13-2-2024

**Exp 7 and Exp 8**

**Exp 7;**

1.What does thermally fully developed flow mean? (1M)

2. Plot bulk mean temperature, wall temperature and heat transfer coefficient profiles for the constant heat flux at the wall case and explain the trend. (3 m)

**EXP 8:**

1. Write the energy balance for the test piece from first principles. Obtain the expression for the temp distribution for the same. (3 m)  
  
2.On the same graph, plot temperature vs time, for cooling for a specimen by forced convection and by natural convection. Explain. (2 m)

3.What are the non-dimensional numbers used in unsteady conduction? (1 m)