19.39. **Model:** We will use the Carnot engine to find the maximum possible efficiency of a floating power plant.
Solve: The efficiency of a Carnot engine is

$$\eta_{max} = \eta_{Carnot} = 1 - \frac{T_C}{T_H} = 1 - \frac{(273 + 5)\text{ K}}{(273 + 30)\text{ K}} = 0.0825 = 8.25\%$$