Topic 3 Exercise 4 – molecular shapes, polarity and intermolecular forces

1. Explain the meaning of the term electronegativity.

2. Draw the correct dipoles on the following covalent bonds:

 a) Cl – Cl

 b) H – O

 c) B – F

 d) N – F

 e) N – O

 f) H – Cl

 g) H – N

 h) B – H

3. Draw the following molecules, add dipoles to all the bonds and predict whether or not they have an overall dipole:

 a) CO2

 b) SO2

 c) BF3

 d) NF3

 e) Cl2

 f) HCl

 g) H2O

 h) H2S

i) SiCl4

 j) PCl3

k) NH3

 l) SO3

4. Hence deduce the types of intermolecular force that can exist between the molecules