CL13_Q1. Using the Schrödinger's wave equation find the wave function associated with particle having energy 10 eV travelling along positive x-direction approach a potential step of height 7 eV.

CL13_Q2. Define the terms reflection coefficient and transmission coefficient with respect to step potential.

CL13_Q3 A stream of particles of mass **m** and total energy **E** moves towards a potential step of height V_0 , if the energy of the electrons is lesser than the step potential $(E > V_0)$ then by applying continuity conditions obtain the expression for reflection coefficient.

CL13_Q4. The probability of reflection from a potential step is given by $\frac{(k_2 - k_1)^2}{(k_2 + k_1)^2}$, where the k's are the wavenumbers in the two regions. If a 5 eV electron encounters a 2 eV potential step, what is the probability that it will be reflected?