

**NO CREDIT IF YOU: Fail to put in the Units & Properly Round, Fail to show ALL math work,**

**PRINT YOUR NAME on the line:** \_\_\_\_\_

Your start time on this test \_\_\_\_\_

Your finish time on this test: \_\_\_\_\_

Time it took you to do this test: \_\_\_\_\_

**1. (30 pts, 3 pts ea) Fill in the blanks**

What are some of the visual evidences for a chemical reaction

1.1 \_\_\_\_\_

1.2 \_\_\_\_\_

1.3 \_\_\_\_\_

1.4 In this reaction:  $2 \text{H}_2 + \text{O}_2 \rightarrow 2 \text{H}_2\text{O}$ , the '2' in front of the Hydrogen [2  $\text{H}_2$ ] is called the  
\_\_\_\_\_

1.5 The following symbol is sometimes used in a chemical reaction  $\downarrow$ , what would expect to visually see in the chemical reaction in order to use this symbol? Describe it!

1.6 What does the term "Driving Force" mean? \_\_\_\_\_

1.7 What is needed for electrical conductivity in an aqueous solution? \_\_\_\_\_

1.8 The net ionic reaction for the reaction of an acid and a base is:

1.9 An acid produces or generates:

1.10 A base produces or generates :

**2. (28 pts, 14 pts ea) Show the Molecular Equation, Complete Ionic Equation and the Net Ionic Equation for the following reactions:**

2.1 The reaction of Silver Nitrate with Calcium Chloride

## 2.2 The reaction of Nitric Acid with Ammonium Hydroxide

### 3. (42 pts, 14 pts ea) Reactions:

- A. Write the formulae for the reactants and products
- B. Balance the equation
- C. Will the reaction go to completion?

3.1 Sulfuric Acid and Sodium Bicarbonate.

Will the reaction go to completion? Yes / No

**3.2 Iron (III) Bromide and Potassium Hydroxide**

**Will the reaction go to completion? Yes / No**

**3.3 Hydrochloric Acid and Zinc**

**Will the reaction go to completion? Yes / No**

**How do you rate this test from 1 to 10**

1 = Very Easy, can do it with my eyes closed, 10= Very Very Difficult, could not do any of the problems

# Periodic Table of Elements

		Alkaline earth metals																				Noble gases															
		1A																				8A															
																						7A															
																						6A															
																						5A															
																						4A															
																						3A															
1		1	<b>H</b>																			2	<b>He</b>														
			1.008																				4.003														
Alkali metals	2	3	<b>Li</b>	4	<b>Be</b>																			5	<b>B</b>	6	<b>C</b>	7	<b>N</b>	8	<b>O</b>	9	<b>F</b>	10	<b>Ne</b>		
			6.941		9.012																				10.81		12.01		14.01		16.00		19.00		20.18		
	3	11	<b>Na</b>	12	<b>Mg</b>	Transition metals												13	<b>Al</b>	14	<b>Si</b>	15	<b>P</b>	16	<b>S</b>	17	<b>Cl</b>	18	<b>Ar</b>								
			22.99		24.31														26.98		28.09		30.97		32.07		35.45		39.95								
	4	19	<b>K</b>	20	<b>Ca</b>	21	<b>Sc</b>	22	<b>Ti</b>	23	<b>V</b>	24	<b>Cr</b>	25	<b>Mn</b>	26	<b>Fe</b>	27	<b>Co</b>	28	<b>Ni</b>	29	<b>Cu</b>	30	<b>Zn</b>	31	<b>Ga</b>	32	<b>Ge</b>	33	<b>As</b>	34	<b>Se</b>	35	<b>Br</b>	36	<b>Kr</b>
			39.10		40.08		44.96		47.88		50.94		52.00		54.94		55.85		58.93		58.69		63.55		65.38		69.72		72.59		74.92		78.96		79.90		83.80
	5	37	<b>Rb</b>	38	<b>Sr</b>	39	<b>Y</b>	40	<b>Zr</b>	41	<b>Nb</b>	42	<b>Mo</b>	43	<b>Tc</b>	44	<b>Ru</b>	45	<b>Rh</b>	46	<b>Pd</b>	47	<b>Ag</b>	48	<b>Cd</b>	49	<b>In</b>	50	<b>Sn</b>	51	<b>Sb</b>	52	<b>Te</b>	53	<b>I</b>	54	<b>Xe</b>
		85.47		87.62		88.91		91.22		92.91		95.94		(98)		101.1		102.9		106.4		107.9		112.4		114.8		118.7		121.8		127.6		126.9		131.3	
6	55	<b>Cs</b>	56	<b>Ba</b>	57	<b>La*</b>	72	<b>Hf</b>	73	<b>Ta</b>	74	<b>W</b>	75	<b>Re</b>	76	<b>Os</b>	77	<b>Ir</b>	78	<b>Pt</b>	79	<b>Au</b>	80	<b>Hg</b>	81	<b>Tl</b>	82	<b>Pb</b>	83	<b>Bi</b>	84	<b>Po</b>	85	<b>At</b>	86	<b>Rn</b>	
		132.9		137.3		138.9		178.5		180.9		183.9		186.2		190.2		192.2		195.1		197.0		200.6		204.4		207.2		209.0		(209)		(210)		(222)	
7	87	<b>Fr</b>	88	<b>Ra</b>	89	<b>Ac**</b>	104	<b>Rf</b>	105	<b>Db</b>	106	<b>Sg</b>	107	<b>Bh</b>	108	<b>Hs</b>	109	<b>Mt</b>	110	<b>Ds</b>	111	<b>Rg</b>	112	<b>Uub</b>	113	<b>Uut</b>	114	<b>Uuq</b>	115	<b>Uup</b>							
		(223)		226		(227)		(261)		(262)		(263)		(264)		(265)		(268)		(271)		(272)															

metals ← → nonmetals