

Physical Science 10

Chemistry Exam Review #1: Bohr Diagrams, Naming and Writing Formulas for Compounds, Balancing Equations

1. Explain the difference between an atom, element and compound giving an example of each.
2. Draw each of the following Bohr Diagrams
 - a) Al
 - b) C
 - c) Mg^{+2}
 - d) N^{3-}
 - e) Cl^{1-}
3. Write the names of the following molecular compounds:
 - a) CO_2 _____
 - b) N_2O_5 _____
 - c) PF_5 _____
 - d) NH_3 _____
 - e) CCl_4 _____
4. Write the formulas for the following molecular compounds:
 - a) dinitrogen monoxide _____
 - b) diphosphorous hexabromide _____
 - c) sulfur dioxide _____
 - d) silicon tetrahydride _____
 - e) nitrogen diselenide _____
5. Balance the following equations
 - a) ____ Br_2 + ____ K_2S \rightarrow ____ KBr + ____ S_8
 - b) ____ C_8H_{18} + ____ O_2 \rightarrow ____ CO_2 + ____ H_2O
 - c) ____ NaCl \rightarrow ____ Na + ____ Cl_2
 - d) ____ Na_2CO_3 + ____ CaCl_2 \rightarrow ____ CaCO_3 + ____ NaCl
 - e) ____ Fe_2O_3 \rightarrow ____ Fe + ____ O_2
 - f) ____ Al + ____ HCl \rightarrow ____ H_2 + ____ AlCl_3
 - g) ____ Au + ____ HNO_3 + ____ HCl \rightarrow ____ AuCl_3 + ____ NO + ____ H_2O

6. Write the names of the following ionic compounds:

a) LiCl _____

b) Mg_3P_2 _____

c) $\text{Ba}(\text{NO}_3)_2$ _____

d) K_3PO_4 _____

e) CsOH _____

f) $\text{Ca}_3(\text{PO}_4)_2$ _____

g) FeO _____

h) PbO_2 _____

7. Write the formulas for the following ionic compounds:

a) barium hydroxide _____

b) iron (II) fluoride _____

c) calcium sulfide _____

d) copper (I) sulfate _____

e) cobalt (III) iodide _____

f) aluminum oxide _____

g) sodium carbonate _____

h) iron (III) nitrate _____