Name: _____   **Period:** _____   **Seat#:** _____

Conceptual Questions

1) Define Dalton's Law in your own words.	**2)** Different types of gases exert different pressures on their containers even if they have the same volume, temperature, and number of moles. True or False. Explain.

3) Write a generic equation for determining the pressure of a gas collected over water.	**4)** Convert 890mm Hg to atm.	**5)** Convert the pressure of water vapor at 350K (in C from your table) into kPa.

Mathematical Questions

- Show plugging in the variables to the correct places in the equation
- Get an actual answer, including units! Box your answer!
- Don't forget - you must show units and any conversions that might be involved.
- You can either rearrange your equation before you plug in your variables, or after. Do what works for you!
- If needed, use the Water Vapor Pressure Table from your Reference Sheet

6) A container holds three gases: oxygen, carbon dioxide, and helium. The partial pressures of the three gases are 2.00 atm, 3.00 atm, and 4.00 atm, respectively. What is the total pressure inside the container?	**7)** A gas mixture contains hydrogen, helium, neon and argon. The total pressure of the mixture is 93.6 kPa. The partial pressures of helium, neon and argon are 15.4 kPa, 25.7 kPa, and 35.6 kPa, respectively. What is the pressure extended by the hydrogen?

8) If you place 3.00 mol of N_2 and 4.00 mol of O_2 in a 35.0 L container at 25.0 °C, what will the pressure of the resulting mixture of gases be?

9) The partial pressure of F_2 is 300 torr. The total pressure of the mixture of gases is 1.00 atm. What is the mole fraction of F_2 ?

10) A flask contains 2.00 moles of nitrogen and 2.00 moles of helium. How many grams of argon must be pumped into the flask in order to make the partial pressure of argon twice that of helium?

11) 80.0 liters of oxygen is collected over water at 50.0 °C. The atmospheric pressure in the room is 96.00 kPa. What is the partial pressure of the oxygen?

12) A mixture of 2 moles of H_2, 3 moles of NH_3, 4 moles of CO_2, and 5 moles of N_2 exert a total pressure of 800. torr. What is the partial pressure of each gas?

13) If 60.0 L of nitrogen is collected over water at 40.0 °C when the atmospheric pressure is 760.0 mm Hg, what is the partial pressure of the nitrogen?

14) A mixture of 14.0 grams of hydrogen, 84.0 grams of nitrogen, and 2.00 moles of oxygen are placed in a flask. When the partial pressure of the oxygen is 78.00 mm of mercury, what is the total pressure in the flask?