

A natural disaster is a sudden, violent and destructive event caused by natural phenomenon

## PHYSICAL SCIENCES

Disaster Risk Management

Urban fire

### NATURAL HAZARDS AND DISASTERS

Earthquake

Tsunami

Avalanche

Drought

wild fire

volcanic eruption

floods

Traveling cyclone

- Traveling cyclone
- Tropical cyclone
- Middle Latitude cyclone
- Tornadoes

## 1- EARTHQUAKE:

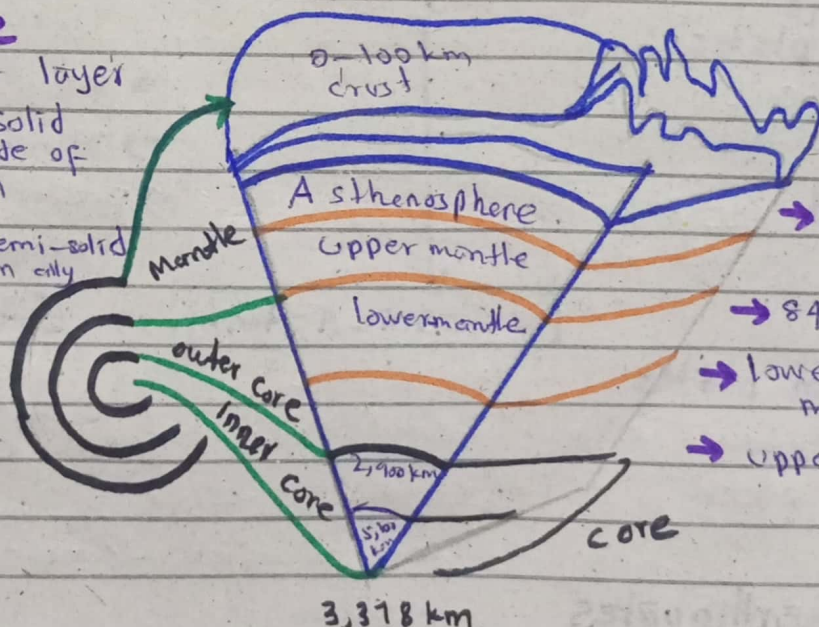
Result of sudden movement along faults within earth.

To understand the concept of Earthquake, structure of earth should be understood.

### Structure of Earth:-

#### The Core

- Central most layer
- Inner core → solid and made of iron
- outer core → semi-solid nickel and iron only



#### The Mantle

- 2890 km
- silicate rock b/w crust and core.
- 84% of earth's volume
- lower part of mantle → magma
- upper part → solid

#### The Crust:

- Rocky layer - outermost solid shell.
- No fairly uniform crust - (continental crust + oceanic crust)
- crust + mantle = Lithosphere.

# Key Concepts of Earthquakes

**Faults:** A fracture in the rocks, that makes the earth crust.

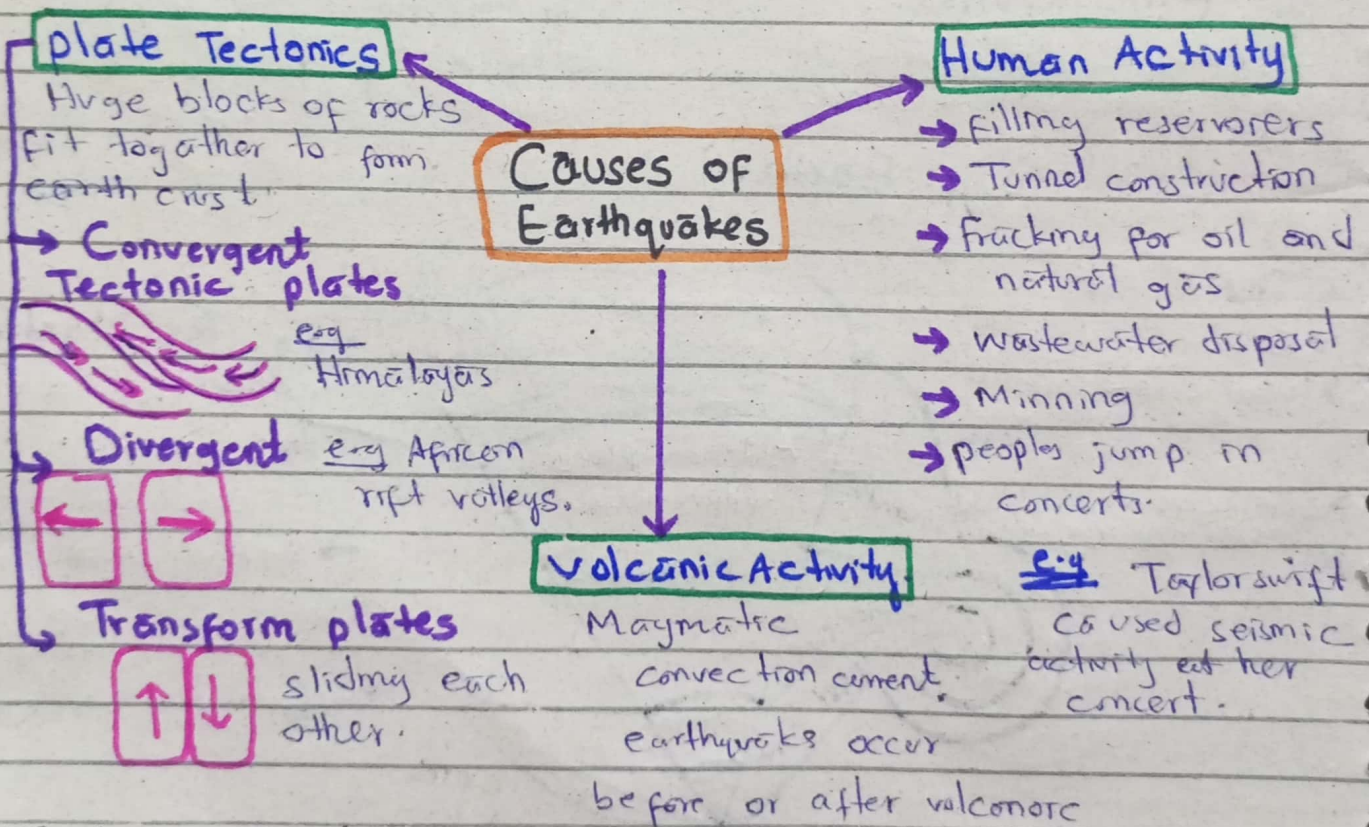
**plates:** Massive layer of rocks that makes the outer layer.

**Hypocenter:** Location below the earth crust, where earthquake start.

**Epicenter:** Location directly above it, on the surface of earth.

**Main shock:** The largest main earthquake.

Earthquakes occur when the earth's crust releases energy suddenly - (seismic waves).



## effects of Earthquakes

Ground shaking, Building damage, Fires, Flooding, Landsliding, Tsunamis, mental health, Economic impacts

underground nuclear explosions.

## How Earthquakes are Recorded?

Earthquakes are recorded using seismographs.

Recording created by seismographs is called seismogram.

## How to Reduce Impacts of Earthquakes

(prepare your home, educate yourself and develop an emergency plan).

→ Base-Isolation techniques.

→ Designing earthquake-resistant structure

## Largest Earthquakes History in Pakistan.

2005 - Kashmir earthquake: 8 - October - 2005

7.6 magnitude

Death: 73,276 — 87,350.

1935 - Quetta Earthquake: 31 May 1935 - magnitude = 7.7

Death - 30,000 - 60,000