Prelab Questions
Lab2

Measurement of Flow Rate, Friction Factor, and Velocity Profile in Pipe Flow

(To be turned in at the beginning of the laboratory class period)

Short Answer (no more than one sentence)

1. Name three quantities that will be measured or calculated in this laboratory.

2. What quantity is the venturi meter used to measure in the experiment?

3. What instrument is used to measure the velocity profile?

4. How many pressure taps are used in order to obtain the friction factor of the pipe in the experiment?

5. Sample calculations: Calculate the flow rate based on the following measured quantities using the venturi meter: the venturi meter head drop is 0.5176ftwater, the contraction diameter is 51.054mm, the discharge coefficient is 0.935, the water density is 996.9kg/m^3, and air density is 1.138kg/m^3. (Hint: use the data reduction equation for Q.)