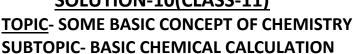


ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION-10(CLASS-11)

TOPIC- SOME BASIC CONCEPT OF CHEMISTRY





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

Ans. b

- 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 Ans. d
- 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}

Ans. a

- 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 Lb) 7 Lc) 6 Ld) 5 L

Ans. d

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}

Ans. d

- 1.6 Which of the species is not paramagnetic?
- a) As^+b) Cl^-b) $Ne^{2+}d$) Be^+

Ans. b

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

Ans. a

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

Ans. c

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

Ans. c

- 1.10 Which among the following is temperature independent?
- a) Molality b) Mole fraction c) Molarity d) Mass percent Ans. b and d

1.11 Boron exists as two stable isotopes; 10 B (19%) and 11 B (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

Ans. d

- 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

Ans.

- 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 **Ans.**
- 1.14 Which of the following are isoelectronic species?
- a) H⁺, H and H⁻b) Li⁺, Na⁺ and K⁺ c) Cl⁻, Br⁻ and l⁻d) F⁻, Ne and Na⁺ Ans. d
- 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 Ans. b

PREPARED BY: MR. ARNAB PAUL CHOWDHURY