CHM 1025C   **George W.J. Kenney, Jr**   **FINAL EXAM**   **01-Aug-2009**

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

Max Grade: 100 points   **PRINT NAME ON LINE** _____

CHECK CORRECT BOX OR LOOSE 20 PTS   **Test End time**   _____

Wed Afternoon Lab □   **Test Start time**   _____

Wed Evening Lab □   **Test Elapsed time**   _____

PART A WITH RED CALCULATORS ONLY   **(5 pts ea, 20 pts total)**

1. I am 5 feet 6.5 inches tall. My date, who's from Ireland, is 172.6 cm. Who is taller and by how much [in inches]?

2. I go to the store to get a bottle of Rum. The bottle size is 750. ml. How many gallons is this?

3. The outside thermometer says it's 5° F, what is this temperature in ^{o}K?

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4.      4000.00              5000.0
     x   2.00            x      2
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Max Grade: 100 points   **PRINT NAME ON LINE** _____

CHECK CORRECT BOX OR LOOSE 20 PTS	**Test End time** _____
Wed Afternoon Lab ☐	**Test Start time** _____
Wed Evening Lab ☐	**(1 pt) Test Elapsed time** _____

A. Fill in the blanks   (3 pts each, 39 pts total

1. A plant growing is a Chemical or Physical Property?

2. What is the difference between an element and a compound?

3. What kind of a mixture is a McDonalds Cheeseburger?

4-5. What are the names and relative sizes of the sub element particles?

6. What is the main product from the reaction of a strong acid and strong base?

7. What are the steps in the Scientific Method?   **CT-1**

8. What is Scientific Notation?   **CT-1**

9. How many ml is in one Liter?   **CT-1**

10. How many milligrams is in one gram?   **CT-1**

11. In the Greenhouse Effect, the sun transmits _____ to the earth?

12. When you go to the Chemistry Lab, you will not be allowed to take the lab if:

    1.

    2.

13. What is the RedNeck way to remember Significant Digits?

B. Fill in the Blanks (3 * 20 Points each = 60 pts)

1. _____ $Fe_2(CO_3)_3$

2. _____ $CaCl_2$

3. _____ K_3PO_4

4. _____ H_2SO_4

5. _____ $AlCl_3$

6. Silver Nitrate   _____

7. _____ Na_2S

8. Lead (IV) Bromide

9. _____ $Na\ NO_3$

10. Potassium Sulfate $K_2\ SO_3$

11. _____ HCl

12. _____ $Fe(MnO_4)_3$

C. Write the equations for the following reactions and will they go to completion:

C-1. Silver Nitrate reacting with Lithium Bromide

C-2. Sodium Bromide reacting with Magnesium Nitrate

C-3. Calculate % Composition of each element in Sodium Bicarbonate

C-4. Calculate the Empirical & Molecular formulae for: C = 79.23%, H = 5.70%, Mw is 100 – 110 g/mole

C-5. If I try to react 10.0 g of Magnesium and 12. g of Hydrochloric Acid,

(10 pts) A. Write the complete balanced equations

(10 pts) B. Will this reaction go to completion?

(20 pts) C. How much of each product is generated?

(1 pt) DID YOU CHECK FOR SIGNIFICANT DIGITS _____ Yes _____ No

(1 pt) DID YOU CHECK FOR PROPER UNITS _____ Yes _____ No

(1 pt) 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 H 1.008	2A																2 He 4.003
3 Li 6.941	4 Be 9.012											3A 5 B 10.81	4A 6 C 12.01	5A 7 N 14.01	6A 8 O 16.00	7A 9 F 19.00	10 Ne 20.18
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
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
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
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 Tl 204.4	82 Pb 207.2	83 Bi 209.0	84 Po (209)	85 At (210)	86 Rn (222)
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			