UNIVERSITI MALAYSIA PAHANG

PROCESS CHEMISTRY AND PHARMA ENGINEERING

ASSIGNMENT

NAME : _____

MATRIC NO : _____

1. Assuming that carbonated water A contains only CO_2 (1) and H_2O (2). Determine the compositions of the V & L phases in a sealed can of soda and the P exerted on the can at 10 °C is about 980 bar and $x_1 = 0.02$. Given $P_2^{sat} = 0.01227$ bar (from steam tables at 10°C).

2. A mixture of 45% mol% benzene and 55 mol% toluene is being flash-distilled at a rate of 10 kmol/h at 1 atm total pressure. The liquid product should not contain more than 30 mol% benzene. Calculate the amounts and the compositions of the top and the bottom products. The relative volatility of benzene in the mixture is 2.6.