**Test:** Practice Questions - Online RA Session #01 - Chemistry

**Points:** 20 points

**Name:** _____ **Score:** _____

**Date:** _____

**Signature:** _____

Select multiple choice answers with a cross or tick:

○ Only select one answer

☐ Can select multiple answers

✔ Test Created with: www.classmarker.com

## Question 1 of 8

T10 1 pt

What is the value of Avogadro's Constant?

**A)** $2.066 \times 10^{22}$

**B)** $2.062 \times 10^{23}$

**C)** $6.022 \times 10^{23}$

**D)** $6.022 \times 10^{15}$

## Question 2 of 8

T10 3 pts

Match each item to its definition.

| | | | |
|---|---|---|---|
| 1. [ ] | The mass of one mole in grams. | A. | 1 Mole |
| 2. [ ] | The weight of all elements in a substance combined. | B. | Relative Atomic Mass |
| 3. [ ] | $6.022 \times 10^{23}$ particles of a substance. | C. | Relative Formula Mass |

## Question 3 of 8

T10 1 pt

Calculate the number of water molecules in 0.5 mol of water.

You can write 'times' as * OR x
You can write 'to the power of' as ^

## Question 4 of 8

T10 2 pts

Calculate the mass of 0.25 mol of carbon dioxide molecules.

$M_r$ of $CO_2$ = 44

## Question 5 of 8

T10 2 pts

The amount of carbon atoms in 6.0 g of carbon is 0.5 mol?

- **A)** True
- **B)** False

## Question 6 of 8

T10 3 pts

In the reaction shown by the equation below, what mass of sulfur dioxide can be made from 16 g of sulfur?

Mr of $SO_2$ = 64

$S(s) + O_2(g) \rightarrow SO_2(g)$

## Question 7 of 8

T10 4 pts

12 g of magnesium reacts completely with excess hydrochloric acid to form magnesium chloride and hydrogen:

$Mg(s) + 2HCl(aq) \rightarrow MgCl_2(aq) + H_2(g)$

Calculate the maximum mass of hydrogen that can be produced.

$A_r$ of Mg = 24, $M_r$ of $H_2$ = 2

## Question 8 of 8

T10 4 pts

1.0 g of calcium carbonate decomposes to form calcium oxide and carbon dioxide:

$CaCO_3(g) \rightarrow CaO(s) + CO_2(g)$

Calculate the maximum mass of carbon dioxide that can be produced.

$M_r$ of $CaCO_3$ = 100, $M_r$ of $CO_2$ = 44

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