

# 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. other causes include volcanic activity and human activities like mining.

\* \* \*\*fault types:\*\* normal, thrust (reverse), strike-slip (left-lateral, right-lateral).

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

\* \* \*\*body waves:\*\* travel through earth's interior. p-waves (faster, longitudinal) and s-waves (slower, transverse).

\* \* \*\*surface waves:\*\* travel along earth's surface. love waves (horizontal shifting) and rayleigh waves (combined motion).

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

\* \* \*\*epicenter:\*\* point on earth's surface directly above the focus.

\* \* \*\*fault line:\*\* surface trace of a fault.

\* \* \*\*fault plane:\*\* the cracked surface of the fault.

\* \* \*\*fault scarp:\*\* topographic expression of faulting (visible displacement of land).

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

\* \* \*\*richter scale:\*\* measures earthquake magnitude (logarithmic scale of seismic wave amplitude).

\* \* \*\*seismographs/seismometers:\*\* instruments that record ground motion.

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

\* \* \*\*earthquake prediction:\*\* difficult to pinpoint time, location, and magnitude, but some precursors include changes in groundwater levels, animal behavior, and small earthquakes.

\* \* \*\*earthquake effects:\*\* loss of life, property damage, infrastructure damage, landslides, fires, soil liquefaction.

\* \* \*\*safety measures:\*\* (see detailed instructions in original text for actions inside/outside buildings, in vehicles, and outdoors).

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

\* \* latur 1993 (6.3)

\* \* jabalpur 1997 (6.0)

\* \* nandprayag 1999 (6.8)

\* \* bhuj 2001 (7.7): widespread devastation, over 20,000 deaths, felt across india.

\* \* muzzaffarabad (pok) 2005 (7.4)

\* This condensed version provides a comprehensive overview of the key information presented in the original document.

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

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

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

\* \* magnitude: 7.7

\* **DEPTH: 25 KM**

\* \* epicenter: 23.40°n, 70.28°e

\* \* impact: >100,000 deaths, 167,000 injured, 600,000 homeless. widespread destruction in bhuj, bhachau, and surrounding areas.

\* \* response: national/state government aid, 185+ ngos, international rescue/relief teams, world bank/aid.

## \* \*\*2005 KASHMIR EARTHQUAKE (PAKISTAN):\*\*

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

\* \* magnitude: 7.4

\* \* location: muzzaffarabad, pakistan-occupied kashmir

\* \* impact: ~100,000 deaths in pakistan, ~2,000 deaths in india. heavy damage.

\* Key differences: the 2001 earthquake was centered in india, while the 2005 earthquake's epicenter was