

Chapter-15 Some Natural Phenomena

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

Sweater is made of wool and generally shirt we wear is made of cotton blended with some synthetic fibers. Constant friction between the shirt and sweater lets transfer of electrons from one material to the other. This results in building of electric potential. When enough potential has been accumulated, while taking off the sweater it discharges and transfer of electrons take place. Passage of electrons through air in the forms of spark let out heat and sound energy. Thus we hear the crackling sound and in dark rooms we may see the spark lights as well.

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

When we touch a charged body, with our hand, the excess of accumulated charge or static charges on it, gets transfer to ground through our body. Thus the charged body loses its charge, and becomes neutral.

3. 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?

The destructive energy of an earthquake is measured on Richter Scale. The reading of magnitude 3 on the Richter scale would be recorded by a seismograph. If the Richter scale gives a reading of magnitude 3, then the earthquake is not likely to cause much damage. Generally, earthquake of magnitudes higher than 5 is considered destructive in nature.

4. *Suggest three measures to protect ourselves from lightning.*
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- i. *Stay indoor or under covered area.*
- ii. *Do not take bath during lightning.*
- iii. *Do not use any electrical appliances during lightning.*

5. *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 charged balloon because both carry same charges and we know same charges repel each other whereas an uncharged balloon is attracted by charged balloon because unlike charges attract each other.

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

The three states in India where earthquakes are more likely to strike are Jammu and Kashmir, Gujrat, and Assam.

7. *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. During thunderstorms, which are accompanied with lightning, electric discharge from the clouds can travel through the metallic rod of the umbrella. This may give an electric shock to the person who is

carrying it. Hence, it is not safe to carry an umbrella during lightning.
