

Phys 402: Applications of Quantum Mechanics

Homework VII (Total 2 problems; due 930am, Thursday, March 17, 2016]

[To receive full credits, please show all necessary steps that lead to your answers.]

- 1) Prob. 9.2 (Page 343, textbook. Understand the time dependent perturbation theory, implications.)
- 2) Prob. 9.3 (You can approximate the delta potential as a square potential in time i.e. $H'=0$ when $t < -T/2$, or $t > T/2$; $H'=U/T$ otherwise and take T to be zero. Note that the time integral of H' is equal to U , the strength of the delta potential.)