

Which of the following cannot be charged easily by friction?

- B

Copper rod cannot be charged easily by friction because it is a conductor. Only non-conducting materials can be charged easily by friction.

When a glass rod is rubbed with a piece of silk cloth the rod:

- B

The two objects charged by friction gets oppositely charged.

Charge acquired by the glass rod is positive and charge acquired by the cloth is negative.

Write T against true and F against false in the following statements:

- (a) False

- (b) True

A charged glass rod attracts a charged plastic straw as both are oppositely charged.

- (c) False

Lightening conductor can protect a building from lightening by conducting all the charges to the Earth directly.

- (d) False

Sometimes, a crackling sound is heard while taking off sweater during winters. Explain.

Sometimes a crackling sound is heard while taking off sweater during winters because the woollen sweater gets charged because of the friction between the sweater and the body.

Explain why a charged body loses its charge if we touch it with our hand.

A charged body loses its charge if we touch it with our hand because our body conducts the charges to the earth.

Name the scale on which the destructive energy of an earthquake is measured. An earthquake measures 3 on this scale. Would it be recorded by a seismograph? Is it likely to cause much damage?

Destructive energy of an earthquake is measured on the Richter scale. It has readings from 1 to 10.

Reading of 3 can be recorded by the a seismograph. Reading of 3 can't cause much damage. Generally magnitudes higher than 5 cause damage.

Suggest three measures to protect ourselves from lightning.

Some of the measures to protect ourselves from lightning are as follows:

- (i) We should stay in a completely closed place.
- (ii) We should avoid standing in open during thunderstorm
- (iii) If moving in a car, we should remain there until the lightning is over and close the windows.

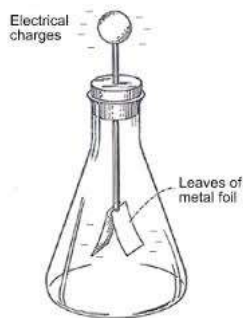
Explain why a charged balloon is repelled by another charged balloon whereas an uncharged balloon is attracted by another charged balloon?

A charged balloon is repelled by another balloon whereas an uncharged balloon is attracted by another uncharged balloon because like charges are repelled by each other and unlike charges are attracted to each other. An uncharged body is attracted by a charged body.

Describe with the help of a diagram an instrument which can be used to detect a charged body.

An electroscope is used to detect whether a body is charged or not. It consists of a metal rod. At one end of the rod, two leaves of aluminium foil are fixed and at the other end there is a metal disc. The leaves of aluminium foil are placed inside a conical flask and the flask is corked to isolate the leaves from air.

When the metal disc is touched with a charged body, the aluminium strips move away from each other. Some of the charges of the body are transferred to the strips through the metal rod. Nature of charges on both the leaves and the charged body are the similar. Hence, both the leaves of the aluminium foil will move away from each other. If the body was not charged, then the leaves of the foil would remain as they were before. They would not repel each other.



List three states in India where earthquakes are more likely to strike.

In India, earthquakes are most likely to strike in Jammu and Kashmir, Gujarat and Assam.

Suppose you are outside your home and an earthquake strikes. What precaution would you take to protect yourself?

(ii) If travelling in a bus or a car, we should not come out when an earthquake strikes and go to an open field.

The weather department has predicted that a thunderstorm is likely to occur on a certain day. Suppose you have to go out on that day. Would you carry an umbrella? Explain.

No, we should not carry an umbrella in a thunderstorm because thunderstorms are generally accompanied by lightning. Electric discharge from the clouds can travel through the metallic rod of the umbrella during lightning. This may give an electric shock to the person who is carrying it. Hence, it is not safe to carry an umbrella during lightning.