# Electricity And Magnetism

1. A glass rod rubbed with silk is brought near the fur rubbed with an ebonite rod. What will be your observation? Give a reason to your answer.
2. An ebonite rod is rubbed with fur. Explain the charging of ebonite rod on the basis of electron movement.
3. A charged rod is brought near a negatively charged pith ball electroscope. What conclusion do you draw about the charge on the rod if the pith ball moves (a) towards the body. (b) away from the body
4. You are provided with a negatively charged gold leaf electroscope. State and explain what happens when:
   (a) A glass rod rubbed with silk is brought near the disc of electroscope
   (b) An ebonite rod rubbed with fur is brought near the disc of electroscope
   (c) An undercharged metal rod is brought near the disc of electroscope.
   (d) A glass rod rubbed with silk is rolled on the disc of electroscope.
5. When a charged rod is brought near the disc of a negatively charged gold leaf electroscope, it is observed that the decrease. What inference do you draw about the charge on t he rod? Explain.
6. Distinguish between the primary and secondary cells.
7. *n* electrons flow through a cross section of a conductor in time t. If charge on an electron is e, write an expression for the current in the conductor.
8. What amount of work is needed is moving 2C charge through a potential difference of 8V?
9. A cell of potential difference 12V is connected to a bulb. The resistance of filament of the bulb when it glows, is 24Ω. Find the current drawn from the cell.
10. How is the current flowing in a conductor changed if the resistance of conductor is doubled keeping the potential difference across it the same?
11. A small magnet is suspended by a silk thread from a rigid support such that the magnet can freely swing. How will it rest? Draw a diagram to show it.
12. Explain what do you understand by magnetic induction. What role does it play in the attraction of a piece of iron by a magnet?
13. When a bar magnet is placed on a table, there are two points near it where the resultant magnetic field due to the earth's magnetic field and the magnetic field of the magnet is zero, Explain this.
14. State the positions of neutral points when a magnet is placed with its axis in the magnetic meridian and with its north pole (i) pointing towards geographic north. (ii) pointing towards geographic south.