

GEOLOGY

Notes by-

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Earthquake

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Earthquakes are caused by passage of vibrations.

Tectonic Earthquake :-

① slow, longer period movement

② Rapid; short period movement

→ Geologically important

→ Orogenic & peritrogenic earth movement

→ Epeirogenic Minor phenomenon

→ Important from human pt. of view

When large rock masses are subjected to mechanical pressure acting over long periods of time, stresses go on increasing till breaking point. Due to breaking fault is formed & vibrations are set up in the earth known as earthquake.

Origin / focus :- The place at which an earthquake originates is called as its origin or focus.

Epicentre :- The point on the surface vertically above the focus is called as epicentre.

Intensity of earthquake changes point to point but its magnitude i.e. energy released is a fixed quantity. Due to sudden movement huge amount of energy is released & it is stated in reference to "Richter's Scale".

Iso-seismal line :- Lines joining points of equal intensity of earthquake.

* Earthquake Waves :-

① P-wave (Primary wave) :- faster
Transfer through solid & fluid.
Longitudinal wave like sound wave.

② S-wave (Secondary wave) :- slower than P wave
Cannot pass through fluid
Transverse wave like light wave.

③ L-wave (Long wave) :- slower than P & S wave
It is confined to crust
Cause damage at surface

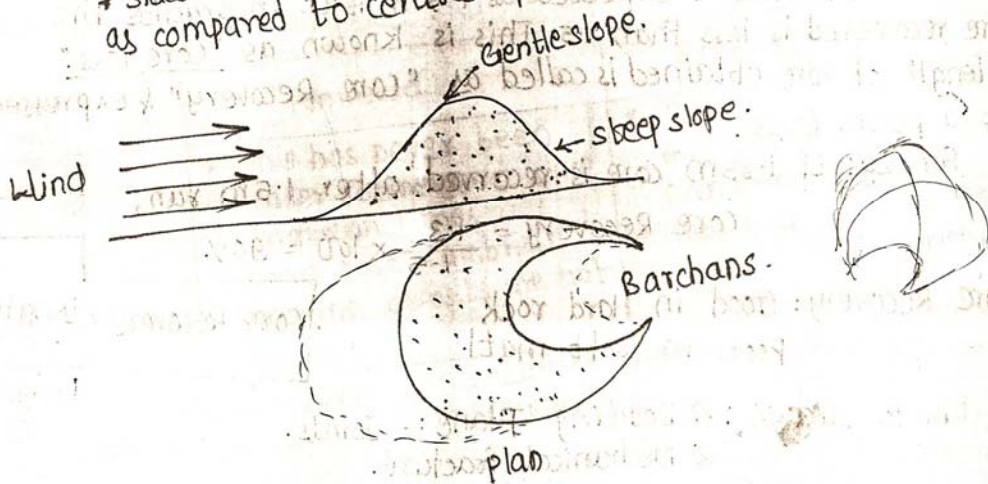
Interpretation of seismographs :-

As P waves are fastest, they first reaches to station. Then S & last L wave reaches. The diff in the arrival time betⁿ P & S wave will be proportional to the dist. of epicentre from station. Thus by determining the time

WIND ACTION

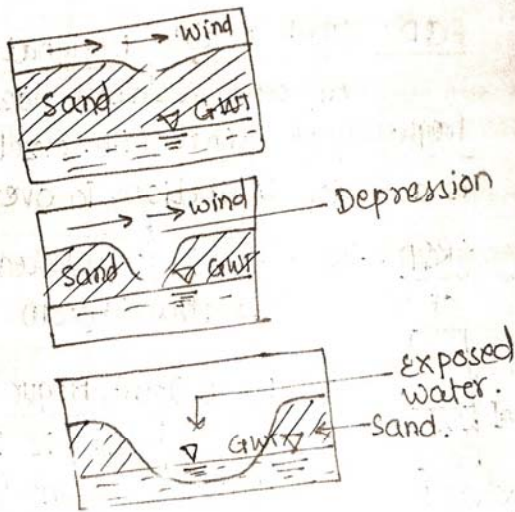
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- * Dunes :- These are wind deposits.
- * Wind blows continuously, causes erosion of sand & carries along with it
- * sides of dunes offers less resistance gets extended as compared to central portion.



* deflation :- [Oasis]

- Wind causes erosion of sand & depression is formed
- Wind continues to erode depression
- Due to continuous erosion water table gets exposed.

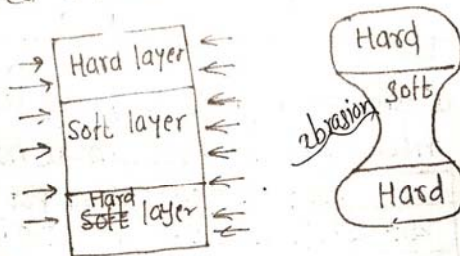


Eg: Oasis in Egypt, Libya.

* Attrition :-

Particles carried along with wind, get rubbed & collapsed against each other & become rounded. Thus spherical grains are formed. Mica is soft, thus gets removed & hence in windborne sand mica is absent.

* Abrasion :- Moving particles along with wind, causes abrasion of rock surface that come in its path. When beds are horizontal & hard layer exists above soft layer, underlying soft layer get removed due to wind action. Due to this mushroom shaped topography formed



Duration ↑