

KSU – Chemical Engineering Department
ChE 212 (Thermodynamics) – TUT #1

Name: _____

ID: _____

SN: _____

1. Model the following as closed or open system:
 - a. Radiator of the car
 - b. A can of soft drink put in the refrigerator
 - c. Continuous reactor

2. Classify the following properties as intensive or extensive:
 - a. Total energy
 - b. Temperature
 - c. Density

3. A system is initially at 20 °C, and its temperature increases by 20 °C. Express the initial temperature and the rise in temperature, in K.

4. The lower half of a 10-m-high cylindrical container is filled with water ($\rho = 1000 \text{ kg/m}^3$) and the upper half with oil that has a specific gravity of 0.85. Atmospheric pressure = 100 kPa. Calculate the absolute pressure on the tank.

