**Reference Tables Scavenger Hunt** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions**: Using the Reference Tables for Chemistry, answer the following questions. After the answer, indicate the table you used in parentheses. You can use the letter for the table, and abbreviate Periodic Table as PT.

1. Name C5H10.
2. Write the equation for the decay of K-42.
3. Explain how you know that NaPO4 is soluble in water but NiCrO4 is not.
4. What is the definition of STP, and give the values?
5. Name, and give the formulas of one acid and one base.
6. Name C2H3O2-or CH3COO-
7. What is the solubility of hydrogen chloride at 40 degrees Celsius, in grams?
8. What is the freezing point of bromine?
9. What are the units for the heat of fusion, and what do they mean?
10. What is the symbol for the mole?
11. What is the vapor pressure of ethanol at 750C?
12. How much heat does it take to convert 25g of water to steam at 1000C?
13. What is the prefix for 1/1000 of a meter?
14. What is the molecular formula of ammonia?
15. What is the formula for the phosphate ion?
16. Name CH3COOH.
17. Write the symbol for a beta particle?
18. What is the half-life of U-233?
19. Is the formation of water, from its elements endothermic or exothermic?
20. What is the atomic mass of gold?
21. How much heat is released when LiBr dissolves in water?
22. What is the general formula for alkynes? What does it mean?
23. What is the electronegativity of fluorine?
24. What is the decay mode of Ca-37?
25. What is the ionization energy of rubidium?
26. Which atom is more likely to lose electrons, Al or Zn?
27. What is the atomic number of Se?
28. What is the atomic radius of chlorine?
29. What is the oxidation state of sodium?
30. Which indicator would be the best to use to identify a strong base?
31. Write the electron configuration of potassium.
32. At what temperature will water boil, when the atmospheric pressure is 65 kPa?
33. What is the trend of atomic radii across period 3?
34. Will Mn produce colored ions in solution? Why or why not?
35. Will Sn4+ react with Cu?
36. What is the heat of vaporization of water?
37. Will Al react with HCl to produce hydrogen gas?
38. What is the density of tin?
39. In the molecule CCl4, what is the EN difference of the C-Cl bond? Is the bond polar or nonpolar? Why? Is the molecule polar or nonpolar? Why?
40. What is the formula for mole calculations?

**Using table T, solve the following problems**:

1. Give the parts per million of solute for a solution containing 25g of sodium chloride in 200g of water.
2. If the accepted value for the mass of an object is 10.3g and a student found that the mass was 10.1g, what is the student’s percent error?
3. If a peanut is burned in a calorimeter containing 50g of water, and the water temperature changes from 450C to 570C, how many joules of energy were released by the peanut?