**KMT and Gas Laws Makeup Test: General**

R = 0.08206 Latm/molK

1) What are the four postulates of the kinetic molecular theory? (8 pt)

2) Why are gases more compressible than solids? (2 pt)

4) If I have 450 grams of F2 gas at a pressure of 33.3 atm and a volume of 77.5 L, what is the temperature of this gas? R = 0.08206 Latm/molK. (5 pt)

5) I have 45 moles of a gas at a temperature of 450o C. If I have 450 mL of this gas in a container, what is the pressure of the gas?(5 pt)

6) A taxidermied squirrel has a volume of 750 mL at a temperature of 290 K. If the temperature of the squirrel is increased to 325 K, what will its new volume be? (5 pt)

7) A balloon held underwater has a volume of 3.8 L at a pressure of 1.1 atm. If the balloon is released so that it rises to the surface where the pressure is 1.05 atm, what will the new volume of the balloon be? (5 pt)

8) In problems 6 and 7 above, I never specified what gas was involved. If I were to use two different gases, would I get the same answers to these questions? Why or why not? (5 pt)

9) What happens in the following scenarios? (1 pt each, circle one answer each)

* When you increase the pressure on a gas, the volume ( increases / decreases ).
* When you decrease the volume of a gas, the pressure ( increases / decreases ).
* When you decrease the volume of a gas, the pressure ( increases / decreases ).
* When you increase the temperature of a gas, the volume ( increases / decreases ).