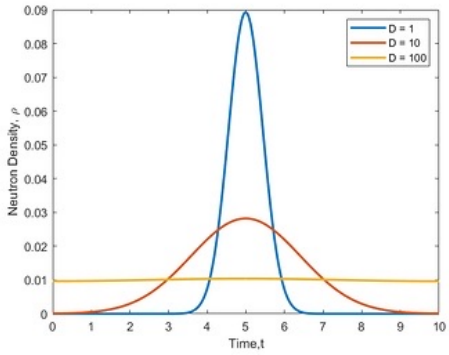
Language used : MATLAB

Source code : Problem_1b.m

figure : Problem_1b.png



Observations :

- For lower values of D, the peak of density distribution occurs at the midpoint [T=5] of the timespan.
- As D increases the peak density decreases.
- For D=100, density distribution is a flat straight line at 0.01

N.B. :

I had tried with $A = \begin{cases} -2+c\,; & i=j \\ 1\,; & |i-j|=1 \\ 0\,; & \text{else} \end{cases}$ [just like the Schrö-dinger eq^n problem]

But the distribution for different values of 'D' differs quite a bit orders of magnitude and the figure just doesn't tell any story then. I would appreciate if you could point the mistake here.