

Prelab Questions

Lab3

Measurement of Pressure Distribution and Lift for and Airfoil

(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. How many pressure taps are there on the airfoil?
3. Give the chord length of the airfoil?
4. What is done in the experiment to obtain the Lift force from the pressure distribution?
5. Sample calculation. Calculate the lift coefficient based on the following data: Lift force is 2.446N, the chord length is 0.3048m, the airfoil span is 1m, air density is 1.1934kg/m^3 , the free stream velocity is 4.1m/s. (Hint: the definition of the lift coefficient.)