

Physics

1. Draw graph showing variation of electric field with distance for a uniformly charged metallic sphere.
2. An electron and proton are free to move in an electric field. Which one will have greater acceleration? Why?
3. Sketch two equipotential surfaces for (a) a point charge. (b) between two plane sheets of charge.
4. Show that the work done in rotating an electric dipole of dipole moment p in a uniform electric field E by an angle θ from the equilibrium position $W = PE(1 - \cos \theta)$
5. The given graph shows the variation of charge 'q' verses potential difference for two capacitors C_1 and C_2 .The capacitors have same plate separation, but the plate area of C_2 is double that of C_1 . Identify the line in the graph corresponding to C_1 & C_2 and why?