

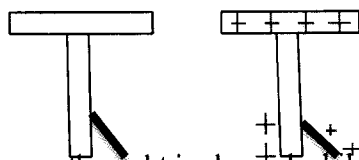
NYABURURU GIRLS' NATIONAL SCHOOL

FORM 2 PHYSICS FOUNDATION

TERM 2, 2016 (WEEK 13-27/07/2016)

ELECTROSTATICS 1

1. A pith-ball suspended on a silk thread is attracted by a charged ebonite rod. Does this indicate that the pith-ball is charged? Explain your answer. (2mks)
2. Explain each of the following.
 - (i) Experiments on electrostatics do not work well on humid days. (2mks)
 - (ii) An uncharged metal rod causes the leaf of a charged electroscope to collapse. (2mks)
3. Two electroscopes in the figure below are identical.



The electroscope on the right is charged while the one on the left is not charged. Copy the diagrams and show the divergence of the leaves after the two electroscopes are connected with a thin conducting wire. (2mks)

4. A positively charged rod is brought near the cap of a lightly charged electroscope. The first collapses and as the rod comes nearer, the leaf diverges. What is the charge on the electroscope? Explain the behavior of the leaf. (3mks)
5. Explain why the leaf of an uncharged electroscope diverges when a charged object is brought near the cap. (2mks)
6. A polythene rod is rubbed with fur and the fur is left on the rod. What charge is obtained? Explain your answer. (2mks)
7. List three examples in which electrification (charging) occurs. (3mks)
8. State the charge on the body(s) in the following observations.
 - (a) A pith-ball that is attracted by both an ebonite rod rubbed with fur and a glass rod rubbed with silk.
 - (b) A charged electroscope whose leaves collapse on bringing an uncharged metal rod or a negatively charged rod near it.
 - (c) Two identical metal spheres, one of which had lost 20 electrons and the other gained 24 electrons are made to touch.