

## CH5: Solutions

|    |   |                    |                        |                         |
|----|---|--------------------|------------------------|-------------------------|
| 1  | Molarity is the number of .....of solute dissolved in 1L of solution  |                    |                        |                         |
|    | grams   | Milliliter         | second                 | moles                   |
| 2  | Molality is the number of moles of ..... dissolved in 1 Kg of solvent .   |                    |                        |                         |
|    | solvent   | Solute             | solution               | Acid                    |
| 3  | Molarity is the number of moles of solute dissolved 1 .....of solution  |                    |                        |                         |
|    | grams   | Milliliter         | Liter                  | moles                   |
| 4  | A solution has a volume of 2.0 L and contain 36.0 g of glucose ( C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> ) . IF The molar mass of glucose is 180 g/mol . whatis the molarity of the solution                                      |                    |                        |                         |
|    | 1.0   | 1.00               | 0.1                    | 0.01                    |
| 5  | How many liers of 0.25 M NaCl solution must be measured to obtain 0.1 mol of NaCl   |                    |                        |                         |
|    | 1   | 2                  | 2.5                    | 3.5                     |
| 6  | What is the concentration of solution mol/l when 80g of calcium carbonate Ca(CO <sub>3</sub> ) <sub>2</sub> , is dissolved in 2L of solution ? ( Mw Ca(CO <sub>3</sub> ) <sub>2</sub> = 100 g/mol )                                     |                    |                        |                         |
|    | 0.4   | 4                  | 0.004                  | 1                       |
| 7  | A student needs to prepare 250ml of Cd(NO <sub>3</sub> ) <sub>2</sub> Solution . how many grams of cadmium nitrate are required ? ( Mw Cd(NO <sub>3</sub> ) <sub>2</sub> = 236 g/mol/mol)   |                    |                        |                         |
|    | 5.9   | 5.1                | 5.4                    | 5.6                     |
| 8  | When it is correctly balanced, the correct coefficients for the equation below are<br>PCl <sub>3</sub> + H <sub>2</sub> O ----> H <sub>3</sub> PO <sub>3</sub> + HCl  |                    |                        |                         |
|    | 1, 3, 1, 3  | 1, 3, 1, 1         | 1, 1, 1, 3             | 2, 3, 2, 3              |
| 9  | What is the coefficient for CO <sub>2</sub> when the following chemical equation is properly balanced using the smallest set of whole numbers? C <sub>4</sub> H <sub>10</sub> + O <sub>2</sub> ----> CO <sub>2</sub> + H <sub>2</sub> O |                    |                        |                         |
|    | 1   | 2                  | 4                      | 8                       |
| 10 | What is the coefficient for CO <sub>2</sub> when the following chemical equation is properly balanced using the smallest set of whole numbers? C <sub>2</sub> H <sub>5</sub> + O <sub>2</sub> ----> CO <sub>2</sub> + H <sub>2</sub> O  |                    |                        |                         |
|    | 3   | 5                  | 9                      | 2                       |
| 11 | Acid + base → salt + water  |                    |                        |                         |
|    | Oxidation reaction  | Reduction reaction | Participation reaction | Neutralization reaction |
| 12 | Process of lose electron from an atom call Mg → Mg <sup>++</sup> + 2e <sup>-</sup>  |                    |                        |                         |
|    | Oxidation   | Reduction          | Participation          | Neutralization          |
| 13 | Process of accepted (gain ) electron from an atom call Cl <sub>2</sub> + 2e <sup>-</sup> → 2Cl <sup>-</sup>   |                    |                        |                         |
|    | Oxidation   | Reduction          | Participation          | Neutralization          |
| 14 | What is the molality of solution when 50g of calcium carbonate CaCO <sub>3</sub> , is dissolved in ( 500g of water ? ( Mw CaCO <sub>3</sub> = 100 g/mol   |                    |                        |                         |
|    | 1.6 m   | 0.61m              | 1 m                    | 0.1 m                   |
| 15 | Acid + base → slat + .....  |                    |                        |                         |
|    | Water   | Acid               | base                   | Benzene                 |

|    |   |                         |                             |                        |
|----|---|-------------------------|-----------------------------|------------------------|
| 16 | <b><math>\text{Pb}(\text{NO}_3)_2(\text{aq}) + 2\text{NaI}(\text{aq}) \longrightarrow \text{PbI}_2(\text{s}) + 2\text{NaNO}_3(\text{aq})</math></b> |                         |                             |                        |
|    | <b>Oxidation –reduction reaction</b>  | <b>Neutral reaction</b> | <b>Precipitate reaction</b> | <b>None</b>            |
| 17 | <b>Which of the following represent molar concentration except</b>  |                         |                             |                        |
|    | <b>Molarity</b>   | <b>Molality</b>         | <b>Normality</b>            | <b>Weight / weight</b> |
| 18 | <b>..... is the number of mole of solute dissolved solution</b>   |                         |                             |                        |
|    | <b>Normality</b>  | <b>Molality</b>         | <b>Molarity</b>             | <b>Mole fraction</b>   |
| 19 | <b>..... is the number of mole of solute dissolved one liter of solution</b>  |                         |                             |                        |
|    | <b>Normality</b>  | <b>Molality</b>         | <b>Molarity</b>             | <b>Mole fraction</b>   |