What is the name of the compound SrO?

## Question #3

What happens to the electrons during a metallic bond?

#### **Question #5**

Balance the following reaction and identify the mole ratio between the two reactants.

 $CH_4 + O_2 \rightarrow$ 

# **Question #7**

Rank the bulk forces in order of strength from weakest to strongest.

## **Question #9**

What kind of a reaction is this?
Na + CaSO<sub>4</sub> →

#### **Question #2**

What is the molar mass for the hydrocarbon C<sub>24</sub>H<sub>37</sub>O<sub>6</sub>

#### **Ouestion #4**

What type of bond forms between two nonmetals share electrons?

#### **Question #6**

What are the dominant intermolecular forces present in water?

## **Question #8**

What is the formula for copper (IV) sulfate?

## **Question #10**

Which molecule has covalent bonding and does not require a double or triple bond?

CO<sub>2</sub>, CO, N<sub>2</sub>, Cl<sub>2</sub>

Draw the Lewis dot structure for BrO<sub>3</sub>-

#### **Question #13**

What is the molar mass of (NH<sub>4</sub>)<sub>2</sub>S?

## **Question #15**

Draw the Lewis Dot structure for nitrogen gas.

#### **Question #17**

Predict the products and balance the following reaction: aluminum phosphate plus rubidium nitrite

#### **Ouestion #19**

If you have 10 mol of Zn, how many mols of ZnO can be produced? 3Zn+Al<sub>2</sub>O<sub>3</sub>→3ZnO+2Al

## **Question #12**

What is the VSEPR geometry for carbon tetrachloride?

#### **Question #14**

What is the VSEPR geometry for ammonia?

#### **Question #16**

What kind of a reaction requires O<sub>2</sub> as a reactant?

#### **Question #18**

In a 'polar' bond, the elements involved are sharing the electron(s)...

#### **Ouestion #20**

If you have 25g of Zn, how many g of ZnO can be produced?
3Zn+Al₂O₃→3ZnO+2Al

Name the seven diatomic elements.

## **Question #23**

If you have 38L of  $O_2$  at STP, how many L of  $H_2O$  can you make, assuming your water is gaseous.  $2H_2 + O_2 \rightarrow 2H_2O$ 

# **Question #25**

What is the mole ratio of TNT to carbon monoxide?  $C_7H_5N_3O_6 \rightarrow CO + C + H_2O + N_2$ 

## **Question #27**

What is the molar mass of sodium carbonate?

#### **Question #29**

How many moles of iron (III) sulfate in 44.5g iron (III) sulfate? The molar mass is 400.1 g/mol.

## **Question #22**

What is the molar mass of AI(OH)<sub>3</sub>?

#### **Question #24**

Draw the Lewis dot structure for AIH<sub>3</sub>

#### **Ouestion #26**

What is the formula of sodium carbonate?

## **Question #28**

What is the molar mass of iron (III) sulfate

#### **Question #30**

How many grams
potassium chloride are in
14.6 moles potassium
chloride?
1 mole = 74.5 g

How many grams of iron (III) carbonate are found in 5.46 moles iron (III) carbonate?

## **Question #33**

Aqueous copper(II) bromide reacts with aqueous aluminum chloride. Balance this equation and predict the products.

## **Question #35**

What is the mole ratio of iron(III) sulfate to sodium sulfate?

 $Fe_2(SO_4)_3 + 3Na_2CO_3$  $\rightarrow Fe_2(CO_3)_3 + 3Na_2SO_4$ 

#### **Question #37**

If 15 g oxygen is reacted with hydrogen, then how many moles water will be produced?

## **Question #39**

If 46 g sodium metal reacts completely, how many moles chlorine gas will be required to make sodium chloride?

# **Question #32**

Aqueous copper(II) bromide reacts with aqueous aluminum chloride. What type of reaction is this?

# **Question #34**

How many moles of sodium carbonate are in 10.9 g sodium carbonate?

Molar mass is 106 g

## **Question #36**

If 10 moles iron (III) sulfate reacts, how many moles sodium sulfate will form?
Fe<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> + 3Na<sub>2</sub>CO<sub>3</sub>
→Fe<sub>2</sub>(CO<sub>3</sub>)<sub>3</sub> + 3Na<sub>2</sub>SO<sub>4</sub>

## **Question #38**

What are three of the four indications that a chemical reaction has occurred?

## **Question #40**

If 100 g sodium chloride reacts completely with barium, then how many grams sodium metal will be obtained?

2NaCl + Ba → BaCl<sub>2</sub> + 2Na

How many liters fluorine gas in 0.87 moles of fluorine gas at STP?

#### **Question #43**

 $2H_2S + 3O_2 \rightarrow 2SO_2 + 2H_2O$ How many moles of  $H_2S$  are required to form 8.20 moles of  $SO_2$ ?

## **Question #45**

Na<sub>2</sub>S<sub>2</sub>O<sub>3(aq)</sub> + 4Cl<sub>2(g)</sub> + 5H<sub>2</sub>O<sub>(aq)</sub>  $\rightarrow$ 2NaHSO<sub>4(aq)</sub>+8HCl<sub>(aq)</sub> How many moles of H<sub>2</sub>O react if 5.24 x 10<sup>19</sup> molecules of HCl are formed?

# **Question #47**

Which electrons are involved in bonding?

#### **Question #49**

How many valence electrons are available in NF<sub>3</sub>?

#### **Question #42**

How many grams of oxygen gas are in 0.69L of oxygen gas at STP?

#### **Question #44**

2NaClO<sub>3</sub>→2NaCl+3O<sub>2</sub>
How many molecules of oxygen are produced when 80.0 grams of sodium chloride are produced?

## **Question #46**

Draw the Lewis structure and identify the VSEPR geometry for BCl<sub>3</sub>.

## **Question #48**

How many electrons does Antimony need to gain or lose to have a full valence shell?

## **Question #50**

Identify if the following are ionic or covalent: LiF, CH<sub>4</sub>, CH<sub>3</sub>OH, NH<sub>3</sub>, MgO

List the first ten prefixes used to name covalent molecules

**Question #52** 

Name C<sub>2</sub>H<sub>6</sub>

**Question #53** 

Name Ag<sub>2</sub>O

**Question #54** 

Name Cu(NO<sub>2</sub>)<sub>3</sub>

**Question #55** 

Name SO<sub>6</sub>

**Question #56** 

Draw the Lewis structure for BaS

**Question #57** 

Draw the Lewis Structure for CH<sub>3</sub>OH

**Question #58** 

How many lone pairs does CH<sub>4</sub> have?

**Question #59** 

How many lone pairs does NH<sub>3</sub> have?

**Question #60** 

Is SF<sub>2</sub> polar or non polar?

Is SiO<sub>2</sub> polar or non polar?

# **Question #63**

Identify the main IMF present in F<sub>2</sub>

# **Question #65**

Identify the main IMF present in C (graphite)

## **Question #62**

Which is more polar, CHCl<sub>3</sub> or CHBr<sub>3</sub>

## **Question #64**

Identify the main IMF present in HCI

# **Question #66**

What is the sum of the coefficients when balanced:
\_\_\_Ag + \_\_\_S → Ag₂S