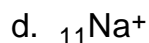
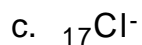


CH1010 Practice Exam 1 Fall 2000

In solving problems, you must show all work. Little or no credit will be given for a correct answer with no work shown.

1. Write the electronic configuration for the following atoms or ions. The atomic number of the element is given by the subscript preceding the symbol.



2. a) The density of ethanol is 0.79 g/ml. What is the weight of 16 ml of ethanol?

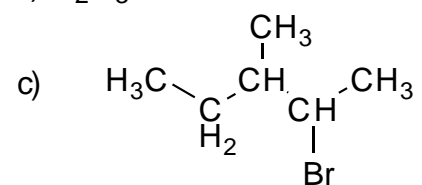
b) The formula of ethanol is $\text{C}_2\text{H}_6\text{O}$. How many moles are there in the above 16 ml of ethanol?

3. Draw the extended structures of 4 isomers having the formula $\text{C}_4\text{H}_9\text{Cl}$. Name each of the isomers you have drawn.

4. Name the following substances.

a) MgCl_2

b) N_2O_3



5. Calculate how many grams of CO_2 are generated when 150 g of isopropanol ($\text{C}_3\text{H}_8\text{O}$) are burned in oxygen. Combustion of isopropanol in oxygen produces CO_2 and water.

6. Calculate the percent N in NCl_3

7. Draw the three dimensional structure of CH_3F

8. a. The Earth is 93 million miles from the Sun. What is this distance in meters? In cm? Use scientific notation in your answer. (1 mile = 1.609 km).

b. The density of gold is 19.32 g/cm^3 . What is the volume of one-half pound of gold in cm^3 ? (1 pound = 453.6 g)