**KMT and Gas Laws Test: Topics**

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

2) Why can we assume that gas molecules don’t interact with each other? (4 pt)

3) Why are gases more compressible than liquids or solids? (4 pt)

4) If I have 4.5 moles of a gas at a pressure of 0.33 atm and a volume of 7.75 L, what is the temperature of this gas? R = 0.08206 Latm/molK. (5 pt)

5) I have 45 liters of a gas at a temperature of 320 K. If the pressure of the gas is 5.0 atm, how many moles of gas are present? R = 0.08206 Latm/molK. (5 pt)

6) A taxidermied squirrel has a volume of 750 mL at a temperature of 298 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 1.5 L at a pressure of 1.2 atm. If the balloon is released so that it rises to the surface where the pressure is 1.0 atm, what will the new volume of the balloon be? (5 pt)

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