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FBI - AREDE

Success

Level: 10066

Department: MBBS

College: MHS

Course code: PHY 102

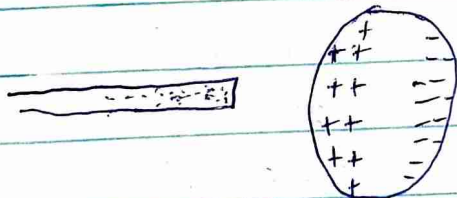
Matric no: 19/MHS 01/094

Assignment answer

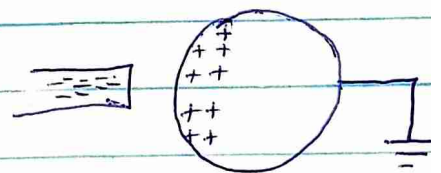
1) Charging by induction

Electric charges can be obtained on an object without contact by the process of electrostatic induction. If a positively charged rubber rod is brought near an uncharged conducting sphere that is insulated, the repulsive force between the electrons on the rod and the sphere causes a distribution of charges. The electrons move to the side farthest from the rod while the side closer to it has an excess of positive charges. If a grounding wire is then connected to the sphere, the electrons will flow to the earth leaving the sphere with induced positive charges. Finally when the rod is removed, the introduced charges become uniformly distributed around the sphere.

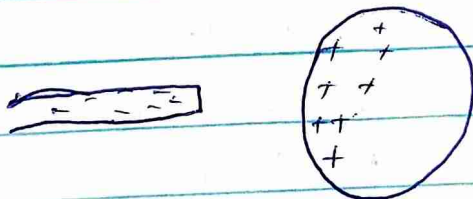
(a)



(b)



(c)



(d)

