

Chapter 15 -Some Natural Phenomena

1. State whether the following are True or False.
 - (a) Earthquakes occur all the time all over the world.
 - (b) The plates of the outermost layer of the earth are always in continuous motion.
 - (c) Tremors on the earth can also be caused by the eruption of a volcano.
 - (d) The process of electric discharge cannot occur between clouds and the earth.
 - (e) Bathing outdoors should be avoided during thunderstorm.
2. Is it possible to predict the occurrence of an earthquake?
3. If a charged plastic straw is brought near another uncharged plastic straw, what will happen?
4. The aluminium strips in an electroscope as shown in fig. 15.1 are replaced by plastic strips and a charged body is brought in contact with the metal clip. What will happen?



Fig. 15.1

5. Plastic straws A and B are rubbed with dry cotton cloth. What will happen if they are brought near each other?

Short Answer Type Questions

1. During the construction of a building the lightning conductor was left hanging in the air by mistake. Would the lightning conductor be still effective? Explain.

2. If air and cloud were good conductors of electricity, do you think lightning could occur? Explain.
3. Identify the lightning conductor and the copper plate in Fig. 15.2.

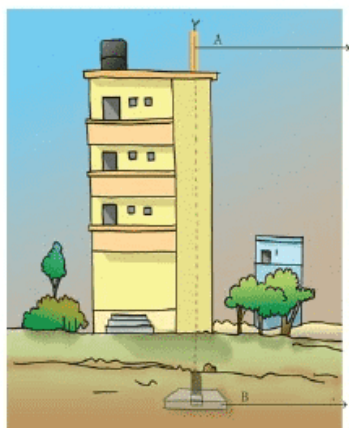


Fig. 15.2

4. If the materials used for constructing a building were good conductors, do you think lightning will strike the building. Will the lightning conductor be still required to be installed in the building?
5. You might have observed on a dry day that when you touch the screen of a television or computer monitor (with picture tube), you get a slight shock. Why does it happen?
6. Explain how does lightning conductor protects a building from getting struck by lightning.
7. In an electroscope if a negatively charged body is brought in contact with the metal clip, the strips of the electroscope diverge. If now another charged object carrying equal amount of positive charge is brought in contact with the clip, what will happen?
8. The strips of an electroscope diverge when a charged body is brought in contact with the metal clip. Now the clip is touched gently by our hand. What will happen to the strips? Explain.

Long Answer Type Questions

1. Explain how lightning takes place?
2. Mention three precautions that you will take to protect yourself if earthquake strikes when you are inside the house.
3. Explain why it is safer to use a wireless telephone instead of a landline telephone during lightning.
4. What precautions would you take if lightning occurs while you are outside the house?
5. If the metal clip used in the electroscope is replaced by an ebonite rod and a charged body is brought in contact with it, will there be any effect on the aluminium strips? Explain.