

YOUR NAME (Please Print): _____

1. (3pts, 1 pts ea) Your start time on this test _____

Your finish time on this test: _____

Time it took you to do this test: _____

A. (5 pts) Perform the following Conversion

A-1. Convert 0 Deg F to Deg K:

Summary:	<u>Section</u>	<u># of Quest</u>	<u># to do</u>	<u>Pts Ea</u>	<u>Total Pts</u>
	A. Conversion	1	1	5	5 %
	B. Formulae Calculations	4	3	10	30 %
	C. Answer the following?	3	3	5	15 %
	D. Naming Compounds	14	10	5	50 %
				Total	100 % _____

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 _____

B. (10 pts ea) Formulae Calculations, Do 3 of the 4

B-1a. Sodium Hydroxide is used in rebreathers units to absorb carbon dioxide. The reaction of sodium hydroxide and carbon dioxide produces sodium carbonate and water. As we all know, since water is produced, the reaction will go to completion. How many grams of sodium hydroxide is needed to react with 1 pound of carbon dioxide?

B-1b. How much Sodium Carbonate is formed?

B-2a. An organic compound containing only C, H, N and O has the following analysis

C 49.47%

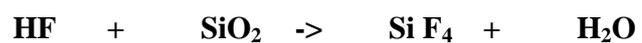
H 5.191%

N 28.86%

What is the empirical formula?

B-2b. The approximate molar mass is 194. What is the Molecular formula?

B-3. For the formulae given below, how much SiO₂ is required to react with 20.00 g of HF?



B-4. Starting with 1.00 g of Hydrochloric Acid and assuming the reaction generates only a 50% yield, how much sodium chloride is produced from the reaction of Sodium Bicarbonate with Hydrochloric Acid?

C. (5 pts ea) Answer ALL of the following?

C-1. Calculate the number of moles in 21.50 g of Arsenic

C2, Calculate the molar mass of each compound and the Percentage of the Bolded / Underlined Atom:

C2. Magnesium Sulfate

C3. Copper (II) Nitrate

D. (5 pts ea) Answer 10 out of 14 of the following?

D-1. What does the average atomic mass mean?

D-2. How many atoms of oxygen are in 8 grams of oxygen?

D-3. What is a formulae weight?

D-4. What is the difference between empirical formulae and molecular formulae?

D-5. What does Stoichiometry mean? [p 247]

D-6. What does a Limiting Reactant mean?

D-7. What is the difference between a Theoretical and a Actual yield?

D-8. What is the difference between an acid and a base?

D-9. What is a hydronium ion?

Note: For 10, you must answer A, B and C

D-10a. Name a Strong Acid

D-10b. Name a Weak Acid

D-10c. Name a Strong base

D-11. What is a Diprotic Acid?

D-12. What is an Amphoteric Substance

Note: For 13, you must answer A, B and C

D-13a. What is the pH of a strong acid?

D-13b. What is the pH of a strong base?

D-13c. What is a neutral pH?

D-14. If I have a liter beaker filled with 500 ml of water and add 20 g of Sodium Acetate and take the pH and it's around 7. Then I add 10 ml of Concentrated Hydrochloric Acid, what is the expected pH?

- A. 1.**
- B. 3.**
- C. 7.**
- D. 11.**
- E. 14**