

10. We use the result of problem 7:

$$n(E) = CE^{1/2} = \left[6.81 \times 10^{27} \text{ m}^{-3} \cdot (\text{eV})^{-2/3} \right] (8.0 \text{ eV})^{1/2} = 1.9 \times 10^{28} \text{ m}^{-3} \cdot \text{eV}^{-1} .$$

This is consistent with Fig.42-5.