ME 24-221
Thermodynamics I

Quiz No: 6
17 November, 2000
Instructor: J. Murthy
15 minutes
Open textbook, closed notes

Two kilograms of water are contained in a closed system, and are in the saturated liquid state at 100 kPA. The water is heated in a constant pressure process until it turns into saturated vapor. The source of heat is a constant temperature reservoir at 120°C. The entropy generation due to friction and other irreversibilities, $_1S_{2,gen}$, is zero for the system and the reservoir.

1. What is the entropy change of the system in kJ/K?

2. What is heat transfer to the system in kJ?

3. What is the entropy change of the reservoir in kJ/K?

4. What is the net entropy change of the universe in kJ/K?