

**ME 200 Thermodynamics – Spring 2020  
PREPARING FOR EXAM 3**

**Answers**

**V. Some Additional Practice Problems**

1. See Exam 3, Problem 1 from the Fall 2017 Exam Review tab on the ME 200 website.
2.  $w_{TA} > w_{TB}$ , Select Turbine B
3.  $\dot{\sigma} = 0.0012075 \text{ kW/K}$
4. Not possible,  $\dot{W}_{max} = 679 \text{ kW}$
5. Possible (positive total entropy generation rate)
6.  $\dot{\sigma} = 3.279 \frac{\text{kW}}{\text{K}}$
7.  $\sigma = 5.1193 \times 10^{-4} \text{ kJ/K}$
8.  $T = 343.3 \text{ K}$
9.  $Q = -2092 \text{ MJ}$ ,  $\sigma = 793 \text{ kJ/K}$
10.  $T_{2a} = 530 \text{ K}$ ,  $\dot{\sigma} = 0.302 \frac{\text{kW}}{\text{K}}$ ,  $\dot{W}_s = -1016 \text{ kW}$
11. See Exam 3, Problem 2 from Fall 2017 Exam Review tab posted on the ME 200 website.