<u>CHM 1025C</u> Chapter Test #4 Ch 8 & 9 George W.J. Kenney, Jr, Professor of Chemistry 23-Apr-2009 West

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

(1 pt) 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:

Max Grade: 100 points

A. Fill in the Blanks (28 pts total, 4 points ea)

1. Why is the atomic weight of an element sometimes called the average atomic weight?

- 2. What is a mole?
- 3. Which contains more atoms: 1 mole of Lead or 12.01 g of Carbon?
- 4. What is the Molar Mass of Water?
- 5. What is Avogadro's Number [what is the value and what does that mean]?
- 6. What is the purpose of determining Percent Composition?
- 7. What does Theoretical Yield mean?

B. Solve the Following. Show the Complete and Balanced Equation for each reaction And - Will the reaction go to Completion? (70 pts total, 10 points ea)

B-1 What is the molecular and what is the empirical formulae for a compound that contains 59.95% Carbon and 13.42% Hydrogen? The estimated Mw is between 175 – 185 g/mole.

B-2 What is the empirical formulae for a compound that contains 52.00% Aluminum?

B-3 Ammonium Chloride is reacted with Sulfuric Acid. What is the driving force for this reaction? Show all equations.

B-4-6 5.00 g of Magnesium is reacted with 3.00 g of Hydrochloric Acid.

- **B-4** Show the Complete Balanced Formulae
- B-5 How much "Product" [what is the driving force] is formed
- B-6 How much excess is there of the one reactant in excess?

B-7 10.0 g of Silver Nitrate is reacted with 10.0 g of Potassium Chloride to produce 2.0 g of a precipitate. What is the Percent Yield for this reaction?

DID YOU CHECK FOR SIGNIFICANT DIGITS	Yes	No
DID YOU CHECK FOR PROPER UNITS	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

1	1 H 1.008	2A											3A	4A	5A	6A	7A	2 He 4.003
2	3 Li 6.941	4 Be 9.012											5 B 10.81	6 C 12.01	7 N 14.01	8 0 16.00	9 F 19.00	10 Ne 20.18
3	11 Na 22.99	12 Mg 24.31	_									_	13 Al 26.98	14 Si 28.09	15 P 30.97	16 S 32.07	17 Cl 35.45	18 Ar 39.95
4	19 K 39.10	20 Ca 40.08	21 Sc 44.96	22 Ti 47.88	23 V 50.94	24 Cr 52.00	25 Mn 54.94	26 Fe 55.85	27 Co 58.93	28 Ni 58.69	29 Cu 63.55	30 Zn 65.38	31 Ga 69.72	32 Ge 72.59	33 As 74.92	34 Se 78.96	35 Br 79.90	36 Kr 83.80
5	37 Rb 85.47	38 Sr 87.62	39 Y 88.91	40 Zr 91.22	41 Nb 92.91	42 Mo 95.94	43 Tc (98)	44 Ru 101.1	45 Rh 102.9	46 Pd 106.4	47 Ag 107.9	48 Cd 112.4	49 In 114.8	50 Sn 118.7	51 Sb 121.8	52 Te 127.6	53 I 126.9	54 Xe 131.3
6	55 Cs 132.9	56 Ba 137.3	57 La* 138.9	72 Hf 178.5	73 Ta 180.9	74 W 183.9	75 Re 186.2	76 Os 190.2	77 Ir 192.2	78 Pt 195.1	79 Au 197.0	80 Hg 200.6	81 TI 204.4	82 Pb 207.2	83 Bi 209.0	84 Po (209)	85 At (210)	86 Rn (222)
7	87 Fr (223)	88 Ra 226	89 Ac** (227)	104 Rf (261)	105 Db (262)	106 Sg (263)	107 Bh (264)	108 Hs (265)	109 Mt (268)	110 Ds (271)	111 Rg (272)	112 Uub	113 Uut	114 Uuq	115 Uup			

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