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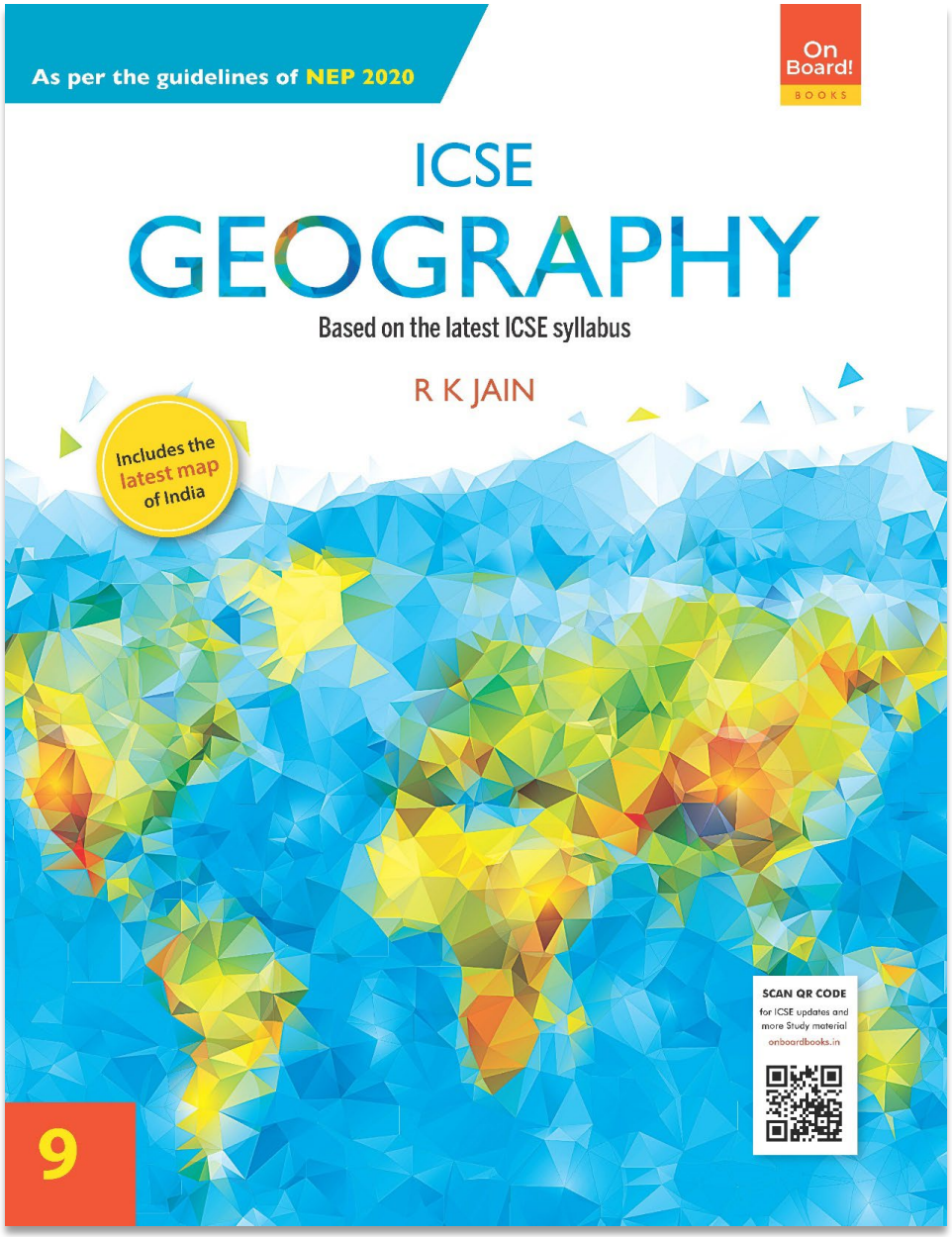
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ICSE GEOGRAPHY

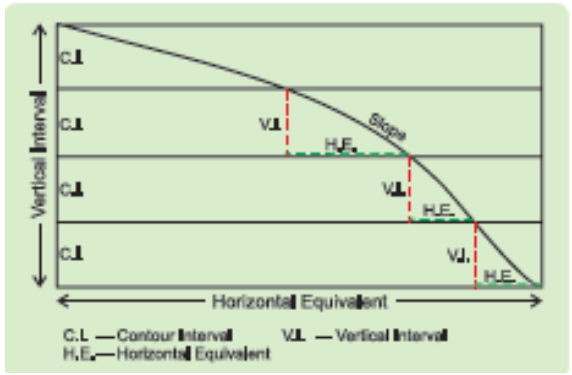
Class 9

Chapter 22: Representation of Relief Features through Contours

The surface of the Earth is not uniform. It has mountains, hills, plateaus, valleys, waterfalls, seas, lakes, etc. These are the features representing the elevation and depression on the Earth's surface. These are technically known as the **relief of the Earth**.

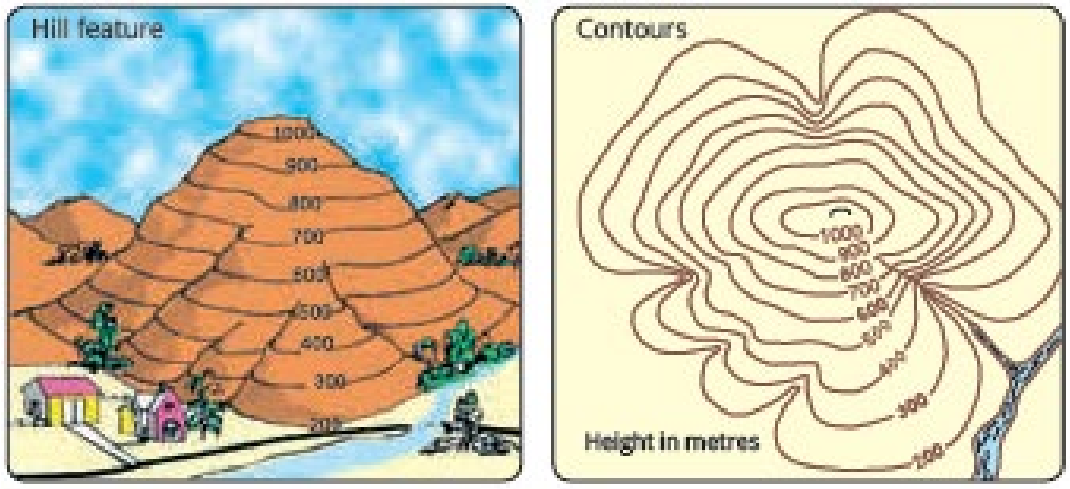
CONTOURS

Contour is an imaginary line, which joins the points or places having the same height above the mean sea level. In other words, a contour is a line of constant height above the mean sea level.



Gradient (slope) of the land

The contours are drawn on the basis of actual surveys done in the field. The difference between the values of any two successive contours is known as the **contour interval** or the **vertical interval or V.I.** The vertical interval is usually constant on a map.
The horizontal distance between any two contours depends upon the slope of the land. The horizontal distance is called the **Horizontal Equivalent** or H.E.



Methods of showing relief on a map with the help of contours

The contour lines have the following characteristics:

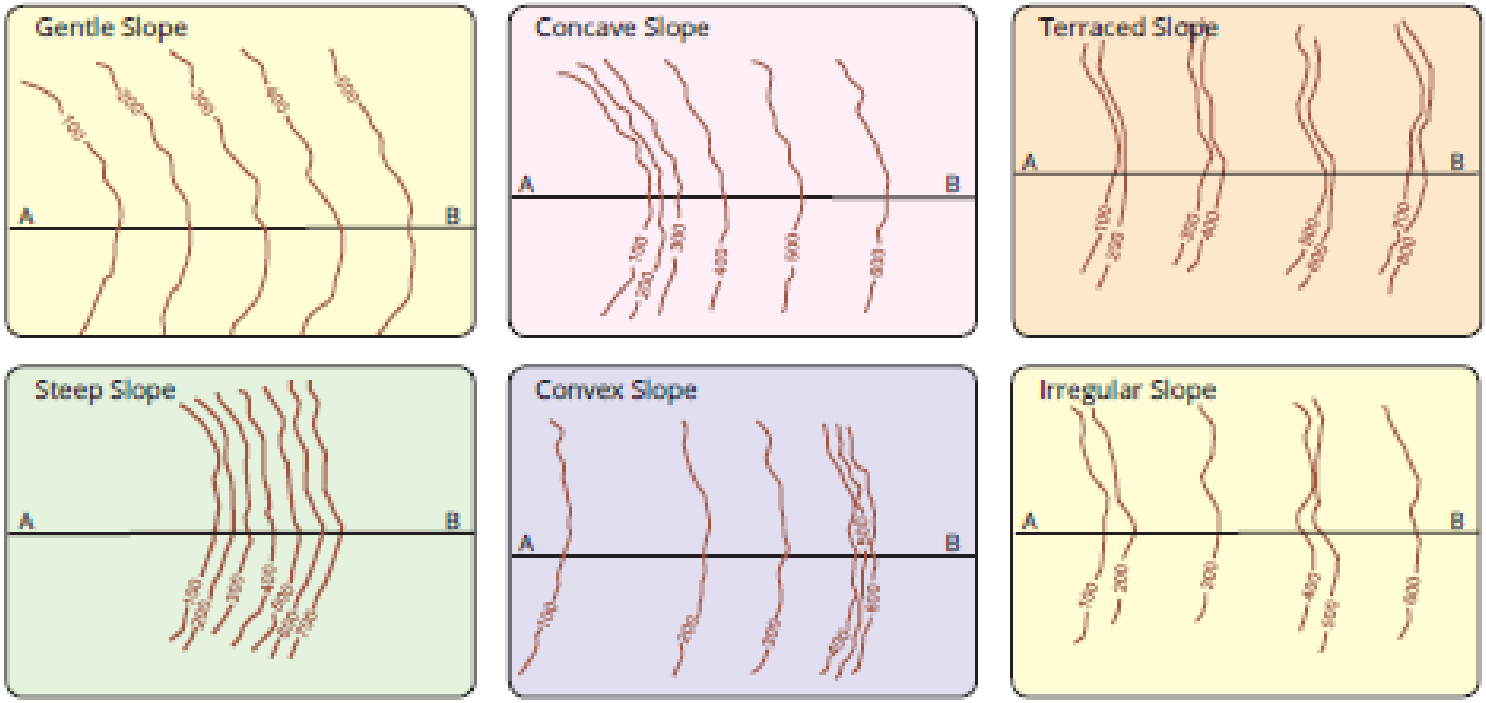
- The contour lines can never cross each other.
- When two contour lines, having different heights meet, it means that the slope is vertical, like a cliff or a waterfall.
- The spacing between the contour lines indicates the nature of the slope.
- The widely spaced contour lines show gentle slope, whereas the closely spaced contour lines show steep slope.
- All contour lines are marked with a number, which indicates their height above the mean sea level in metres or in feet.
- The contour with zero value represents the coastline.

CONTOUR FEATURES

The distance between any two contours, i.e. horizontal equivalent (H.E.) on a map, is very important. It shows the gradient or the slope of the land. The contours are drawn close to each other when the slope is steep and they are spaced widely when the slope is gentle. Some types of slopes are shown in the figure.

1. The widely spaced contours show gentle slope.
2. The closely placed contours show steep slope.
3. The closely placed contours in the higher elevation and the widely spaced contours in the lower elevation show concave slope.
4. The widely spaced contours in the higher elevation and the closely placed contours in the lower elevation show convex slope.
5. The closely and widely spaced contours in an alternate manner show terraced slope.

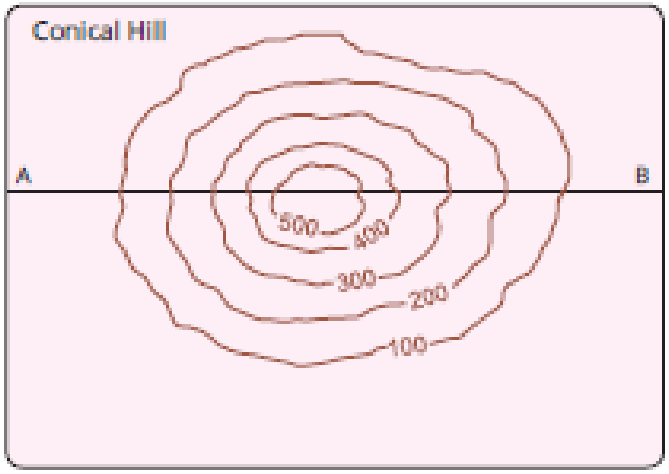
6. The contours which are irregularly placed and show a mixed pattern show **irregular slope**.



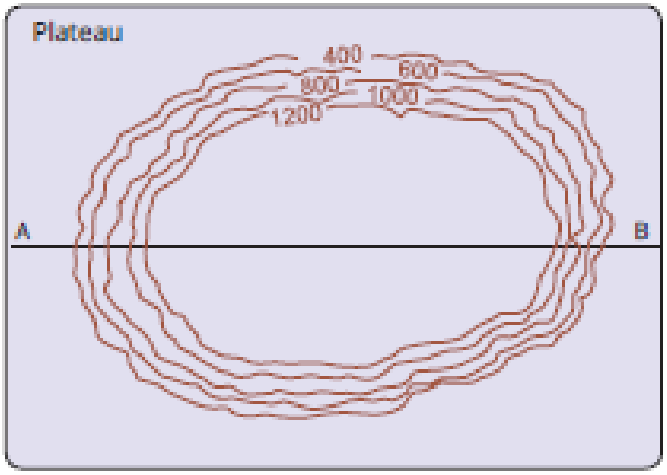
Various types of slopes shown with the help of contours

It is very important to know and understand as to how some of the relief features are represented by the typical contour patterns.

1. A **conical hill** rises almost uniformly from the surrounding regions. It can be shown with the help of almost concentric contour lines spaced regularly.
2. A **plateau** is a flat-topped highland rising abruptly above the surrounding region. The top of the plateau is almost flat without contours or has very few contours, whereas its sides are shown by closely spaced contours.



Contour diagram of a conical hill



Contour diagram of a plateau

3. A **ridge** is an elongated hill and has a narrow upland area. The contours showing a ridge are more or less elliptical in shape.

4. A **valley** is a low lying area between two hills or ridges, often occupied by a river. It is shown by V-shaped contours. The contours point towards the heart of the hill. Thus the apex of the V points to the higher ground and its arms to the lower ground.

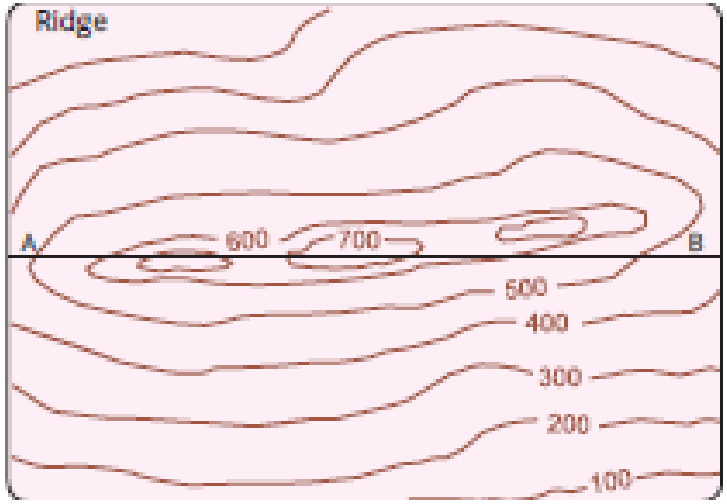
5. A **waterfall** is a sudden, almost perpendicular, descent of the bed of a river. It can be identified when several contours merge into one while crossing a river stream. When the contours are closely spaced, they indicate a **rapid**.

6. A **sea cliff** is almost a steep or a perpendicular face of rock with a considerable height overlooking the sea coast. A cliff can be identified on a contour map when the contours run very close to one another, and finally merge into one.

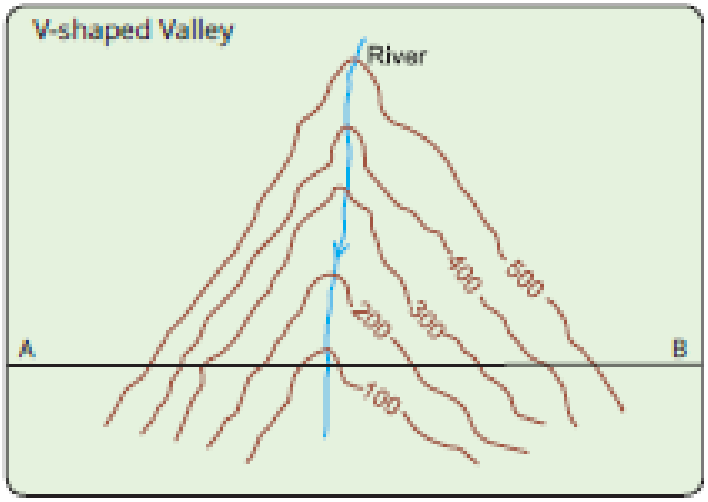
7. A **gorge** is also called an I-shaped valley. It is a very deep valley with almost vertical walls on both sides. The contours are placed very close to each other on both sides of the river.

8. A **U-shaped valley** is formed by glacial erosion. The valley has a flat floor and steep parallel sides. It is indicated by close parallel contours running on both sides of the stream leaving a broad-flat valley floor. The spacing of the contours indicates more or less a convex slope.

9. An **escarpment** is an abrupt, comparatively long and regular, steep face of a hill or ridge. It has close contour lines on one side which gradually thins out on the other side. The steep side forms the escarpment and the gentle side forms the dip. The entire region is called the scarpland.



Contour diagram of a ridge



Contour diagram of V-shaped valley

THANK YOU