

PHY614

Classical Electrodynamics 2

Quiz – 1

Date: 04-10-2024]

[Time: 30 minutes

Name:

Roll No.:

Question:

Show that the one-dimensional Schrodinger equation ($\hbar = m = 1$)

$$-\frac{1}{2} \frac{\partial^2 \psi}{\partial x^2} = i \frac{\partial \psi}{\partial t}$$

is invariant under the Galilean transformation, when

$$\psi \rightarrow \psi' = \psi \exp\left(-ivx + \frac{iv^2t}{2}\right).$$

