

UNCONFORMITY

a) What is unconformity? Give its main types. Mention the significance of unconformity.

The unconformity may be defined as the surface of weathering, erosion or denudation or a surface of non-deposition or possibly the combination of all the upper three.

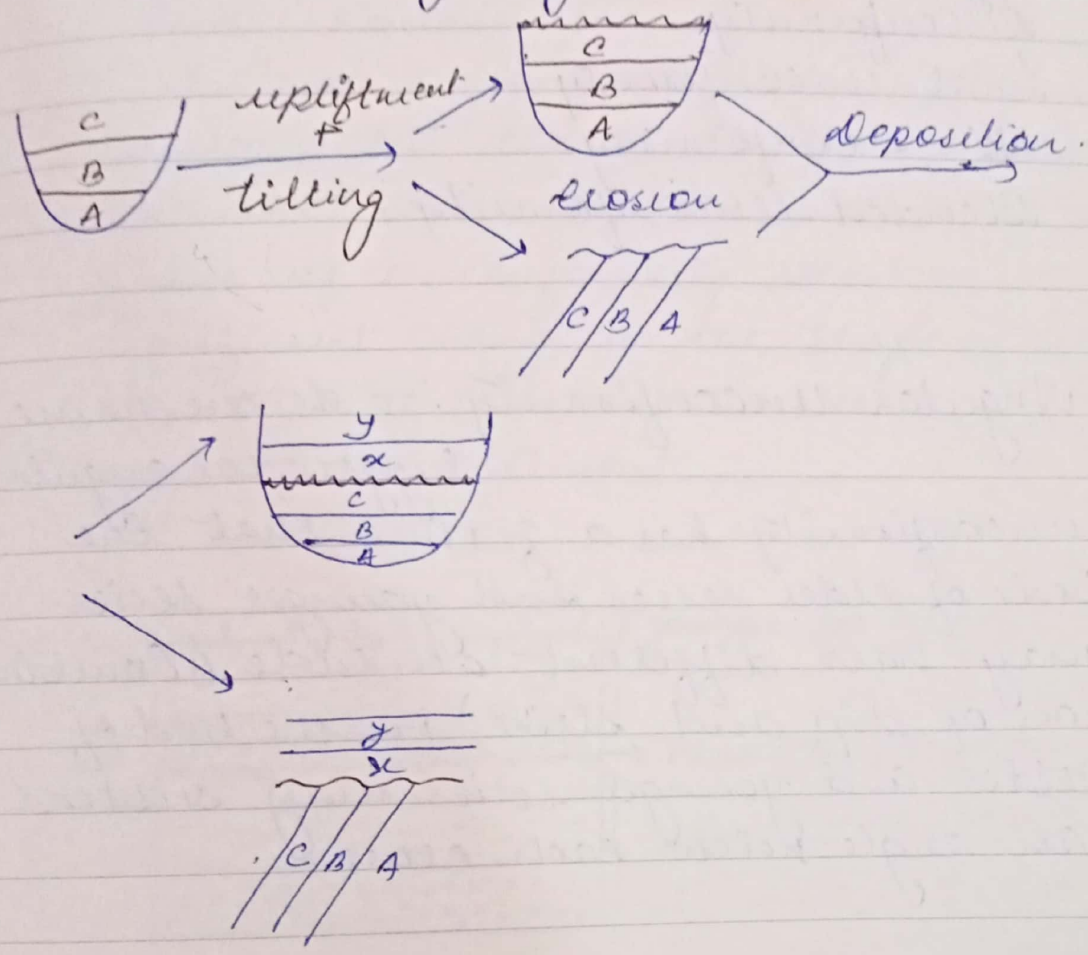
It can also be defined as the stratigraphic break in the deformation of sediments.

There are three major aspects of unconformity.

(i) Time: An unconformity develops during a period of time when, deposition does not take place. This concept tells that during a significant period time the area was completely devoid of deposition.

(ii) Deposition: Any interruption in the deposition in sediment whether that interval is large or small, gives rise to an unconformity. The major breaks in sedimentation and deposition can be easily identified as compared to minor breaks.

(iii) Structure : Structurally unconformity may be regarded as a plain that separates the older series of beds from the relative younger bed.



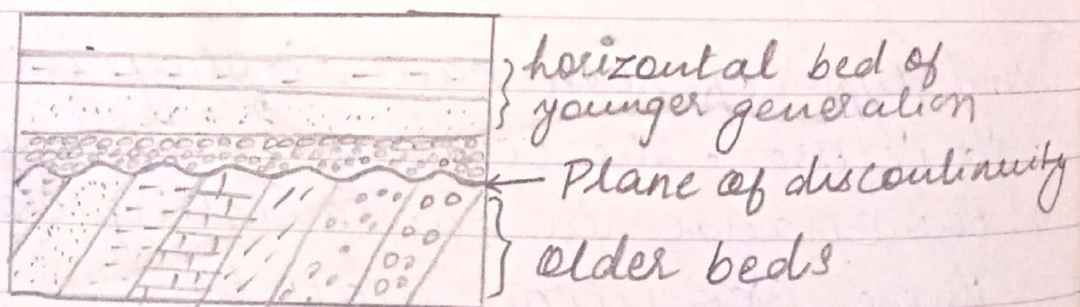
Any types of rock can display this structure. The unconformity indicate the change in the existing condition. These condition may be

- a) Orogenic Period.
- b) Facies change (new formation of rock)
- c) climatic change (due to upliftment)
- d) Floral or Faunal change.
- e) Marine Transgression or regression —
 when sea is invaded a land.

CLASSIFICATION OF UNCONFORMITY

- a) Angular unconformity
- b) Disconformity
- c) Local unconformity
- d) Non-conformity
- e) Blended Unconformity

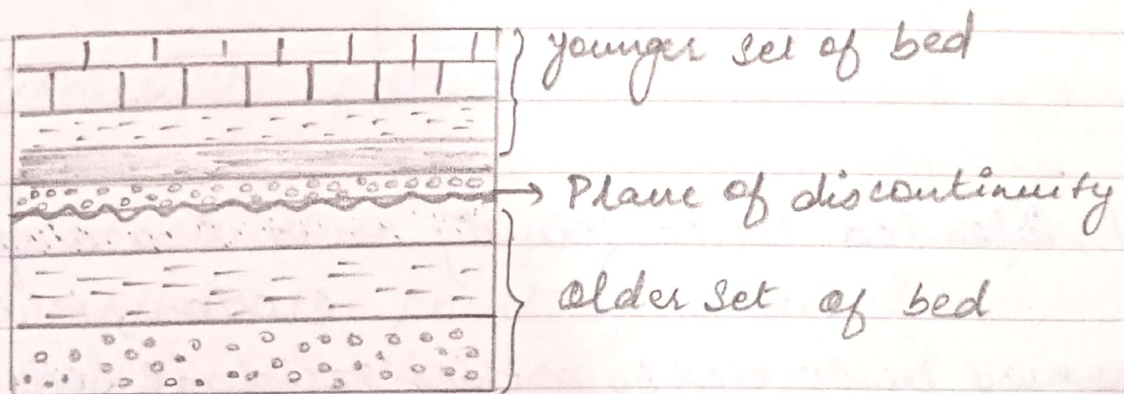
a) Angular unconformity :- As the name suggest the angular unconformity has a feature that the beds of older series and younger series may have different attitude (Combination of dip and strike) i.e. the bed of older and younger series may subtend an angle with each other.



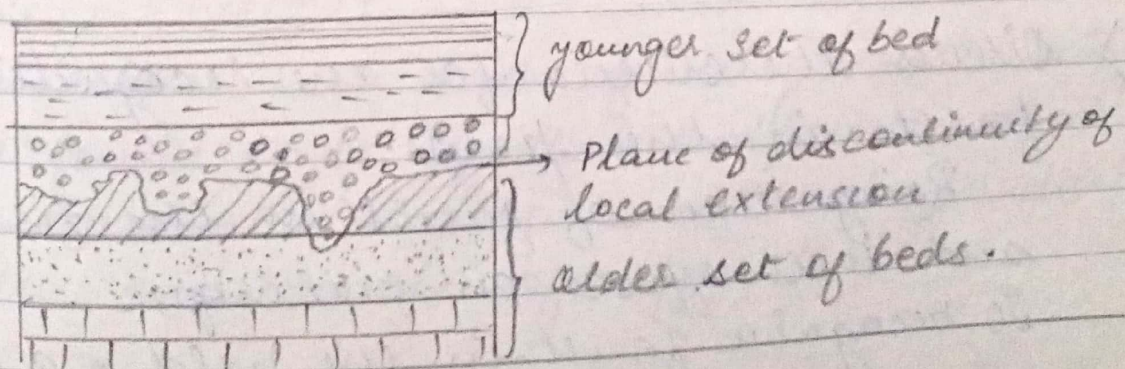
b) Disconformity :- It is also known as parallel unconformity. In this conformity the beds of older and younger series are parallel to each other. It indicates that during the course of

of upliftment and submergence tilting did not take place and hence the attributes of the older and the younger series remain the same.

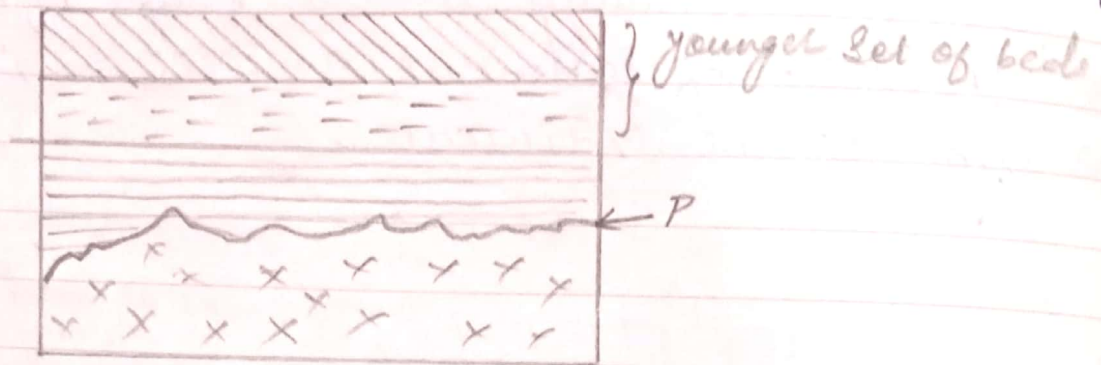
In map or in field it cannot be easily identified but the evaluation of the sediments which lie in contact of the plane of unconformity show some significant change in the shape of sediments, texture of sediment as well as in the age of the sediment.



Local unconformity :- which is a variety of disconformity that is it exhibits all feature of disconformity but it is local or small scale in extent.



Non-conformity - The nonconformity occurs due to the existence of the contact plane of igneous or metamorphic and sedimentary rock. It means that the deposition is taken place over the rock units which are magmatic in Origin. According to some geologists, it should be termed as 'Heterolithic unconformity'.



(c) **Blended Unconformity** :- It is a surface of erosion, which may be covered by a thick residual soil that grades into the underlying bed rock. Younger sediments deposited above the surface may incorporate some of the residual-soil and a sharp contact may be lacking. Such a contact may be called Blended unconformity.

Q) Discuss the criteria for the recognition of faults in the field.

Recognition of fault in the field and their effects on outcrops.
To recognise fault in the field, a number