**Chemical Engineering 374**

**Reading Questions 8—Chapter 5.4**

**Name** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What are six key assumptions made in deriving the Bernoulli Equation?
2. How does pressure change across curved streamlines? (This should make sense, right, I mean, why else would they curve…)
3. Under what conditions can the requirement of flow along a streamline be relaxed?
4. How is static pressure related to total pressure? Which is the more fundamental, thermodynamic pressure we are used to? Are the dynamic and hydrostatic pressures “true” pressures?
5. Which quantity is conserved in deriving the Bernoulli Equation? What about the energy equation?
6. Under conditions in which the Bernoulli equation applies, is the HGL constant or not? What about the EGL? Explain.