**13-2-2024**

**EXP 6 and 11**

**Exp 6:**

1. Plot individual resistance Vs radius (for conduction, convection) and a separate curve on the same plot for radiation). Explain (3 m)

2. Derive the expression of critical radius of insulation for cylinder, explain the terms. (2 m)

**EXP 11:**

1.Draw the side view the cylinder (a circle) and show the locations of the thermococuples by dots. TC 1 will be at 12 – o clock position, TC 2 at 3-o clock position, TC – 3 at 6-o clock position and TC-4 at 9-o clock position.

The flow is from left to right. Arrange the thermocouples in decreasing order of temperature (theoretically). Give reasons for your answer (2)

2. Obtain the equation for stagnation temperature based on the sketch drawn in Q1 (1 m)

4. For laminar flow, sketch the variation of heat transfer coefficient versus θ, where the angle is measured from the stagnation point. Explain the curve (2m)