

QUES 02:-

**An artificial satellite moving in a circular orbit around the earth has a total (K.E. + P.E.) energy  $E_0$ . Its potential energy is**

(a)  $-E_0$

(b)  $1.5 E_0$

(c)  $2 E_0$

(d)  $E_0$

**Solution**

Total Energy,  $E_0 = -GMm/2r$

Potential Energy,  $U = -GMm/r = 2E_0$

**Answer: (c)  $2 E_0$**