Assignment 12

Due on 2019-10-33, 23:59:59 IST.

The due date for submitting this assignment has passed.

1. The boundary layer thickness at a distance 5 cm from the leading edge is __________.
   - No answer is acceptable.
   - Accepted Answers: 0.03cm
   - Points: 2.0

2. The wall shear stress at a distance 5 cm from the leading edge is _________ Pa.
   - No answer is acceptable.
   - Accepted Answers: 2.0
   - Points: 2.0

3. In a boundary layer with uniform pressure gradient (pressure increases in the flow direction), the point of inflection can be at the surface of the plate.
   - FALSE
   - Accepted Answers: FALSE
   - Points: 2.0

4. A boundary layer with uniform momentum integral is equal to the thermal boundary layer for laminar boundary layers but not for turbulent boundary layers.
   - TRUE
   - Accepted Answers: TRUE
   - Points: 2.0

5. Laminar boundary layers separate faster than turbulent boundary layers because turbulent boundary layers are thinner than laminar boundary layers.
   - FALSE
   - Accepted Answers: FALSE
   - Points: 2.0

Air at 30°C and 1 atm. density density = 1.24 kg/m³. A container is 20 cm square and实干 as shown in the following Fig. 5.

Using the moving bed or displacement thickness estimates

6. The mean velocity in the core of the flow is at position x = 3 m away from the entrance in m/s.
   - No answer is acceptable.
   - Accepted Answers: 0.03
   - Points: 0.0

7. What is the average pressure gradient, in Pa/m, in this section of length 5 m?
   - No answer is acceptable.
   - Accepted Answers: 0.03
   - Points: 0.0

8. Match the following based on this given figure of four past a sharp plate at a high Reynolds number:
   - No answer is acceptable.
   - Accepted Answers: 0.03
   - Points: 0.0