Electrostatic
Topic:Electric field and Electric potential

1. 10J work must be done to move a charge of -200 C from a point A to B.
   (i) which of the two points is at higher potential ?
   (ii) what is the potential difference.
2. A spherical oil drop of radius 10^-4 cm has on it at a certain time a charge of 40 electrons. Calculate the energy that would be required to place an additional electron on the drop.
3. Derive an expression for the torque experienced by an electric dipole placed in uniform electric field.
4. Write properties of electric lines of force.
5. Define the potential difference between two points in an electric field and drive an expression for it. Also give SI unit of potential difference.
6. A small particle carrying an electron is suspended in equilibrium between the horizontal metal plate 5 cm apart, having a potential difference of 3000 volts across them. Find the mass of the particle.
7. Two point charges equal to +10 μC and -10 μC are 1 m apart.what is the amount of work done in bringing them closer to each other by 50 cm.
8. Derive an expression for the potential energy of an electric dipole in uniform electric field,
9. Show that the work done in moving a unit charge along a closed part is zero.
10. What do you understand by equipotential surfaces.give its properties.