

1. How to normalize the wave function for a particle in infinite potential well with boundaries $-a/2 < x < a/2$
2. Write the energy eigen values, eigen functions for the first four states ($n=1,2,3$) for a particle in infinite potential well with boundaries $-a/2 < x < a/2$
3. Give the graphical representations for probability amplitude and probability densities for states $n=3,4$ for a particle in infinite potential well with boundaries $-a/2 < x < a/2$.
4. An electron is bound in 1D infinite potential well of width $2A^0$. Find its energy values in ground and first two excited states.