<u>CHM 1025C</u>	FINAL EXAM	<u>Apr-2009</u>	George W.J. Kenney, Jr, Professor of Chemistry							
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:										
	You	r start time on t	his test							
Your finish time on this test:										
Max Grade: 101	points Tim	e it took you to	do this test:							
A. Fill in the B	<u>Blanks (</u> 22 pts total,	2 points ea)								

- 1. Define Scientific Notation
- 2. What are the rules [in this class] for determining the number of Significant Figures:
- 3. Circle the incorrect Symbol: Co O₂ H₂ N₂ C He₂
- 4. Which contains more atoms: 1 mole of Carbon or 202.7 g of Lead?
- 5. What is Avogadro's Number and what does that mean?
- 6. What does Theoretical Yield mean?
- 7. Name two elements (Symbol and Name) that make up most of those in the Human Body (> 1.0 %).
- 8. Rutherford proposed the structure of the atom by shooting a ______at a target.
- 9. The atomic structure Rutherford proposed had several particles, what is the name given to the smallest and what is its charge?
- 10. Radioactive Carbon is used for dating very old items. This Carbon has 6 protons and 8 neutrons. Normal Carbon has 6 protons and 6 neutrons. These different forms of Carbon are called

_____and the C 6 proton, 8-neutron nuclide symbol is _____

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<u>B.</u> Show the Complete and Balanced Equation for the following (48 pts total, 8 points ea) And - Will the reaction go to Completion? **<u>DO 6 OF THE 9</u>**

B-1. How many moles of rubbing alcohol is there in 1.15 g of it [H₃C-CH₂-CH₂OH]

B-2. The gas tank of my car will hold 17.5 gallons. I go to fill it up in Canada and it's in Liters. How many Liters will my gas tank hold?

B-3. Convert 25.° F to Kelvin

B-4. What is the molecular and what is the empirical formulae for a compound that contains 59.95% Carbon and 13.42% Hydrogen?

B-5. Convert 1.0 in to km

B-6. 10.0 g of Silver Nitrate is reacted with 3.7 g of Potassium Chloride to produce 200. mg of a precipitate. What is the Percent Yield for this reaction?

B-7-9. 5.00 g of Zinc is reacted with 3.00 g of Hydrochloric Acid.

- **B-7** Show the Complete Balanced Formula
- B-8 How much "Product" [what is the driving force] is formed
- B-9 How much excess is there of the one reactant?

Fill in the Blanks (30 pts tota	<u>l, 2 points ea)</u>	
<u>Name</u>	<u>Formulae</u>	Soluble or Insoluble in Water
1. Iron (II) Phosphate		
2. $Pb(NO_3)_4$		
3. Barium Nitrate		
4. Potassium Sulfide		
5. Zinc Carbonate		
6. Ammonium Phosphate		
7. H ₂ SO ₄		
8. NH_4ClO_2		
9. PCl ₃		
10. NO		
DID YOU CHECK FOR SIGNIFI	CANT DIGITS	YesNo
DID YOU CHECK FOR PROPER	R UNITS	Yes No

($1\ pt$) How do you rate this test from 1 to 10

1 = Very East, 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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