Reading:  Omar  Ch. 3

Problems:

1-3  Omar  Q. 3, 4, 13
4.  Omar  Pr. 4
5.  Omar  Pr. 5
6.  Omar  Pr. 6
7.  Omar  Pr. 8

8. Please describe how Einstein used quantum theory to explain the low-temperature behavior of the specific heat in solids. Use 3-4 sentences in your response.

9. What is the specific heat (per unit volume) of vacuum at room temperature T? Assume that vacuum contains black-body radiation at room T in thermal equilibrium. Use the dispersion relation for photons & keep in mind that there is no upper limit on the number of photons.