**Reg. NO:**

**TIME: 45 MIN**

**DATE: 02.5.20**

**BASIC CONCEPTS OF CHEMISTRY-PRACTICE SHEET-01 TOTAL MARKS: 180**

**SUBJECT: CHEMISTRY**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | Weight of oxygen in one mole each of in the simple ratio of: | | | | | | | |
|  | a) | 3 : 2 | b) | 1 : 2 | c) | 2 : 1 | d) | 3 : 1 |
| 2. | Equivalent weight of a bivalent metal is 37.2. The molecular weight of its chloride is | | | | | | | |
|  | a) | 412.2 | b) | 216 | c) | 145.4 | d) | 108.2 |
| 3. | 0.0833 mole of carbohydrate of empirical formula contain 1 g of hydrogen. The molecular formula of the carbohydrate is | | | | | | | |
|  | a) |  | b) |  | c) |  | d) |  |
| 4. | The equivalent weight of Zn in the following reaction is equal to its,  : | | | | | | | |
|  | a) |  | b) |  | c) | 2 | d) | 3 |
| 5. | 5.85 g of NaCl are dissolved in 90 g of water. The mole fraction of NaCl is: | | | | | | | |
|  | a) | 0.1 | b) | 0.01 | c) | 0.2 | d) | 0.0196 |
| 6. | 2.76 g of silver carbonate on being strongly heated yield a residue weighing | | | | | | | |
|  | a) | 2.16 g | b) | 2.48 g | c) | 2.64 g | d) | 2.32 g |
| 7. | A solution contains and 10 mL of the solution required 2.5 mL of 0.1  for neutralization using phenolphthalein as indicator. Methyl orange is then added when a further 2.5 mL of 0.2 was required. The amount of in 1 litre of the solution is: | | | | | | | |
|  | a) | 5.3 g and 4.2 g | b) | 3.3 g and 6.2 g | c) | 4.2 g and 5.3 g | d) | 6.2 g and 3.3 g |
| 8. | The volume occupied by one molecule of water (density 1 g ) is: | | | | | | | |
|  | a) |  | b) |  | c) |  | d) |  |
| 9. | 510 mg of a liquid on vaporization in Victor meyer’s apparatus displaces 67.2 of air at (STP). The molecular weight of the liquid is: | | | | | | | |
|  | a) | 130 | b) | 17 | c) | 170 | d) | 1700 |
| 10. | What volume of 6 M HCL should be added to 2 M HCL to get 1 L of 3 M HCL? | | | | | | | |
|  | a) | 0.25 L | b) | 1.00 L | c) | 0.75 L | d) | 2.50 L |
| 11. | The normality of one molar sodium carbonate solution is: | | | | | | | |
|  | a) | 2 | b) | 1 | c) | 0.5 | d) | 1.5 |
| 12. | If ionises as , then total number of ions produced by 0.1 M will be | | | | | | | |
|  | a) |  | b) |  | c) |  | d) | 1.8 |
| 13. | of an element combines with oxygen forming g of its oxide. The equivalent weight of the element is: | | | | | | | |
|  | a) |  | b) |  | c) |  | d) |  |
| 14. | A sample of ammonium phosphate contains 6.36 moles of hydrogen atoms. The number of moles of oxygen atom in the sample is  (atomic mass of N = 14.04, H = 1, P = 31, O = 16) | | | | | | | |
|  | a) | 0.265 | b) | 0.795 | c) | 2.12 | d) | 4.14 |
| 15. | To neutralise 20 mL of / 10 NaOH, the volume of HCl needed is: | | | | | | | |
|  | a) | 10 mL | b) | 30 mL | c) | 40 mL | d) | 20 mL |
| 16. | andare the atomic weight, equivalent weight, molecular weight and valence of an element. The correct relation is: | | | | | | | |
|  | a) | = | b) |  | c) |  | d) |  |
| 17. | Which one of the following set of units represents the smallest and largest amount of energy respectively? | | | | | | | |
|  | a) | J and erg | b) | erg and cal | c) | Cal and eV | d) | eV and L-atm |
| 18. | The number of atoms present in a 0.635 g of Cu piece will be | | | | | | | |
|  | a) |  | b) |  | c) |  | d) |  |
| 19. | What volume of hydrogen gas, at 273 K and 1 atm pressure will be consumed in obtaining 21.6 g of elemental boron (atomic mass = 10.8) from the reduction of boron trichloride by hydrogen? | | | | | | | |
|  | a) | 89.6 L | b) | 67.2 L | c) | 44.8 L | d) | 22.4 L |
| 20. | The numerical value of (where is number of molecules is moles of gas) is: | | | | | | | |
|  | a) | 8.314 | b) | 6.02 | c) |  | d) |  |
| 21. | In the relationship molecular formula = empirical formula | | | | | | | |
|  | a) | Any value | | | | | | |
|  | b) | Zero value | | | | | | |
|  | c) | Only positive integer value | | | | | | |
|  | d) | None of the above | | | | | | |
| 22. | 10 g on heating gives 5.6 g CaO and …. g | | | | | | | |
|  | a) | 4.4 | b) | 5.6 | c) | 6.5 | d) | 4.2 |
| 23. | Which of the following changes with increase in temperature? | | | | | | | |
|  | a) | Molality | | | | | | |
|  | b) | Weight fraction of solute | | | | | | |
|  | c) | Fraction of solute present in water | | | | | | |
|  | d) | Mole fraction | | | | | | |
| 24. | On combustion of 4 g of the methane, 10.46 kJ of heat is liberated. Heat of combustion of methane is | | | | | | | |
|  | a) | 83.68 kJ | b) | 10.46 kJ | c) | 41.84 kJ | d) | 20.93 kJ |
| 25. | A gas is found to have the formula . Its VD is 70. The value of must be: | | | | | | | |
|  | a) | 7 | b) | 4 | c) | 5 | d) | 6 |
| 26. | Choose the wrong statement. | | | | | | | |
|  | a) | 1 mole means 6.023 particles | | | | | | |
|  | b) | Molar mass is mass of one molecule | | | | | | |
|  | c) | Molar mass is mass of one mole of a substance | | | | | | |
|  | d) | Molar mass is molecular mass expressed in grams | | | | | | |
| 27. | The term standard solution is used for the solutions whose: | | | | | | | |
|  | a) | Normality is known | b) | Molarity is known | c) | Strength is known | d) | All of these |
| 28. | The ratio of mole fraction of a solute and a solvent in a binary solution is: | | | | | | | |
|  | a) | Ratio of their wt. | b) | One | c) | Ratio of their mole | d) | Zero |
| 29. | If in a reaction is reduced to the mass of absorbing one mole of electrons would be | | | | | | | |
|  | a) | 21.0 g | b) | 36.5 g | c) | 18.0 g | d) | 31.5 g |
| 30. | At STP 5.6 litre of a gas weighs 60 g. The vapour density of gas is: | | | | | | | |
|  | a) | 60 | b) | 120 | c) | 30 | d) | 240 |