

EVE 290
Introduction to Environmental Engineering

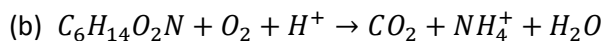
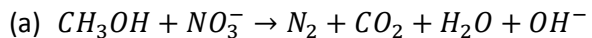
HW #3

3.3

Calculate (a) the grams of hydrochloric acid (HCl) that must be diluted to a volume of 1 L to produce a concentration of 0.5M, and (b) the normality of a 1 L solution containing 45 grams of sodium hydroxide (NaOH).

3.4

Balance the following reactions:



3.5

Calculate the pH and pOH of a 0.5N solution of HCl at 25°C.

3.6

Calculate the pH and pOH of a 0.001M solution of NaOH at 25°C.

3.8

Determine the volume in ft³ occupied by 120 pounds of CO₂ at 1.5 atm and 40°C.

3.9

What volume of O₂ at 30°C and 0.21 atm is required for complete combustion of 20g of propane gas (C₃H₈)?