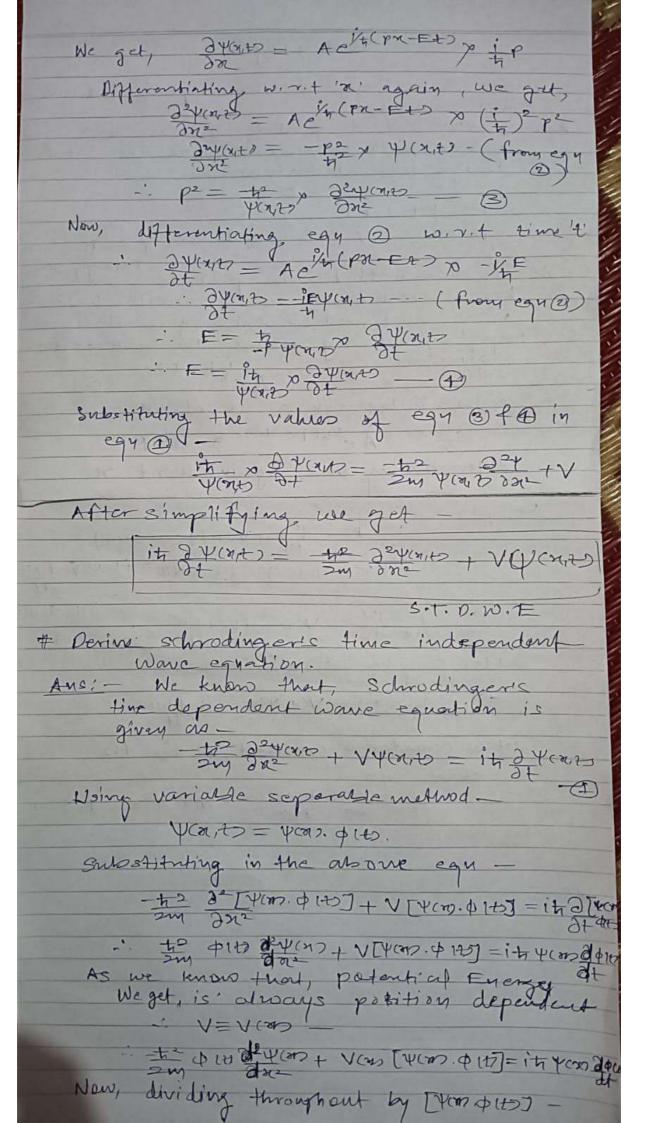
Mod: 05: Dyantym Physics
# Derive Schrödingeris Time dependent Wave
And: Crowsider a particle of mass 'm'
moving with velocity is I have the total
And: Courider a postide of mase 'm' moving with velocity 'v' I have the total energy associated glovery as -
E= K.E+P.E
As we know that the particle Energy?  As we know that the particle Energy?  has wave nature, so it should have
As we know that the particle Everyy?
has wavenature, so it should have
some vouve function which gives its
trajectory at any instant. The wave for is
trajectory at any instant. The wave for is given as - Y(x,t) - A ext - 2
differentiating egy @ w.r.t n'-
Dyina = A ety (PX-EX) > i/h XP
DX 112 22 1 34'
differentiating once again w.r.t n'



We get, The devent + V(m) = it down in the come of the above equation with some constant, which can be the total energy (E) of the particle. = - +2 x + (m) - d24(m) + V(21) = E :. - th 2 drycon + Van. yan = Eyan ? It is the schrodinger's time independent where equation.