1. Write the name and formula of a compound that can be formed by combination of each of the following pairs of elements, and give the type of compound formed (ionic, covalent) and a reason for the choice.

   a) K and P
   b) Ca and F
   c) P and F
   d) S and O

2. Write correct formulas and names for 12 oxoanions.

3. Describe the meaning of and the relationship between the following words and concepts.
   - covalent bond
   - electron pair sharing
   - electron transfer
   - ionic compound
   - cation
   - anion

4. Calculate the bonding energy per nucleon in Joules for $^{16}_8\text{O}$ which has an isotopic mass of 15.99491 amu. The proton, neutron and electron masses are 1.00728 amu, 1.00866 amu and 0.000548 amu, respectively. The speed of light is $2.998 \times 10^8$ m/s and $J = \text{Kg m}^2/\text{s}^2$. Recall, $E = mc^2$.  