CHEM442-001/002	Name	
College of Charleston		
Fall 2000		
Exam III	Score	/100

- 2(20). Using the data given in #1, calculate *E*(thermal) for OFO at 298 K.
- 3(10). Using your results of #2, calculate *H*(thermal) for OFO at 298 K.
- 4(15). A molar sample of OFO underwent a reversible, isothermal expansion from 1.00 L to 10.00 L at 298 K. Calculate the work involved. Is the system doing work on the surroundings?
- 5(10). If 565 of heat are absorbed by the system described in #4 from the thermal reservoir in the surroundings, calculate the change in internal energy of the system.
- 6(10). The complete process of #4 and #5 resulted in a temperature change of the gas. Neglecting vibrational contributions, calculate the temperature change of the OFO as a result of the complete process.
- 8(25). Most of us know that $\overline{v^2} \overline{v}^2 \neq 0$. For the three-dimensional speed of an ideal gas, derive the equation (showing all work) for $\overline{v^3}$ and evaluate $\overline{v^3} \overline{v^3}$. Is this equal to zero?