Compounds-Review

1. Fill the blanks.

A. Pure substances containing two or more types of atoms in definite proportions are called …….

B. Covalent compounds might be …… and ……

C. Smallest unit of a compound is called …….

D. Ionic compounds are formed from …… and …….. by transferring …….

E. ……. compounds are composed of nonmetal elements.

F. Compounds are represented by ……

2. Classify the following compounds as ionic, polar covalent and non-polar covalent compounds.

NaCl, SO_2, H_2, HCl, CO_2, $CaCO_3$, NH_3, K_2S, P_2O_5, Cl_2, P_4, $Al_2(SO_4)_3$, LiOH, ZnO, O_2, HCN, NO_2, Br_2, SiO_2, FeO, HNO_3

Ionic Compounds:

Polar Covalent Compounds:

Non-polar Compounds:

3. Determine the following statements as true or false.

A. …… Compounds resemble their constituents.

B. …… All ionic compounds are solid at room temperature.

C. …… Ionic compounds are formed by transferring first shell electrons.

D. …… Number of electrons in the valance shell cannot be more than 8 electrons.

E. …… Generally solutions covalent compounds can conduct electricity.

F. …… Ozone is a polar covalent compound.

G. …… Sum of the oxidation numbers of atoms in compounds is equal to zero.

H. …… In a $Al_2(SO_4)_3$ molecule there are seven atoms totally.

I. …… $Sn(OH)_2$ stands for tin (II) hydroxide.

J. …… NO_2 is named as nitrogen oxide.

4. Name the following compounds.

$SnCl_4$: ……..

Ca_3P: …….

P_2O_5: ……..

NH_4OH: ……

$KMnO_4$: ……

$Pb(SO_4)_2$: ……

$Al(CN)_3$: ……..

B_2H_4: ……

SO_3: ……

V_2O_5: ……

5. Write down the formula of the following compounds.

Ammonium oxide: ……

Phosphorus trifluoride: ……

Calcium bromide: ……

Iron (II) phosphate: ……

Lead (II) nitride: ……

Silicon dioxide: ……

Phosphorus pentachloride: ……

Zinc sulfate: ……

Methane: ……

Ozone: ……

Red phosphorus: ……

6. Calculate the oxidation states of elements indicated in the following compounds.

A. C in CH_4

B. P in H_3PO_4

C. Cr in $K_2Cr_2O_7$

D. S in $H_2S_2O_3$

F. Cl in $KClO_3$

G. N and S in $(NH_4)_2SO_4$

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