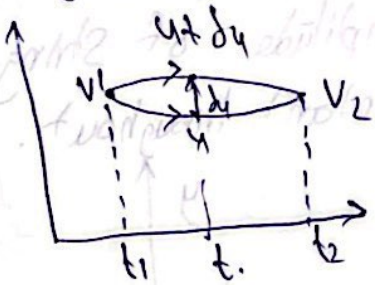
## HAMILTON'S PRINCIPLE:-

Hamilton's principle is a generalization of the principle of virtual displacements to dynamics of system of particles, rigid bodies, or deformable solids. The application of this principle leads directly to the equation of motion for both discrete and continuous systems.

$$\int_{t_1}^{t_2} (T - V)\, dt = 0.$$




Hamilton's principle for the conservative system/motion states that the motion of a particle acted on by conservative forces between two arbitrary instants of time $t_1$ and $t_2$ is such that the line integral over the Lagrangian function is an extremum for the path motion.