Concept of degeneracy in the case of electrons in a 3D box.

<u>Assignment</u>

1. For an electron in a 3D box with energy $E=\dfrac{11h^2}{8mL^2}$, write all the possible degenerate states.

2. For electrons in a cube of side 10nm with energy $E=\dfrac{6h^2}{8mL^2}$, obtain the plot of the probability densities corresponding to all degenerate states.