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**Max Time : 1 hr** **Class = 11th Chemistry Test**  **Max Marks : 20**

**Topic : Concentration Terms**

1. Multiple choice questions : [ 1 X 7 = 7 ]
2. Normality of 0.3 M phosphorus acid is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 0.1 | b) 0.15 | c) 0.6 | d) 0.9 |

1. 8 g NaOH is dissolved in one litre of solution. Its molarity is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 0.2 M | b) 0.1 M | c) 0.4 M | d) 0.8 M |

1. Normality of 0.3 M phosphorus acid is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 0.1 | b) 0.15 | c) 0.6 | d) 0.9 |

1. For preparing 0.1 M solution of H2SO4 in one litre, we need H2SO4 :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 0.98 g | b) 4.9 g | c) 49 g | d) 9.8 g |

1. An antifreeze solution is prepared from 222.6 g of ethylene glycol and 200 g of water. What is the molality of the solution?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 17.95 m | b) 19.57 m | c) 15.97 m | d) 17.07 m |

1. The Molarity of 500 g of water is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 50 M | b) 55.5 M | c) 5 M | d) cannot be calculated |

1. Normality of 10 % (w/v) H2SO4 solution is nearly :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 0.1 | b) 0.2 | c) 0.5 | d) 2 |

1. A solution is prepared by adding 4 g of a substance A to 18 g of water. Calculate the Mass percent of the solute? [ 2 ]
2. How many moles and how many grams of sodium chloride (NaCl) are present in 500 cm3 of a 1 M NaCl solution? [ 2 ]
3. If 1.6 g of NaOH is present in 40 mL of solution. What is the molarity and normality of solution. [ 2 ]
4. Find out the Molarity of 93 % (w/w) H2SO4 . (Density = 1.84 g/mL). [ 2 ]
5. A bottle of commercial sulphuric acid (density = 1.787 g/mL) is labelled as 86 % by weight. What is the Molarity of the acid? What volume of the acid has to be used to make 1 L of 0.2 M H2SO4? [ 2 ]
6. Calculate the Molality of a solution of ethanol in water in which the mole fraction of ethanol is 0.040. [ 2 ]
7. A sample of NaNO3 weighing 0.38 g is placed in a 50 mL measuring flask. The flask is then filled with water upto the mark on the neck. What is the Molarity of the solution? [ 2 ]
8. Calculate the Molarity of a 96% by mass H2SO4 solution, whose density is 1.78 g/cm3 ? [ 2 ]
9. Calculate : a) Molarity [ 2 ]

b) Molality of sulphuric acid solution of specific gravity 1.198 containing 27% H2SO4 by weight.