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

**Max Time : 1 hr** **Class = 11th Chemistry Test**  **Max Marks : 25**

**MOLE CONCEPT & CONCENTRATION TERMS CODE : A**

1. Multiple Choice Questions : [ 1 x 5 = 5 ]
2. The number of atoms in 0.1 mole of a triatomic gas is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1.800 x 1022 | b) 6.026 x 10 22 | c) 18.06 x 1023 | d) 3.600 x 1023 |

1. One mole of CO2 contains

|  |  |
| --- | --- |
| a) 6.02 x 1023 atoms of C | b) 6.02 x 1023 atoms of O |
| c) 18.1 x 1023 molecules of CO2 | d) 3 g atoms of CO2 |

1. Number of moles in 1 m3 gas at NTP is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 4.46 | b) 44.6 | c) 446 | d) 4460 |

1. The total number of atoms of all elements present in mole of ammonium dichromate is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 19 | b) 6.023 x 1023 | c) 114.473 x 1023 | d) 84.322 x 1023 |

1. The total number of electrons in 18 mL of water (density = 1 g/mL) is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 6.02 x 1023 | b) 6.02 x 1025 | c) 6.02 x 1024 | d) 6.02 x 18 x 1023 |

1. Calculate the Molality of a solution of ethanol in water in which the mole fraction of ethanol is 0.040. [ 2 ]
2. What will be the Normality of 7 g/L H2SO4? [ 2 ]
3. Concentration of glucose in normal blood is 90 mg per 100 mL. What is the Molarity of the glucose in blood? [ 2 ]
4. 100 g solution of urea in water has 40 g urea (molar mass = 60 g/mol). What is the Molality of urea solution? What is Mole fraction of urea in solution? [ 2 ]
5. A sugar syrup of weight 214.2 g contains 34.2 g sugar (C12H22O11). Calculate: [ 2 ]

a) Molal concentration b) Mole fraction of sugar in the syrup.

1. How many grams of NaOH should be dissolved to make 100 cm3 0f 0.15 M NaOH solution? [ 2 ]
2. The volume of a drop of water is 0.04 ml. How many H2O molecules are there in a drop of water?

[ 2 ]

1. Calculate number of oxygen atoms in 11 gm of carbon dioxide. [ 2 ]
2. Calculate number of protons in 4.9 gm of H2SO4. [ 2 ]
3. Define Molarity and Molality [ 2 ]

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

**Max Time : 1 hr** **Class = 11th Chemistry Test**  **Max Marks : 25**

**MOLE CONCEPT & CONCENTRATION TERMS CODE : B**

1. Multiple Choice Questions : [ 1 x 5 = 5 ]
2. The total number of atoms of all elements present in one mole of ammonium dichromate is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 19 | b) 6.023 x 1023 | c) 114.473 x 1023 | d) 84.322 x 1023 |

1. The total number of electrons in 18 mL of water (density = 1 g/mL) is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 6.02 x 1023 | b) 6.02 x 1025 | c) 6.02 x 1024 | d) 6.02 x 18 x 1023 |

1. The number of atoms in 0.1 mole of a triatomic gas is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1.800 x 1022 | b) 6.026 x 10 22 | c) 18.06 x 1023 | d) 3.600 x 1023 |

1. Number of moles in 1 m3 gas at NTP is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 4.46 | b) 44.6 | c) 446 | d) 4460 |

1. One mole of CO2 contains

|  |  |
| --- | --- |
| a) 6.02 x 1023 atoms of C | b) 6.02 x 1023 atoms of O |
| c) 18.1 x 1023 molecules of CO2 | d) 3 g atoms of CO2 |

1. A sugar syrup of weight 214.2 g contains 34.2 g sugar (C12H22O11). Calculate: [ 2 ]

a) Molal concentration b) Mole fraction of sugar in the syrup.

1. Calculate number of protons in 4.9 gm of H2SO4. [ 2 ]
2. The volume of a drop of water is 0.04 ml. How many H2O molecules are there in a drop of water?

[ 2 ]

1. Define Molarity and Molality [ 2 ]
2. What will be the Normality of 7 g/L H2SO4? [ 2 ]
3. Calculate the Molality of a solution of ethanol in water in which the mole fraction of ethanol is 0.040. [ 2 ]
4. 100 g solution of urea in water has 40 g urea (molar mass = 60 g/mol). What is the Molality of urea solution? What is Mole fraction of urea in solution? [ 2 ]
5. How many grams of NaOH should be dissolved to make 100 cm3 0f 0.15 M NaOH solution? [ 2 ]
6. Calculate number of oxygen atoms in 11 gm of carbon dioxide. [ 2 ]
7. Concentration of glucose in normal blood is 90 mg per 100 mL. What is the Molarity of the glucose in blood? [ 2 ]