**Senior School, Gulshan**

**Worksheet 2 on Covalent bonding, metallic bonding and Chemical formulae, equations and calculations: Part1**

1. What is covalent bonding? Explain your answer with an example.
2. What is metallic bonding? How are metallic bonds formed?
3. Why metals are malleable?
4. Why metals are good conductors of electricity?
5. Why metallic bonding in magnesium is stronger than that of sodium?
6. What is a mole?
7. Define relative atomic mass of an element.
8. Calculate the relative formula mass of CaCO3 , ZnSO4 and CuSO4.6H2O .
9. Calculate the mass of 0.25 mol of Al2(SO4)3 .
10. 3.2g of copper is reacted with 0.40mol concentrated nitric acid according to the following equation.

Cu(s) + 4HNO3 (aq) → Cu(NO3)2 (aq) + 2H2O (l) + 2 NO2 (g)

1. Which reagent is in excess?
2. Calculate the mole of nitrogen dioxide formed.
3. A compound has the empirical formula CH2 . If the relative formula mass is 56, work out the molecular formula.
4. What is percentage yield?