**Homework No.5 for Extreme Value Statistics** **Deadline: November 17th, 5PM.**

**(1)** 50 pt.

There is a room of volume $10m^3$ whose walls are kept at temperature $300^o$K. The room is filled with air at 1 atm pressure.

(i) Consider the photons and the particles in the room and determine the average of the largest energies of the photons and of the particles. Which one is larger?

(ii) Estimate the avarage difference between the largest and second largest energies of both the particles and the photons.