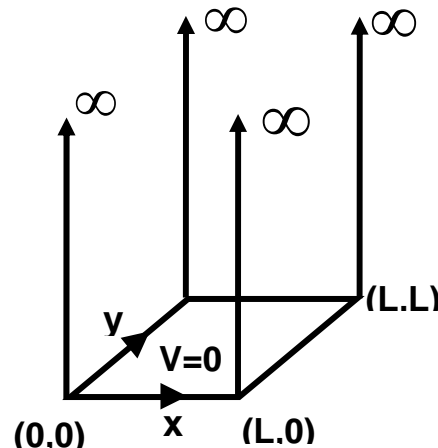


Name:

Applied Quantum Mechanics

Quiz #1, Feb 8, 2008

A potential $V(x,y)$ is infinite except in a region $0 < x < L$, and $0 < y < L$ where $V(x,y)=0$.



(a) Write down the time-independent Schrödinger equation for an electron confined to motion in the potential and solve for the eigenfunctions and eigenenergies.

(b) What is the degeneracy of the ground state and what is the degeneracy of the first excited state? What is the parity of these two states?