**Revision Sheet #3** **|** Lower Secondary Stage (6-8)

1st Semester | 2023-2024

|  |  |
| --- | --- |
| **Subject:** Chemistry | **Chapter 2:** Covalent bonds |
| **Objectives:*** Define covalent bonds
* Explain how covalent bonds are formed
* Use Lewis structure to represent covalent bonds
 |

1. Describe how a covalent bond forms.
2. Covalent bonds form between what kinds of elements?
3. For each element, draw the Lewis dots diagram (based on valence electrons).

Nitrogen Phosphorus

Chlorine Bromine

Selenium Argon

1. For each compound, draw the Lewis dot diagram.

a) CH4 d) Br2

b) PH3  e) N2

c) H2O f) BF3

**Types of Chemical Bonds**

1. *Classify the following as ionic (metal + nonmetal) or covalent (nonmetal + nonmetal).*
2. *Determine the charge for each element or polyatomic ion in each* ***ionic*** *compound.*

|  |  |
| --- | --- |
| 1. CaCl2
 | 1. MgO
 |
| 1. CO2
 | 1. HCl
 |
| 1. H2O
 | 1. KI
 |
| 1. K2O
 | 1. NO2
 |