

REVIEW QUESTIONS

Chapters 12-13

1. Predict whether each compound below is ionic, polar covalent, or non-polar covalent:

a) SF₄ _____ d) KBr _____

b) Cl₂ _____ e) H₂S _____

c) BaS _____ f) O₂ _____

2. Classify each of the following changes as physical or chemical:

a) sharpening a pencil _____

b) cooking an egg _____

c) dew forming on a window _____

d) a tooth decaying _____

e) alcohol evaporating _____

3. Classify each of the following chemical reactions as to their type:

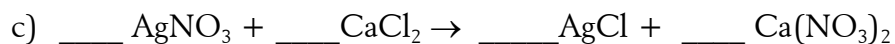
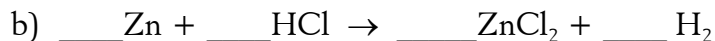
a) $\text{N}_2 + 3 \text{H}_2 \rightarrow 2 \text{NH}_3$ _____

b) $\text{Mg} + 2 \text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$ _____

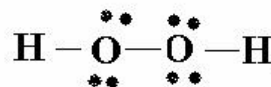
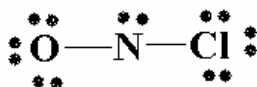
c) $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$ _____

d) $\text{H}_2\text{SO}_4 + 2 \text{NaOH} \rightarrow \text{Na}_2\text{SO}_4 + 2 \text{H}_2\text{O}$ _____

4. Balance the following equations:



5. Shown below are Lewis structures for two compounds. Evaluate each and determine if it is correct or incorrect. If incorrect, make correction to the structure.



Correct or incorrect: _____

6. Complete each statement below with a suitable word or phrase:

a) A cation is formed when a metal _____ electrons.

b) Covalent bonds form between _____.

c) Bonds in which the electrons are not shared equally are called _____.

d) Reactions that release energy are called _____.

e) Compounds formed by electron transfer are called _____.