Homework 10

1. (60 points). Obtain distribution functions for
   fermions and bosons. Present all the derivations.

2. (40 points) Derive the forumlae for degenerate Fermi gas
   pressure.
   Estimate the Fermi temperature of the copper as well as
   the pressure of the copper at room temeperature.

3. (30 points) Derive the Planck formula for the photon gas.