ASSIGNMENT

C-11 : Quantum Mechanics and Applications

DUE DATE: 30/9/2023

1. Show that momentum space wave function is fourier transform of the position space wave function.

2. Find the reflection and transmission coefficients for a particle whose potential function is given as

$$V(x) = \begin{cases} 0 & for\ x < 0 \\ -V_0 & for\ 0 < x < a \\ 0 & for\ x > a \end{cases}$$

   Consider the energy of the particle to be positive.

3. Find an expression for the KE energy of a particle in an infinitely deep potential well, when the total energy of the particle is negative.