**Karan Arora**  **R.L. Institute M: 9416974837**

**Max Time : 1 hr** **Class = 11th Chemistry Test**  **Max Marks : 100**

**Topic : Concentration Terms , Mole concept , Empirical Formula , IUPAC naming**

1. Number of atoms of oxygen present in 10.6 gm of Na2CO3.

|  |  |  |  |
| --- | --- | --- | --- |
| a) 6.02 x 1022 | b) 12.04 x 1022 | c) 1.806 x 1023 | d) 6.35 x 1020 |

1. Which of the following has maximum mass?

|  |  |
| --- | --- |
| a) 0.1 gm atom of carbon | b) 0.1 mole NH3 |
| c) 6.022 x 1022 molecule of H2 | d) 1120 cm3 of CO2 |

1. Total number of electron present in 18 mL of H2O

|  |  |  |  |
| --- | --- | --- | --- |
| a) 6.02 x 1023 | b) 6.02 x 1022 | c) 6.02 x 1024 | d) 6.02 x 1025 |

1. One mole of P4 molecules contain:

|  |  |
| --- | --- |
| a) 1 molecule of P | b) 4 molecules of P |
| c) 6.022 x 1023 atoms of P | d) 24.088 x 1023 atoms of P |

1. The total number of protons, electrons and neutrons in 12 g of 6C12 is:

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1.084 x 1025 | b) 6.022 x 1024 | c) 6.022 x 1023 | d) 18 |

1. The volume occupied by one molecule of water (density = 1 gcm-3) is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 18 cm3 | b) 22400 cm3 | c) 6.023 x 10-23 cm3 | d) 3 x 10-23 cm3 |

1. Number of electrons in 1.8 mL of H2O is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 6.02 x 1023 | b) 3.011 x 1023 | c) 0.602 x 1023 | d) 60.22 x 1023 |

1. 11.2 litre of a gas at STP weighs 14 gm. The gas could not be:

|  |  |  |  |
| --- | --- | --- | --- |
| a) N2 | b) CO | c) B2H6 | d) N2O |

1. One mole of P4 molecules contain:

|  |  |
| --- | --- |
| a) 1 molecule of P | b) 4 molecules of P |
| c) 6.022 x 1023 atoms of P | d) 24.088 x 1023 atoms of P |

1. The total number of protons, electrons and neutrons in 12 g of 6C12 is:

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1.084 x 1025 | b) 6.022 x 1024 | c) 6.022 x 1023 | d) 18 |

1. The volume occupied by one molecule of water (density = 1 gcm-3) is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 18 cm3 | b) 22400 cm3 | c) 6.023 x 10-23 cm3 | d) 3 x 10-23 cm3 |

1. Number of electrons in 1.8 mL of H2O is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 6.02 x 1023 | b) 3.011 x 1023 | c) 0.602 x 1023 | d) 60.22 x 1023 |

1. 11.2 litre of a gas at STP weighs 14 gm. The gas could not be:

|  |  |  |  |
| --- | --- | --- | --- |
| a) N2 | b) CO | c) B2H6 | d) N2O |

1. If NA is Avogadro’s number then number of valence electrons in 4.2 gm of nitride ions (N3-) is:

|  |  |  |  |
| --- | --- | --- | --- |
| a) 3.2 NA | b) 1.6 NA | c) 2.4 NA | d) 1.2 NA |

1. Number of atoms in 4.25 gm of NH3 is approximately.

|  |  |  |  |
| --- | --- | --- | --- |
| a) 6 x 1023 | b) 15 x 1023 | c) 1.5 x 1023 | d) 2.5 x 1023 |

1. The total number of protons in 10 gm of calcium carbonate is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 3.01 x 1024 | b) 4.06 x 1024 | c) 30.1 x 1024 | d) 3.01 x 1023 |

1. What will be the molarity of pure water?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 18 M | b) 50 M | c) 55.6 M | d) 100 M |

1. A sample of nitric acid is 69 % by mass and it has a concentration of 15.44 moles per liter. Its density is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1.86 g/cc | b) 1.41 g/cc | c) 2.6 g/cc | d) 1.02 g/cc |

1. What volume of water is to be added to 100 cm3 of 0.5 M NaOH solution to make it 0.1 M solution?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 200 cm3 | b) 400 cm3 | c) 500 cm3 | d) 100 cm3 |

1. 8 g NaOH is dissolved in 18 g of water. Mole fraction of NaOH in solution and molality of the solution respectively are :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 0.2 , 11.11 | b) 0.167 , 22.20 | c) 0.2 , 22.20 | d) 0.167 , 11.11 |

1. What is the normality of 2 M H3PO2 solution?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 0.5 N | b) 1 N | c) 2 N | d) 3 N |

1. How many gram of HNO3 is required to prepare 400 mL solution of 0.2 M HNO3?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 5.04 g | b) 5040 g | c) 25.2 g | d) 2.52 g |

1. Calculate the normality of 2.1 % (w/v) H2SO4 solution?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 2.14 N | b) 4.28 N | c) 0.428 N | d) 0.214 N |

1. What volume of 0.1 N HNO3 solution can be prepared from 6.3 g of HNO3?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1 L | b) 2 L | c) 0.5 L | d) 5 L |

1. The molarity of 98 % (w/w) H2SO4 (d = 1.8 g/mL) is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 6 M | b) 18 M | c) 10 M | d) 4 M |