Contour

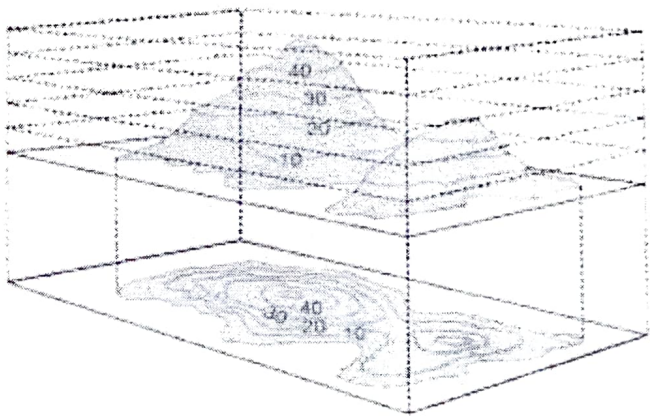
An Imaginary line on the ground surface joining the points of equal elevation is known as contour.

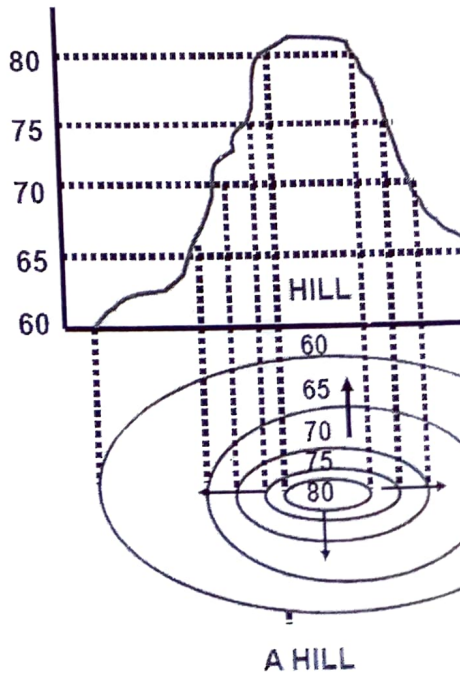
In other words, Contour is a line in which the ground surface is intersected by a level surface obtained by joining points of equal elevation. This line on the map represents a contour and is called Contour line.

A map showing Contour Lines is known as Contour Map.

Contouring

- The process of tracing contour lines on the surface of the earth is called Contouring.





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Purposes of Contouring

Contour survey is carried out at the starting of any engineering project such as a road, a railway, a canal, a dam, a building etc.

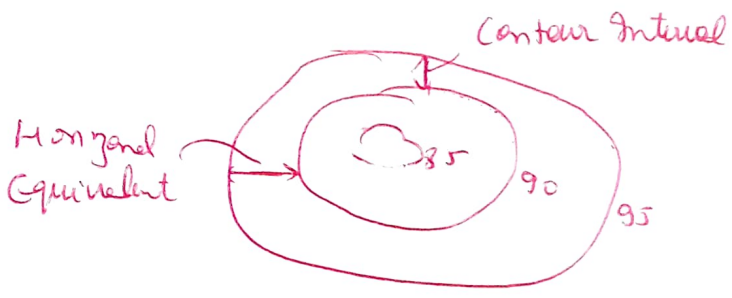
1. For preparing contour maps in order to select the most economical or suitable site.
2. To locate the alignment of a canal so that it should follow a ridge line.
3. To mark the alignment of roads and railways so that the quantity of earthwork both in cutting and filling should be minimum.
4. For getting information about the ground whether it is flat, undulating mountainous.
5. To locate the physical features of the ground such as a pond depression hill, steep or small slopes.

Contour Interval & Horizontal Equivalent

Contour Interval: The constant vertical distance between two consecutive contours is called the contour interval.

Horizontal Equivalent: The horizontal distance between any two adjacent contours is called as horizontal equivalent.

The contour interval is constant between the consecutive contours while the horizontal equivalent is variable and depends upon the slope of the ground.



Characteristics of Contours

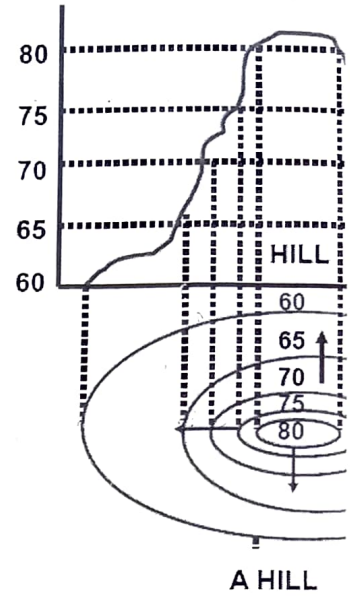
1. All points in a contour line have the same elevation.

2. Flat ground is indicated where the contours are widely separated and steep-slope where they run close together.

3. A uniform slope is indicated when the contour lines are uniformly spaced and

4. A plane surface when they are straight, parallel and equally spaced.

5. A series of closed contour lines on the map represent a hill , if the higher values are inside



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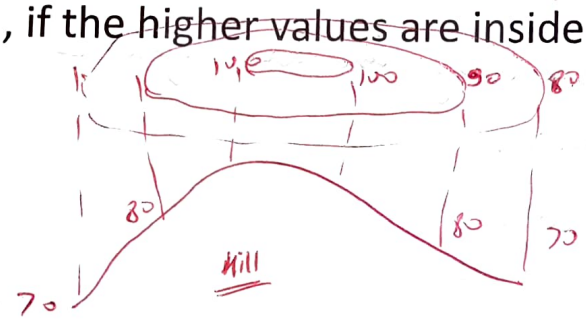
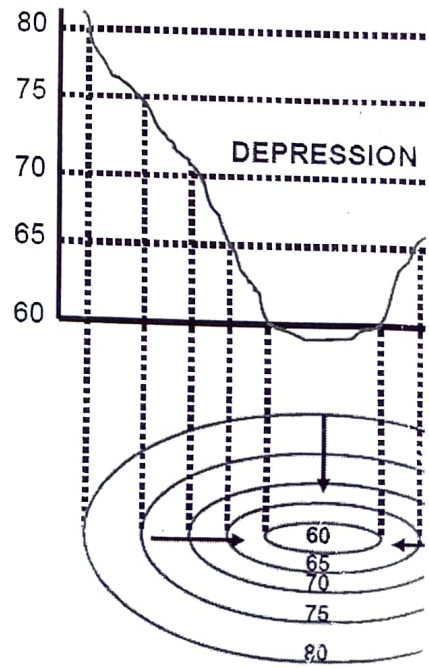


Characteristics of Contours

6. A series of closed contour lines on the map indicate a depression if the higher values are outside



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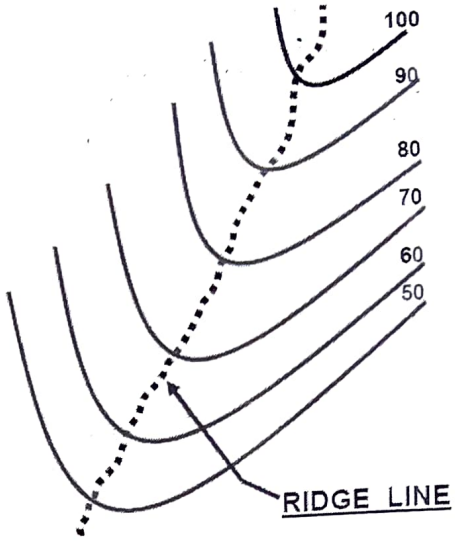
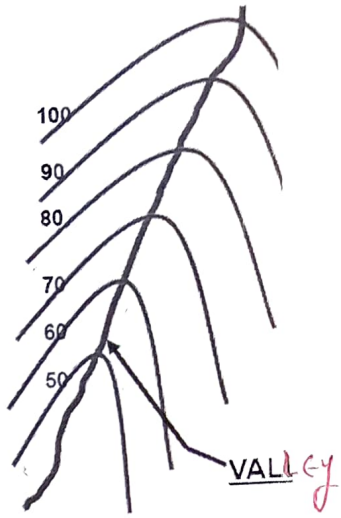
Characteristics of Contours

7. Contour line cross ridge or valley line at right angles.

If the higher values are inside the bend or loop in the contour, it indicates a Ridge.

If the higher values are outside the bend, it represents a Valley.





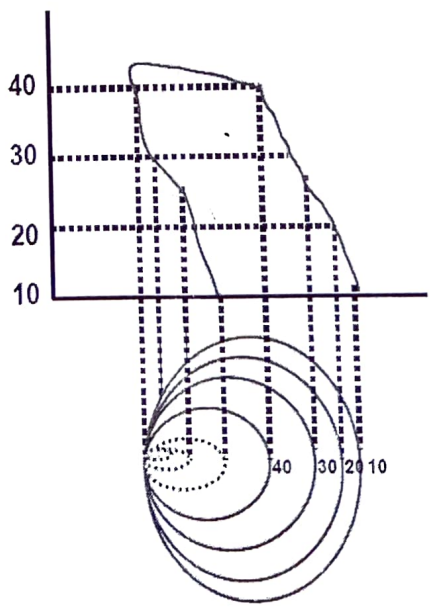
→ Contour lines cross a valley line at right ∠s and formed 'V' shaped contour.

→ ∪ shaped - Ridge.

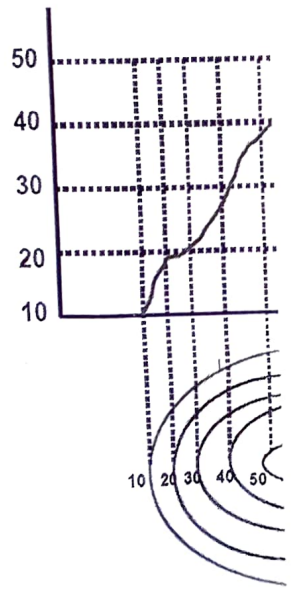
Characteristics of Contours

8. Contour lines cannot merge or cross one another on map except in the case of an overhanging cliff

9. Contour lines never run into one another except in the case of a vertical cliff. In this case, several contours coincide and the horizontal equivalent becomes zero.



OVERHANGING CLIFF



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