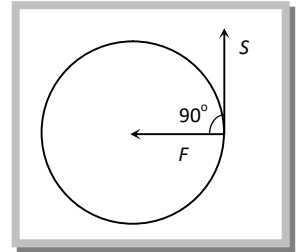# Work done by Centripetal Force.

The work done by centripetal force is always zero as it is perpendicular to velocity and hence instantaneous displacement.

Work done = Increment in kinetic energy of revolving body

Work done = 0

Also $W = \vec{F}.\vec{S} = F{\cdot}S\cos\theta$

$= F{\cdot}S\cos 90° = 0$

Example: (i) When an electron revolve around the nucleus in hydrogen atom in a particular orbit, it neither absorb nor emit any energy means its energy remains constant.

(ii) When a satellite established once in a orbit around the earth and it starts revolving with particular speed, then no fuel is required for its circular motion.