

UPSC Civil Services Examination

UPSC Notes [GS-I]

Topic: Endogenic Processes [Geography Notes for UPSC]

Endogenic Process

Endogenic Processes

- The energy originating from within the earth is the main force behind endogenic geomorphic processes.
- This energy is mostly produced by rotational and tidal friction, radioactivity, and primordial heat from the origin of the earth.
- This energy due to geothermal gradients and heat flow from within induces diastrophism and volcanism in the lithosphere.
- Due to differences in geothermal gradients and heat flow from within, strength and crustal thickness, the action of endogenic forces are uneven.
- Therefore the tectonically regulated original crustal surface is not uniform.

Diastrophism

- All processes that move, lift or build up portions of the crust of Earth come under diastrophism.
- They include:
 - **Orogenic Processes:**
 - It includes mountain building through severe folding and faulting affecting long and narrow belts of the crust of Earth.
 - Orogeny is a mountain building process.
 - **Epeirogenic processes:**
 - It involves the uplift or warping of large parts of the crust of the earth.
 - Epeirogeny is a continental building process.
 - Earthquakes comprising local, comparatively minor movements.
 - Plate tectonics comprising horizontal movements of crustal plates.
- Through the processes of epeirogeny, orogeny, earthquakes and plate tectonics, there can be fracturing and faulting of the crust.
- Each of these courses causes pressure, volume and temperature (PVT) changes which in turn induce metamorphism of rocks.

Volcanism

- Volcanism comprises the movement of magma onto or toward the surface of the earth and also the creation of several extrusive and intrusive volcanic forms.

