

CHAPTER-SOME NATURAL PHENOMENA

VERY SHORT ANSWER TYPE QUESTIONS

1. Which device protects buildings against damage from lightning?
Lightning Conductor
2. Which device can predict the presence of charge on a body?
Electroscope
3. How can intensity of earthquake be measured?
By using Richter scale
4. How many types of charges are there and who discovered them?
There are two types of charges- A) Positive charge
B) Negative charge
Benjamin Franklin discovered them.
5. How do charges interact ?
Like charges repel each other while unlike charges attract each other.
6. Which is that one natural disaster that we are not yet able to predict?
Earthquake
7. Name the other natural disasters that may be caused by earthquake.
a) Floods
b) Landslide
c) Tsunami
8. What could be the magnitude of a destructive earthquake? Give one example.
Destructive earthquakes have magnitudes higher than 7 on Richter Scale. Both Bhuj and Kashmir earthquakes in 2001 and 2005 respectively had magnitude greater than 7.5
9. What is discharging?
The process of removing charge from a body is known as discharging.

SHORT ANSWER TYPE QUESTIONS

1. What are seismic waves?
Waves or tremors generated by an earthquake are called seismic waves. These waves cause trembling and shaking of the ground.
2. What are fault zones or seismic zones?

Earthquakes are caused by movement of plates. The boundaries of the plates are the weak zones where earthquakes are most likely to occur. The weak zones are also called seismic or fault zones.

3. What is the relation between an electric charge and an electric current ?
The electric charge generated by rubbing is static. It does not move. When charge moves, it constitute an electric current.
4. What is electroscope?
A device which can be used to test the presence of charge is known as electroscope.
5. What is Earthing? Why is it so important?
The process of transferring of charge from a charged body to the Earth is called earthing. Earthing is important in buildings so as to protect us from shocks due to leakage of electric current.
6. Write the characteristics of charges?
 - a) Charges can flow through metallic conductors.
 - b) Flowing charge is also called electric current
 - c) Like charges repel each other and unlike charges attract each other.
7. What factors other than the movement of plates can trigger an Earthquake?
 - a) Volcanic eruptions
 - b) Meteor hitting the Earth
 - c) Underground nuclear explosion
8. Name some earthquake prone places in India ?
In India, the areas most threatened are Kashmir, western and central Himalayas, the whole of North-East, Rann of Kutch, Rajasthan and the Indo-Gangetic Plane.
9. What precautions will you take if an earthquake occurs when you are in your home?
 - a) Take shelter under a table and stay there till the shaking stops.
 - b) Stay away from tall and heavy objects that may fall on you.
 - c) If you are in bed, do not get up. Protect your head with a pillow.

LONG ANSWER TYPE QUESTIONS

1. What is the cause of lightning?
During the development of a thunderstorm, the air currents move upward while the water droplets move downwards. These movements cause separation of charges. The positive charges collect near the upper edges of the clouds and the negative charges collect near the lower edges. There is accumulation of positive charges near the ground also. When magnitude of the charges becomes very large, the air becomes good conductor of electricity. Negative and Positive charges meet, producing streaks of bright light and sound. This is the cause of lightning.
2. What is the cause of earthquake?

The earthquake is caused by the disturbance deep down inside the Earth's crust. The outermost layer of the earth is not in one piece. It is fragmented. Each fragment is called a plate. These plates are in continual motion. When they brush past one another or one This is the cause of earthquake.

3. Explain the working of seismograph.

The tremors produce waves on the surface of the earth. These are called seismic waves. The waves are recorded by an instrument called seismograph. The instrument is generally a pendulum which starts vibrating when tremors occur. A pen is attached to the pendulum. The pen records the seismic waves on a paper which moves under it. By studying these waves, a map of earthquake can be constructed.

4. Explain the structure and working of lightning conductor.

It is a device used to protect buildings from the effect of lightning. A metallic rod taller than the building is installed in the walls of a building during its construction. One end of the rod is kept out in the air and the other end is buried deep in the ground. The rod provides easy route for the transfer of electric charge to the ground.

5. How can an object be charged?

We can charge an object by different methods-

- a) **FRICTION**-When the two objects are rubbed together, they get opposite charges.
e.g-when a glass rod is rubbed with a silk cloth, the glass rod attains positive charge while silk cloth attains negative charge.
- b) **CONDUCTION**-when a charged object touches an uncharged object, it becomes charged by the process of conduction.
- c) **INDUCTION**-when a charged body is brought near an uncharged object without touching it, uncharged object attains opposite charge.