit volume d) Force

1.8 A container has an equal mass of H₂, O₂ and CH₄ at 27°C, the ratio of their volume isa) 16:8:1 b) 8:1:2 c) 16:1:2 d) 8:16:1

1.9 There are two chlorides of Sulphur S₂Cl₂ and SCl₂. What is the equivalent mass of SCl₂a) 64.8 b) 32 c) 16 d) 8

1.10 Which among the following is temperature independent?

a) Molality b) Mole fraction c) Molarity d) Mass percent

1.11 Boron exists as two stable isotopes; ¹⁰B (19%) and ¹¹B (81%). Find out the avg. atomic weight of boron in the periodic table-

(a) 10.0 (b) 11.2 (c) 10.2 (d) 10.8

1.12 Between empirical formula and molecular mass of a compound-

a) Empirical formula is greater than Molecular formula

- b) Molecular formula is greater than Empirical formula
- c) Both have same value d) can't be predicted

1.13 The experimental yield of a product of a chemical reaction is-

a) Greater than the theoretical yield b) Equal to the theoretical yield

c) Same with that of the theoretical yield d) can't be predicted

1.14 Which of the following are isoelectronic species?

a) H⁺, H and H⁻ b) Li⁺, Na⁺ and K⁺ c) Cl⁻, Br⁻ and I⁻ d) F⁻, Ne and Na⁺

1.15 The mass spectrometer is used to determine the Mass number of isotopes and-

a) Atomic number b) Relative abundance c) Electronic configuration d) All of the above

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