(Q.) Mention two causes of earthquakes other than movements of tectonic plates? (1 Mark)

(Ans) Tremors due to nuclear explosion and volcanic activities,may cause earthquakes.

(Q.) What are the zones, where the earthquakes are likely to occur on the earth crust called? (1 Mark)

(Ans) Fault or seismic zones.

(Q.) What is Tsunami? (1 Mark)

(Ans Large earthquakes that occur under oceans causes huge waves, which are called Tsunami.

(Q.) What happens, when an ebonite rod rubbed with wool is brought near a positively charged glass rod? (1 Mark)

(Ans) When an ebonite rod is rubbed with wool, negative charges are transferred from the wool to an ebonite rod and the wool is left with the positive charges. Thus, an ebonite rod becomes negatively charged while wool becomes positively charged. So, there must be an attraction between the negatively charged ebonite rod and the positively charged glass rod as unlike charges attract each other.

(Q.) Which scale is used to measure the intensity of an earthquake? (1 Mark)

(Ans) Intensity of an earthquake is measured on the Richter scale.

(Q.) What is an electroscope? (1 Mark)

(Ans) An electroscope is a device which is used to detect, measure and find the nature of the charge on a body.

(Q.) What is lightning? (1 Mark)

(Ans) The electric discharge between clouds and the earth or between different clouds causes lightning.

(Q.) During the lightning, flash appears first than thunder while both are coming from the same place, why? (1 Mark)

(Ans) Flash appears first than thunder while both are coming from the same place, because the speed of light (speed of light is 3.0 X 108 m/s) is much more than the speed of sound (speed of sound in air at 20o C is approximately 343 m/s).

(Q.) What happens when an ebonite rod is rubbed with wool? (1 Mark)

(Ans) When an ebonite rod is rubbed with wool, negative charges are transferred from the wool to an ebonite rod and the wool is left with the positive charges. Thus, an ebonite rod becomes negatively charged while wool becomes positively charged.

(Q.) What is the nature of the charges generated due to rubbing? (1 Mark)

(Ans) Charges generated due to rubbing are static in nature as they cannot move by themselves.

(Q.) What is meant by 'electrification by friction'? (1 Mark)

(Ans) When two bodies are rubbed against each other, frictional force arises between two bodies and equal and opposite charges are aquired by them. Thus, the method of charging the bodies by the friction is known as electrification by friction.

(Q.) Mention two hazards caused by earthquake. (1 Mark)

(Ans) Two hazards caused by earthquake are :-

1. Tsunamis.

2. Landslides.

(Q.) What is seismograph? (1 Mark)

(Ans) Tremors or vibrations caused by the earthquakes which travel in the form of waves within the earth or along the earth's surface, are called seismic waves. Seismograph is an instrument which records these waves.

(Q.) List two places in India which are most threatened by earthquake. (2 Marks)

(Ans) Twoplaces in India which are most threatened by earthquake are

1. Kashmir

2. Rann of kutch.

(Q.) What are tectonic plates? (2 Marks)

(Ans) The earth's lithosphere is fragmented into many pieces. Each fragment is called a plate, also called tectonic plate. These plates are in continuous motion i.e. they float over hot magma.

(Q.) What is a lightning conductor? (2 Marks)

(Ans) Lightning conductor is a device used to protect buildings from the damaging effects of lightning. It runs from the top to the bottom, along the outer wall of the buildings or any other object, which is to be protected. If lightning strikes the buildings or any other objects, then the lightning conductor provides an easy and direct path for the lighning bolt to pass to the ground without effecting them.

(Q.) What is earthing? (2 Marks)

(Ans) he process of transferring of charge from a charged object to the earth is called earthing. For our safety, most of the electrical appliances and the mains of the house are connected to earth, so that we can be prevented from getting an electric shock.

(Q.) What is a thunderstorm? How is it produced? (2 Marks)

(Ans) A thunderstorm is a storm with lightning and thunder. It is produced by a cumulonimbus cloud, usually producing gusty winds, heavy rain and sometimes hail.

(Q.) Explain the process of an electric discharge? (3 Marks)

(Ans) During the development of thunderstorm, air currents move in the upward direction and the water droplets move in the downward direction. These movements causes the seperation of charges. Usually, the negative charges accumulate at the lower part of the clouds and the positive charges are accumulated at its upper part. The positive charges are also accumulated at the ground also. When the accumulation of charges becomes large, a high potential difference is set up between lower part of clouds and earth, which is sufficient to break the insulation of air. As a result, negative and positive charges meet, producing streaks of bright light and sound. This process is called an electric discharge.

(Q.) What causes an earthquake? Which scale is used to measure an intensity of an earthquake?

(3 Marks)

(Ans) The earth's lithosphere is fragmented into many pieces. Each fragment is called a plate, also called tectonic plate. These plates are in continuous motion i.e. they float over hot magma. When a plate goes under another due to collision or they brush past one another, then the disturbance is caused in the earth's crust which is felt as earthquake on the surface of earth. An intensity of an earthquake is measured on the Richter scale.

(Q.) Suggest three measures to protect ourselves from lightning. (3 Marks)

(Ans) Three measures to protect ourselves from lightning are :-

1. In outdoors, stay away from anything that can conduct electricity like electric poles or metal objects.

2. In indoors, unplug electrical appliances like televisions, computers, etc.

3. In indoors, use mobile phones or cordless phones insteadof wired phone.

(Q.) Suppose you are outside your home and an earthquake strikes. What precaution would you take to protect yourself? (3 Marks)

(Ans) The following precautionsshould be taken :-

1. Find a clear spot, away from buildings, trees, poles and electric poles, signboards and overhead power lines anddrop to the ground.

2. Do not use elevators if they are available at some place outside your house.

3. If you are in a car or a bus, do not come out anddrive slowly to a clear spot. Stay inside a cartill the tremors stop.

(Q.) Suppose you are at your home and an earthquake strikes. What precaution would you take to protect yourself? (3 Marks)

(Ans) The precautions that should be taken are :-

1. Take shelter under a table and stay there only, till the shaking stops.

2. Stay away from the objects which are tall and heavy, that may fall on you.

3. If you are on bed, do not get up and remain there only andprotect your head with pillow.

(Q.) What is earthing? Why earthing is provided in buildings? (3 Marks)

(Ans) The process of transferring of charge from a charged object to the earth is called earthing. Earthing is provided in buildings to protect them from electrical shocks due to any leakage of electrical current. For our safety, most of the electrical appliances and the mains of the house are connected to earth, so that we can be prevented from getting an electric shock.

(Q.) What are the causes of earthquake? Explain briefly two hazards caused by an earthquake. (5 Marks)

(Ans) Causes of earthquake are as follows :-

1. Disturbances deep inside the earth's crust.

2. The movement of plates, whose boundaries are the weak zones called fault zones.

3. Nuclear explosion and volcanic activities

Earthquake can cause immense damage to buildings, bridges, dams and people. There can be a great loss to life and property. The earthquakes can cause floods, landslides, tremor and tsunamis.

Tsunami

Tsunami is a sea wave of local or distant origin that results from large-scale seafloor displacements associated with large earthquakes, major submarine slides, or exploding volcanic islands.

Tremor

Tremors are caused when an underground nuclear explosions is carried out, or a meteor strikes the earth, or a volcano erupts. The tremors produce waves on the surface of the earth. These are called seismic waves. An instrument called seismograph is used to record these waves.