Ques.

An electron of mass m and magnitude of charge |e| initially at rest gets accelerated by a constant electric field E. The rate of change of de-Broglie wavelength of this electron at time t ignoring relativistic effects is :

F = |e| E

$a = \frac{F}{m} = \frac{|e|E}{m}$

V = $at = \frac{|e|E}{m}t$

$\lambda = \frac{h}{mV} = \frac{h}{|e|Et}$

$\frac{d\lambda}{dt} = \frac{-h}{|e|Et^2}$