

What is an earthquake? Discuss Richter scale in this context. What was the intensity of earthquake in Pakistan dated 26 October 2015 and where was the locus?

## Earthquake

Earthquake is an intense shaking of earth's surface by the production of seismic waves under the ground surface of earth. Earthquake occurs when tectonic plates move under the depth of earth surface. Tectonic plates move due to the rotation of ~~sun~~ earth around sun. So, seismic waves are produced and they cause to shake the earth and it can lead to earthquake. Seismic waves are of two types; surface waves and body waves. Both waves are the source for earthquake and there is slight difference between these two waves.

## Causes of Earthquake

Some causes of earthquake are defined as;

- i Tectonic plates move beneath the earth's surface and they become a reason to produce earthquake.
- ii Volcanic eruption is another cause of earthquake. Volcanic eruption is the release of magma, gases and some similar materials from earth's surface in large amount. This released magma is in very hot form. It can contribute to produce earthquake.
- iii Landslides are also a reason which can

contribute to produce earthquake. Landslide is the movement of earth's surface and due to this movement earthquake arises and become a disaster for people on earth.

## Types of earthquake

There are three types of earthquake.

### 1 Shallow Focus Earthquake

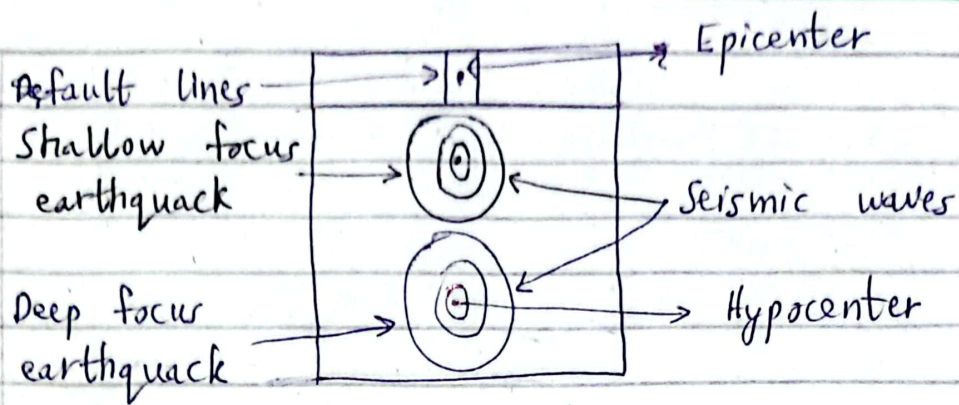
Shallow focus earthquake is that type of earthquake which have focus point of length 0-70 km under the earth's surface. Shallow focus earthquake is very dangerous and <sup>devastating</sup> it can create huge big problems on the earth. It is very rarely.

### 2 Intermediate Earthquake

The earthquake which length 70-350 km under the surface of earth is called intermediate earthquake. The magnitude of intermediate earthquake lies between the magnitude of other two types.

### 3 Deep Focus Earthquake

Deep focus earthquake has focus or hypocenter of length 350-700 km beneath the surface of earth. The magnitude of deep focus earthquake is 5-10 on the Richter scale. The most earthquake coming are deep focus earthquake. These earthquakes are less devastating than shallow focus earthquake.



## Effects of earthquake

As earthquake is harmful, so it has a effects on people, environment and other species of earth.

- i Earthquake has a negative effect on infrastructure; all the buildings, roads, trees are effected by earthquake.
- ii The intense earthquake is harmful for living beings, it can <sup>become</sup> a reason of deaths and casualties of living things.
- iii Tourism is also affected with earthquake. A lot of tourism sites loss their beauty and nature and tourists deny to visit such places.
- iv If earthquake can act on agricultural land, it can lead to food shortage and it may chances of land infertility.
- v Earthquake has also affect on economy of any country. As earthquake contribute to devastate the nature so it is a manifesta-tion to spend money on land effected by earthquake, hence any country may suffer economy unbalance.
- vi Earthquake can also cause of fire because it is a sudden shake of earth and everything on it and chances of fire is very increased.

## Richter Scale

Richter scale is a scientific instrument that is invented by Charles Richter in 1935. It is used to measure the intensity of earthquake. Richter scale measures magnitude of earthquake by knowing the speed or range of seismic waves on seismograph. If a number is increased by one on seismograph, it means tenfold increase of magnitude because seismograph works on mathematical logarithm. In the context of energy, an increased number shows the 23 times increase of energy. Richter scale is widely used around the globe to measure the intensity of earth-quake. Richter scale has ten numbers from 0 to 10 which defined the <sup>ten</sup> intensity of earthquake.

## Earthquake in Pakistan on 26 October 2015

Earthquake struck in Pakistan along with neighbour countries on 26 October 2015. It is a deep focus earthquake with magnitude of 8.1 on the Richter scale. The locus of this earthquake in the mountains of Hindu Kush in the Badakshan - province of Afghanistan.