

HW 9

Due: Nov 15 at 5pm

Krane, Chapter 5, problems 16, 17, 19

Chappell

1. An electron with 5 eV of energy approaches a potential barrier with $U_0 = 10$ eV. Calculate the tunneling probability for the following barrier widths: $L = 0.1$ nm, 1 nm, 10 nm, $1\mu\text{m}$ and 1mm. Comment on how likely electron tunneling is over macroscopic distances, i.e. $L > 1$ mm.