

# GENERATED NOTES FROM PDF

## **\*\*EARTHQUAKES:\*\***

\* \* \*\*definition:\*\* sudden release of energy in earth's crust creating seismic waves.

\* \* \*\*causes:\*\* primarily faults (breaks in rock layers) due to tectonic plate movement, also volcanic activity.

\* \* \*\*fault types:\*\* normal (downward movement), thrust/reverse (upward movement), strike-slip (horizontal movement).

## **\* \*\*SEISMIC WAVES:\*\***

\* \* body waves: p-waves (fast, longitudinal), s-waves (slower, transverse).

\* \* surface waves: love (horizontal shifting), rayleigh (circular motion, most damaging).

\* \* \*\*focus (hypocenter):\*\* point of rupture where seismic waves originate.

\* \* \*\*epicenter:\*\* surface point directly above the focus.

## **\* \*\*MEASUREMENT:\*\***

\* \* richter scale: logarithmic scale measuring earthquake magnitude (energy released).

\* \* seismographs/seismometers: instruments measuring ground motion.

\* \* \*\*earthquake zones (india):\*\* ii (least active), iii (moderate), iv (high), v (highest).

\* \* \*\*prediction:\*\* difficult, but some precursors include unusual animal behavior, water level changes, foreshocks.

## **\* \*\*EFFECTS:\*\***

\* \* damage to buildings, infrastructure, transport systems.

\* \* fires, landslides, tsunamis, floods, soil liquefaction.

\* \* loss of life and property.

## **\* \*\*SAFETY MEASURES (DURING/AFTER):\*\***

\* \* indoors: stay under sturdy furniture, away from windows.

- \* \* outdoors: move to open area, avoid structures.
- \* \* in vehicle: stop in safe place, stay inside.
- \* \* after: check for gas leaks, fires, avoid damaged buildings.

## **\*\*NOTABLE EARTHQUAKES IN INDIA:\*\***

- \* \* latur 1993 (6.3)
- \* \* jabalpur 1997 (6.0)
- \* \* chamoli 1999 (6.8)
- \* \* bhuj 2001 (7.7): widespread devastation, over 20,000 deaths.
- \* \* kashmir 2005 (7.4)

\* This concise summary covers the key aspects of earthquakes, their causes, effects, and safety measures.

## **\* \*\*2001 BHUJ EARTHQUAKE (GUJARAT, INDIA):\*\***

**\* DATE: JANUARY 26, 2001**

\* \* magnitude: 7.7

**\* DEPTH: 25 KM**

\* \* epicenter: 23.40°n, 70.28°e

\* \* time: 08:46:42.9 ist

\* \* impact: >100,000 deaths, 167,000 injured, 600,000 homeless. widespread destruction in bhuj, bhach

\* \* response: national/state government aid, >185 ngos (mostly indian), international rescue/relief teams

\* \* \*\*2005 kashmir earthquake (pakistan-administered kashmir):\*\*

\* **DATE: OCTOBER 8, 2005**

\* \* magnitude: 7.4

\* \* impact: ~100,000 deaths in pakistan, ~2,000 deaths in india. heavy damage to life and property. muz