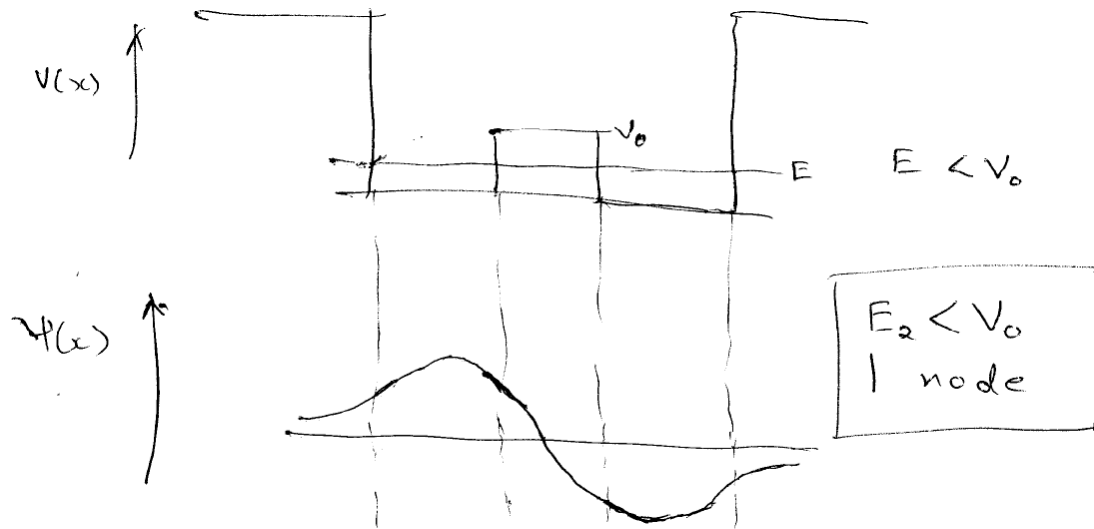


ErrataTo HW 4 Solutions

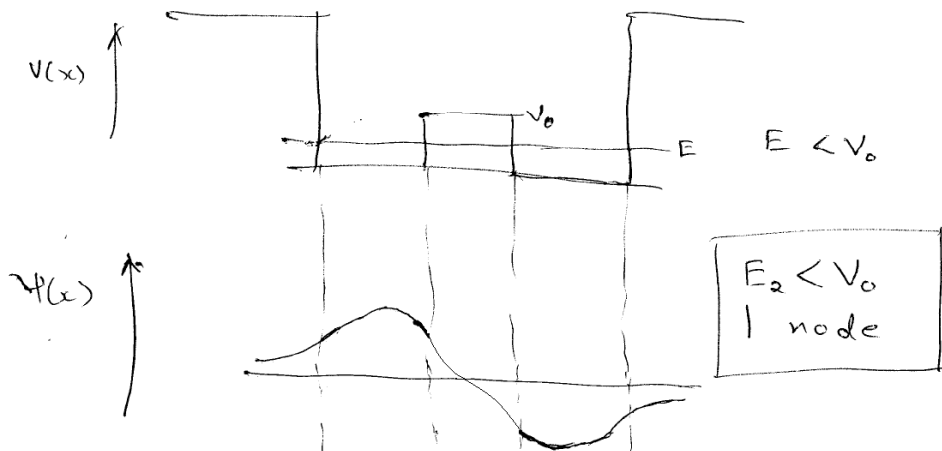
For context, please refer to HW 4 solutions posted at http://www.ece.ucsb.edu/courses/ECE162/162A_F07Bowers/HW4soln.pdf

1. Q1 Page 3

For the second (1-node) energy level (assuming $E < V_0$) I have drawn the solution to look like



I have the barrier region totally wrong: $KE > 0$ instead of < 0 as it should be for $E < V_0$. The correct solution looks like this



2. Q3 Page 10

I have claimed that the amplitude is greater where the potential slopes down, as shown in the fig. In fact the amplitude reduces as KE increases (towards the RHS of the well), as has been proved on p. 140 of French and Taylor. Hence the amplitudes are another part of the diagram that we need to change.

The problem with my explanation is that even though the well slopes down to the right, I have neglected the effect of the large repulsive barrier to the right which tends to reduce the probability of finding an electron towards the RHS of the well.

If you find any more errors or if you have any questions regarding HW 4 solutions please send me an e-mail at ashok_ramu@umail.ucsb.edu or drop by at Phelps 1435 during my office hours on 29th Oct, 3-5 p.m.