

CHM 1142

Exam 1

TUD Department of Chemistry

Fall 2017

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200 points total

50pts 1) Match the formula to the correct name,

- | | | |
|--|---------------------------------|----------------------|
| PCl_3 _____ | a. dialuminum trisulfide | q. bromic acid |
| K_2O _____ | b. dipotassium oxide | r. ferric chloride |
| $\text{Ca}(\text{H}_2\text{PO}_4)_2$ _____ | c. calcium dihydrogen phosphate | s. iron(II) chloride |
| Na_2SO_3 _____ | d. hydrobromic acid | t. calcium phosphate |
| BCl_3 _____ | e. silver nitrate | u. hydrobromous acid |
| AgNO_3 _____ | f. sodium nitrate | v. bromic acid |
| K_2CO_3 _____ | g. sodium sulfite | |
| Al_2S_3 _____ | h. sodium sulfate | |
| HBr _____ | i. potassium trichloride | |
| FeCl_2 _____ | j. lithium permanganate | |
| | k. aluminum sulfide | |
| | l. sodium sulfite | |
| | m. potassium oxide | |
| | n. boron trichloride | |
| | o. potassium carbonate | |
| | p. phosphorus trichloride | |

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64 pts 2) Write the names or formula for the following compounds:

CaS_____

sodium bicarbonate_____

SnBr₂_____

Al₂O₃_____

AgOH_____

N₂O₄_____

KI_____

sulfur trioxide_____

Al₂(CO₃)₃_____

HClO₃_____

ClO₂_____

copper (I) bromite_____

200 points total

36pts 3) Answer the following:

a) Circle the warmer temperature?

20°C

20K

b) How many neutrons are in an atom of Sr-90?

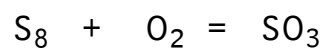
c) How many mL are in 0.667 L?

d) Circle the greater distance

0.100 m

1000 mm

e) Balance the following equation:



f) What prefix means “nine”?

g) Convert 2.2×10^{-3} to decimal notation?

h) Write the name and symbol of a halogen.

i) Circle the subatomic particle with the greater mass?

electron

neutron

15pts 4) How many significant figures are in the following?

10.08210_____

0.0900000_____

 1.00×10^{-7} _____

1205000_____

 1.022000×10^{-4} _____

10pts 5) Fill in the following table:

Symbol	# of protons	# of neutrons	# of electrons	charge
	11	12		0
K-		21		+1
Ar-40			18	
-27	13			+3

10pts6) What mass of a liquid with $d=1.82$ g/mL has a volume of 24 mL ?

10pts7) A snake is 3.2 feet long.

2.54 cm = 1 inch

a) What is his length in mm?

5pts 8) Assume that an element consists of two isotopes with masses of 90.00 amu and 120.00 amu. If the abundance of the 90.00 amu isotope is 80.00% and the abundance of the 120.00 amu isotope is 20.000%, what should appear in the periodic chart as the atomic weight of the element?