Chemistry 115 Name

Dr. Cary Willard

Quiz 7a (20 points) April 24, 2013

Data: PV=nRT, 1 atm=760 torr = 760 mm Hg = 14.7 psi = 101.3 kPa, R = 0.0821 L atm/mol K = 62.4 L torr/mol K, K=oC + 273.16

1. (4 points)The atmospheric pressure on Jupiter is 3.27 atm. What is the atmospheric pressure in torr?
2. (2 points) A gas occupies 5.23 L at 482 torr, what volume will it occupy at a pressure of 823 torr?
3. (4 points) A sample of methane gas has a pressure of 8355 torr at 25oC. If the maximum pressure of the tank is 10,000. torr, how high can the temperature rise before the tank bursts? (Give the final temperature in oC.)
4. (4 points) How many moles of argon gas will a 12.5 L canister hold at 52oC if the pressure is 7.34 atm?
5. (4 points) What volume will 25.0 g of oxygen gas occupy at 25oC and 822 torr?

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Quiz 7b (20 points) April 24, 2013

Data: PV=nRT, 1 atm=760 torr = 760 mm Hg = 14.7 psi = 101.3 kPa, R = 0.0821 L atm/mol K = 62.4 L torr/mol K, K=oC + 273.16

1. (4 points)The atmospheric pressure on Jupiter is 4.05 atm. What is the atmospheric pressure in torr?
2. (2 points) A gas occupies 5.23 L at 482 torr, what volume will it occupy at a pressure of 279 torr?
3. (4 points) A sample of methane gas has a pressure of 6922 torr at 25oC. If the maximum pressure of the tank is 10,000. torr, how high can the temperature rise before the tank bursts? (Give the final temperature in oC.)
4. (4 points) How many moles of argon gas will a 12.5 L canister hold at 52oC if the pressure is 15.7 atm?
5. (4 points) What volume will 25.0 g of oxygen gas occupy at 25oC and 941 torr?

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Quiz 7c (20 points) April 24, 2013

Data: PV=nRT, 1 atm=760 torr = 760 mm Hg = 14.7 psi = 101.3 kPa, R = 0.0821 L atm/mol K = 62.4 L torr/mol K, K=oC + 273.16

1. (4 points)The atmospheric pressure on Jupiter is 4680 torr. What is the atmospheric pressure in atm?
2. (2 points) A gas occupies 5.23 L at 584 torr, what will the pressure be if the volume is allowed to expand to 8.69 L?
3. (4 points) A sample of methane gas has a pressure of 6944 torr at 25oC. If the maximum pressure of the tank is 10,000. torr, how high can the temperature rise before the tank bursts? (Give the final temperature in oC.)
4. (4 points) How many moles of argon gas will a 12.5 L canister hold at 52oC if the pressure is 876 torr?
5. (4 points) What will the pressure (in atm) of 250. g of oxygen gas be in a 55.0 L canister at 25oC?

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Quiz 7d (20 points) April 24, 2013

Data: PV=nRT, 1 atm=760 torr = 760 mm Hg = 14.7 psi = 101.3 kPa, R = 0.0821 L atm/mol K = 62.4 L torr/mol K, K=oC + 273.16

1. (4 points)The atmospheric pressure on Jupiter is 5880 torr. What is the atmospheric pressure in atm?
2. (2 points) A gas occupies 5.23 L at 584 torr, what will the pressure be if the volume is compressed to 4.23 L?
3. (4 points) A sample of methane gas has a pressure of 5791 torr at 25oC. If the maximum pressure of the tank is 10,000. torr, how high can the temperature rise before the tank bursts? (Give the final temperature in oC.)
4. (4 points) How many moles of argon gas will a 12.5 L canister hold at 52oC if the pressure is 931 torr?
5. (4 points) What will the pressure (in atm) of 250. g of oxygen gas be in a 65.0 L canister at 25oC?