

EARTH QUAKE

What is Epi center
and Hypo center?

Date: _____

EPICENTER

The epicentre is the location on Earth's surface directly above where an earthquake occurs and spreads.

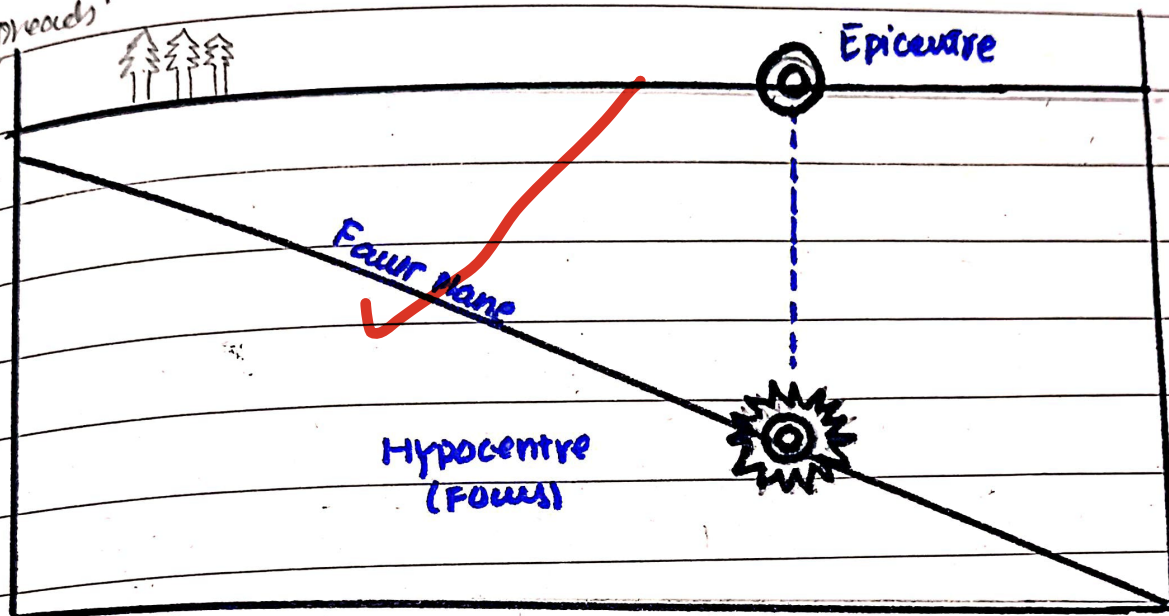


Figure.

HYPOCENTER

The hypocentre is the actual point at which an earthquake occurs and the point from which body waves of an earthquake ultimately originate.

Characteristics	EPICENTER	HYPOCENTER
Position on Earth	Earth's surface	Earth's subsurface
Associated waves	Body waves and surface waves	Body waves only
Dimensionality	used as reference to measure 2 dimensional spread of seismic waves	used as reference to measure 3-dimensional spread of seismic waves.

SEISMOGRAPHY

Seismography is the scientific study and recording of seismic waves generated by earthquakes, volcanic eruptions, explosions or other sources of ground motions with the help of an instrument called a **Seismometer** and the record produced on display is called a **Seismogram**.

THE PROCEDURE OF SEISMOGRAPHY

Sensing Motion:

A Seismometer detects ground movement, often with a suspended mass that stays still, while the frame moves with the Earth.

Recording:

This relative motion generates electrical signals, recorded digitally or analogically by the seismograph.

Seismogram:

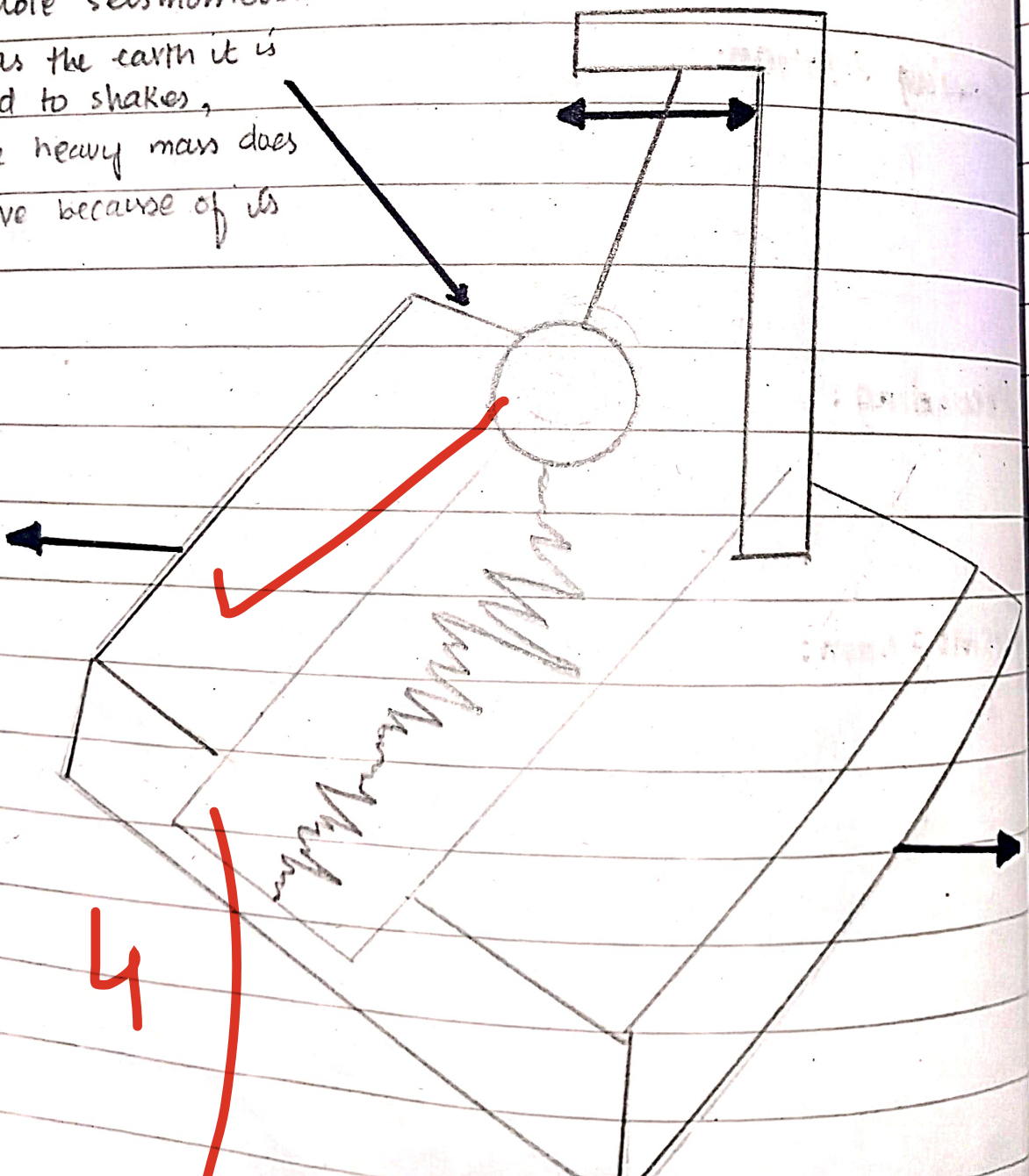
The resulting wave line (seismogram) shows arrival times and intensity, with different wave types (P-waves, S-waves, Surface waves) revealing subsurface structures.

APPLICATION OF SEISMOGRAPHY

By analyzing seismograms, seismologists can determine the location, depth, magnitude and other characteristics of earthquakes, contributing to our understanding of the Earth's interior and seismic activity. Moreover, Seismography plays a vital role in earthquake monitoring, hazard assessment and seismic research.

In Figure,

The whole seismometer moves as the earth it is attached to shakes, But the heavy mass does not move because of its inertia.



RITCHTER SCALE

1. Richter scale is a measure of the strength or magnitude of an earthquake, developed by Dr. Beno Gutenberg and Charles Richter. On the contrary, some countries use Moment magnitude scale because it accurately measures the total energy released by earthquakes. Eg. United States of America.

Limitations of Richter Scale

The shaking amplitude that Richter scale measures does not increase proportionally with energy for very large earthquakes, leading to underestimation.

discuss it in more detail.....

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