MPPSC MAINS

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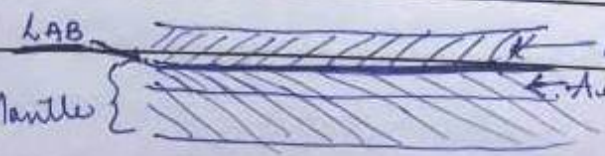
Q: What are Plate Tectonics ? Explain various types of plate boundaries and structure formed by them. (250 w)

Plate Tectonics basically talks about the earth's crust and regions and phenomenas related to it. It is formulated in 1960s and explains about structure of lithosphere, aesthenosphere and mantle of earth and related actions of these eg :- earthquakes, volcanoes, formation of mountains, plates and trenches.

PLATE TECTONICS

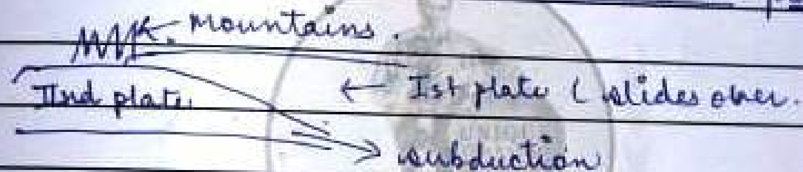
According to plate tectonics theory, the rigid outer layer of earth — Lithosphere is 100 km thick and floats on plastic layer of aesthenosphere which, in turn, is upper layer of the mantle. Layers of lithosphere is brittle and is called tectonic plates and Lithosphere - Aesthenosphere boundary is called 'LAB'.



TYPES OF PLATE BOUNDARIES

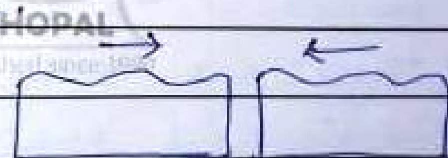
Convergence — Divergence — Transform

① **Convergence** :- when two plates converge into one other, one subducts and other slides over it. This type of plate boundary gives rise to fold mountains and intermontane plateaus.



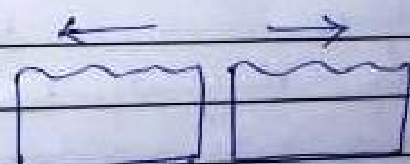
Eg: → Himalyas, Rockey, Andes.
These are prone to earthquakes and volcanoes.

(I)



Convergence

② **Divergence** :-

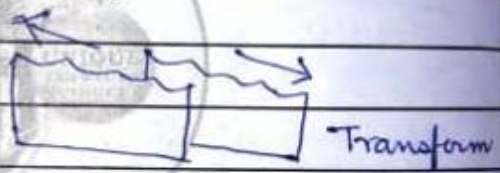


Divergence.

When plates move away from each other, this is called divergence boundary.

- This is constructive plate boundary
- gives rise to trenches and make new ocean beds and rift valleys.
- These often results in volcanoes which intern give rise to underwater ridges Eg :- Great ridge of Atlantic Ocean.

(3) Transform boundary :-



- These are just sliding plate boundaries.
- These are neither constructive nor destructive ones.
- Prone to earthquakes.
- gives rise to ~~Block~~ Faults mountains
- Eg :- ~~Ring of fire~~ (~~pacific plate and~~ indo australian) and Alpid belt. and St. Andreas fault

Plate tectonics answers much of our questions related to movement inside earth and make us