

UM-SJTU JI Fall 2020 VE 320 Quiz 1

Name:

Student ID:

1. What is the difference between diamond lattice and zinc blende lattice?

The zinc blende lattice has the same structure as the diamond lattice but there are two types of atoms in it rather than one single type in the diamond lattice. different 2'

2. If there are four electrons located in an infinite quantum well with a width of $a=1$ nanometer (10^{-9}m). In the following figure (a) please use black dots to represent the E-k relation of the four electrons. In the following figure (b) and (c), please plot $\Psi(x)$ and $\Psi(x)\Psi(x)^*$.

