

1. An object is taken to a height above the surface of earth at a distance $(5/4)R$ from the centre of the earth. Where radius of earth, $R = 6400$ km. The percentage decrease in the weight of the object will be:
(A) 36%

(B) 50%

(C) 64%

(D) 25%
2. In a potentiometer arrangement, a cell of emf 1.20 V gives a balance point at 36 cm length of wire. This cell is now replaced by another cell of emf 1.80 V. The difference in balancing length of potentiometer wire in above conditions will be _____ cm.
3. A projectile is fired from horizontal ground with speed v and projection angle θ . When the acceleration due to gravity is g , the range of the projectile is d . If at the highest point in its trajectory, the projectile enters a different region where the effective acceleration due to gravity is $g' = g/0.81$, then the new range is $d' = nd$. The value of n is _____