

A uniform electric field pointing in positive x-direction exists in a region. Let A be the origin, B be a point on the x-axis at $x = +1\text{cm}$ and C be the point on the y-axis at $y = +1\text{cm}$. Then, the potential at points A, B and C satisfy :

A $V_A < V_B$

B $V_A > V_B$

C $V_A < V_C$

D $V_A > V_C$

Correct option is B)

As $E = -\frac{dV}{dx}$ so potential will less near the electric field direction.

Thus, $V_A = V_C > V_B \Rightarrow V_A > V_B, V_C > V_B$

