

CBSE Class–VIII
Science NCERT SOLUTION
Chapter-15
SOME NATURAL PHENOMENA

Select the correct option in questions 1 and 2.

1. Which of the following cannot be charged easily by friction ?

- (a) A plastic scale
- (b) A copper rod
- (c) An inflated balloon
- (d) A woolen cloth

Ans: (b) A copper rod.

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

- (a) and the cloths both acquire positive charge.
- (b) becomes positively charged while the cloth has a negative charge.
- (c) and the cloth both acquire negative charge.
- (d) becomes negatively charged while the cloth has positive charge.

Ans: (b) becomes positively charged while the cloth has a negative charge.

3. Write T against true and F against false in the following statements.

- (a) Like charges attract each other.
- (b) A charged glass rod attracts a charged plastic straw.
- (c) Lightning conductor cannot protect a building from lightening.
- (d) Earthquakes can be predicted in advance.

Ans: (a) (F) **(b)** (T) **(c)** (F) **(d)** (F)

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

Ans: The crackling sound is heard because when the sweater is rubbed while taking it off, it acquires a small charge.

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

Ans: Our body is a good conductor of electricity. When we touch a charged body with our hand, the charged body loses charge to the earth through our body.

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

Ans: The destructive energy of an earthquake is measured on a scale called Richter scale. An earthquake measure 3 on this scale would be recorded by a seismograph and it is not likely to cause much damage.

7. Suggest three measures to protect ourselves from lightening.

Ans: (a) Hearing thunder, we should rush to a safer place like building.

(b) If no proper shelter is available we should go in open, never hide under a tree or electric pole.

(c) The telephone cord, electric wires and metal pipes should be avoided from touching.

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

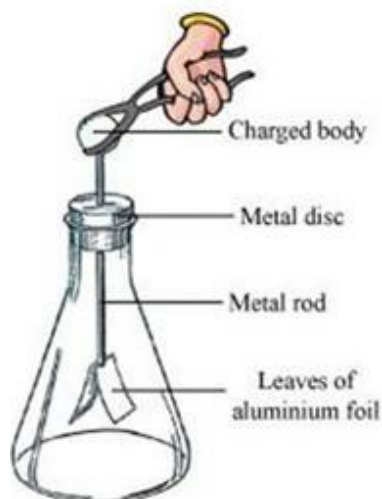
Ans: A charged balloon is repelled by another charged balloon because both have the same charge and we know that like charges repel each other. But charged balloons attract an uncharged balloon and lose its own charge to the other balloon.

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

Ans: A device that is used to test whether an object is carrying charge or not is known as electroscope. In the diagram, there is a metal rod. Below in the end of the metal rod, there are leaves of aluminium foil. Now if we touch the charged body at the upper end of the

metal rod, then charge go to the leaves of aluminium foil by flowing through the metal rod. Thus both leaves have same charge, so the leaves spread because of force of repulsion. We know that same charge repel each other.

So, by this instrument we can detect a charged body.



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

Ans: The states that fall in seismic zones are Jammu and Kashmir, Himachal Pradesh and Gujarat.

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

Ans: Following precautions could be taken to protect ourselves in a earthquake out side the home :

(a) First find a clear spot, away from building, trees and overhead wires.

(b) If I am in a car or a bus, I will not come out. Instead I will told driver to drive the car slowly to clear spot and will not come out till the tremors stop.

12. 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.

Ans: No, I would not carry an umbrella, because the pointed rod of the umbrella can become a target of lightening.