SCHOLUP

Class XI – Chemistry (Some basic concepts of chemistry)

1. Classify following substances as element, compounds and mixtures – water, tea, silver, steel. Carbon dioxide and platinum.

2. Convert 35^0C to ^0F & K.

3. The substance which gets used up in any reaction is called _____.

4. How many significant figures are present in
   a) $4.01 * 10^2$
   b) 8.256
   c) 100

5. Calculate molecular mass of –
   C_2H_6, $C_{12}H_{22}O_{11}$, H_2SO_4, H_3PO_4

6. 1L of a gas at STP weighs 1.97g. What is its molecular mass?

7. Write empirical formula of following-
   CO, Na_2CO_3, KCl, C_6H_{12}, H_2O_2, H_3PO_4, Fe_2O_3, N_2O_4

8. Vitamin C is essential for the prevention of scurvy. Combustion of 0.200g of vitamin C gives 0.02998g of CO_2 and 0.0819g of H_2O. What is the empirical formula of vitamin C?

9. Calculate the weight of lime (CaO) obtained by heating 2000kg of 95% pure lime stone ($CaCO_3$).

10. What volume of 10M HCl and 3M HCl should be mixed to obtain 1L of 6M HCl solution?