AP CHEMISTRY CHAPTER 5 OUTLINE

GASES

5.1-PRESSURE

Measuring Pressure

Units of Pressure

mmHg

Pascal

atm

torr

5.2-THE GAS LAWS OF BOYLE, CHARLES, AND AVOGADRO

Boyle’s Law

Charles’ Law

Absolute temperature scale

Avogadro’s Law

5.3-THE IDEAL GAS LAW

Where did it come from?

Universal Gas Constant

What is Ideal?

5.4-GAS STOICHIOMETRY

Molar volume

STP

Molar Mass of a Gas

Derivation of the formula

IN CLASS CHECK: What is the density of carbon dioxide gas at 15oC and 1.50 atm?

5.5-DALTON’S LAW OF PARTIAL PRESSURE

Mole Fraction

5.6-THE KINETIC MOLECULAR THEORY OF GASES

1.

2.

3.

4.

The Meaning of Temperature

Root Mean Square Velocity

5.7-EFFUSION AND DIFFUSION

Diffusion

Effusion

Graham’s Law of Effusion

5.8-REAL GASES

van der Waals equation