**I.P.S.Sr.Sec.School**

**Max Time : 1 hr** **Class : 11th Chemistry Max Marks : 30**

**Unit Test**

1. Multiple choice questions : [ 2 X 3 = 6 ]
2. A compound X contains 32 % of A , 20 % of B and remaining percentage of C. Then the empirical formula of X is : \_\_\_\_\_\_\_ [ At. Mass : A = 64 , B = 40 , C = 32].

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| a) AB2C2 | b) ABC4 | c) A2BC2 | d) ABC3 |

1. The right option for the mass of CO2 produced by heating 20 g of 20 % pure limestone is :

CaCO3 CaO + CO2.

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| --- | --- | --- | --- |
| a) 1.76 g | b) 2.64 g | c) 1.32 g | d) 1.12 g |

1. Which of the following fertilizers has the highest nitrogen percentage?

|  |  |
| --- | --- |
| a) Ammonium sulphate | b) Calcium cyanamide |
| c) Urea | d) Ammonium nitrate |

1. The number of moles of oxygen in one litre of air containing 21 % oxygen by volume, under standard conditions is : [ 2 ]
2. The total number of valence electrons in 4.2 g of ion is : [ 2 ]
3. Define Molarity and Molality. [ 2 ]
4. How long would it take a radio wave of frequency, 6 x 103 sec – 1 to travel from Mars to the earth, a distance of 8 x 107 km? [ 2 ]
5. What mass of limestone 90% purity is needed to obtain 4.5 litre CO2 at NTP? [ 2 ]
6. What mass of 95 % pore CaCO3 will be required to neutralized 50 mL of 0.5 M HCl solution according to the following reaction? [ 3 ]

CaCO3 (s) + 2 HCl (aq) CaCl2 (aq) + CO2(g) + H2O (l)

1. What is the weight of oxygen required for the complete combustion of 2.8 kg of ethylene? [ 3 ]
2. Define Photoelectric Effect. [ 3 ]
3. Give the electronic configuration of the following ions : [ 1 x 5 = 5]

(a) Cu2+ (b) Cr3+ (c) Fe2+ and Fe3+  (d) H –  (e) S2 –