

## UPSC Civil Services Examination

### UPSC Notes [GS-I]

#### Topic: Exogenic Processes [Geography Notes for UPSC]

##### Exogenic processes

- The exogenic processes obtain their energy from the gradients generated by tectonic factors, processes, their corresponding driving forces and atmosphere determined by the energy from the sun.
- Precipitation and temperature are the two significant climatic components that regulate different processes.
- Whole exogenic geomorphic processes are covered under a common term, denudation which means to uncover.
- Weathering, transportation, and erosion are comprised in denudation.
- Gravitational force acts upon every material on earth having a sloping surface and incline to create the movement of matter in downward slope direction.

##### Stress

- Force applied per unit area is called stress.
- Stress is created in a solid by pulling or pushing and this induces deformation.
- Forces acting along the surfaces of earth materials are shear stresses and it breaks rocks and other earth materials.
- The shear stresses result in slippage or angular displacement.
- Besides gravitational stress, earth materials become exposed to molecular stresses that may be caused by several factors amongst which crystallisation, melting, and temperature variations are the most usual.
- Chemical processes generally lead to loosening of bonds between grains, dissolving of soluble minerals or strengthening materials.
- Therefore, the fundamental cause that leads to erosion, mass movements, and weathering is the development of stresses in the body of the earth materials.
- The effects of most of the exogenic geomorphic processes are minor and slow.
- It may be imperceptible in a short time span, but will in the long run influence the rocks harshly due to constant fatigue.