



**LAND FORM
FEATURES**

Mountains are significant relief features of the second order on the earth's surface. A mountain may have several forms viz.

- (1) Mountain Ridge (ii) Mountain Range
- (iii) Mountain Chain (iv) Mountain System
- (v) Mountain Group and (vi) Cordillera.

CLASSIFICATION OF MOUNTAINS

1. ON THE BASIS OF HEIGHT

- (i) **Low mountains;** height ranges between 700 to 1,000m
- (ii) **Rough mountains;** height – 1000m to 1,500m
- (iii) **Rugged mountains;** height – 1,500 to 2,000m
- (iv) **High mountains;** height above 2,000m



2. ON THE BASIS OF LOCATION

(i) Continental mountains

(a) Coastal mountains:

Examples; Appalachians, Rockies, Alpine mountain chains, Western and Eastern Ghats of India etc.

(b) **Inland mountains:** examples, Ural mountains (Russia), Vosges and Black Forest block mountains (Europe), Himalayas, Aravallis, Satpura, Maikat, Kaimurs etc. (India), Kunlun, Tienshan, Altai etc. (Asia) etc.



(ii) Oceanic Mountains: Oceanic mountains are located on continental shelves and ocean floors.

3. ON THE BASIS OF MODE OF ORIGIN

(1) **Original or Tectonic Mountains**- are caused due to tectonic forces e.g. compressive and tensile forces. These mountains are further divided into 4 types on the basis of orogenetic forces.

(i) Folded Mountains – These are further divided into 3 Sub-types:

(A) Young Folded Mountains

(B) Mature Folded Mountains

(C) Old Folded Mountains

(ii) Block Mountains: are originated by tensile forces leading to the formation of rift

valleys. They are also called as horst mountains.

Dome Mountains – are originated by magmatic intrusions and upwarping of the crustal surface.

Mountains of Accumulations – are formed due to accumulation of volcanic materials.

**2. Circum –Erosional or Relict
Mountains – examples, Vindhya
ranges, Aravallis, Satpura**

BLOCK MOUNTAINS

Block mountains, also known as fault block mountains, are the result of faulting caused by tensile and compressive forces motored by endogenetic forces coming from within the earth.

Block mountains are generally of two basic types e.g.

- (i) Titled Block Mountains.**
- (ii) Lifted Block Mountains.**

FOLDED MOUNTAINS

Folded mountains are formed due to folding of crustal rocks by compressive forces generated by endogenetic forces coming from within the earth. These are the highest and most extensive mountains of the world.

Folded mountains are divided into 2 broad categories:

- (i) Simple Folded Mountains**
- (ii) Complex Folded Mountains**



PLATEAUS

Plateaus are significant relief features of the second order as these cover about 33 per cent of the surface area of the globe. According to Finch and Trewartha “tabular uplands having a relief of more than 500 feet may be arbitrarily defined as plateau”.

Plateau may be defined as that upland which has at least one side of very steep slope standing well above the neighbouring surface and the upper part is extensive and almost flat, examples, Ranchi plateau, Hazaribagh plateau, Shillong plateau etc.



ORIGIN AND EVOLUTION OF PLATEAUS

Plateaus are originated in a number of ways:

Due to downwarping of surrounding areas.

Due to upwarping of some portion of an extensive land mass by a few hundred metres in relation to surrounding ground surface.

Due to deposition of thick covers of basaltic lavas e.g. Columbian plateau (USA).

CLASSIFICATION OF PLATEAUS

1. **According to Mode of Origin**
 - (A) Simple Plateaus
 - (B) Compound plateaus
2. **Classification According to Geographical Situation**

- (1) Intermontane plateaus, examples: Tibetan plateau, Bolivian plateau.
- (2) Piedmont plateaus: Appalachian Piedmont plateau.
- (3) Continental plateaus, examples: Deccan plateau of India, Ranchi Plateau, Shillong plateau.
- (4) Coastal plateaus, example: Coromandal Coastal upland of India.

GLACIAL PLATEAUS: A plateau modified and transformed by glacial actions e.g. Garhwal plateau of India.

FLUVIAL PLATEAUS: are formed due to continuous deposits of fluvial sediments brought by the rivers. The sediments are gradually consolidated and stratified into sedimentary rocks of great thickness. These sedimentaries are raised upward due to earth movements, Rewa plateau, Rohtas plateau.

AEOLIAN PLATEAU : is found because of deposition of fine sediments brought by winds

Enormous volumes of sediments are consolidated in due course of time and plateau is formed.

4. INTERNONTANE PLATEAUS: The highest and most extensive plateaus of the globe. These are called intermontane because they are surrounded by hills and mountains almost from all sides. Tibetan plateau, Columbian plateau.



5. PIEDMONT PLATEAU: Plateau formed at the foothill zone of extensive mountains is called piedmont plateau, mountain range on one side while by plain topography or coastal plain on the other side.

6. DOME SHAPED PLATEAUS: are formed when the landmass is uplifted in such a manner that the middle portion is upwarped and the sides are rounded. Dome shaped plateaus are generally formed due to endogenetic forces mainly during volcanic activities e.g. Ozark plateau (USA).

7. **CONTINENTAL PLATEAUS:** are very extensive plateaus and are generally away from mountainous areas but are surrounded by coastal plains. Plateau of Peninsular.

8. **VOLCANIC PLATEAUS:** are those plateaus which are formed due to accumulation of thick layers of basaltic lavas (Columbian Plateau).



PLAINS

Plains are flat areas with low height, plains are formed mainly in two ways e.g. (i) through endogenetic forces and (ii) exogenetic processes.



CLASSIFICATION OF PLAINS

(1) According to Morphological and Structural Characteristics

- (1) Flat Plains
- (2) Undulating plains
- (3) Rolling Plains
- (4) Dissected Plains

(2) ACCORDING TO MODE OF ORIGIN

(1) Plains formed due to diastrophic forces
(diastrophic plains)

(2) Plains formed due to denudational
processes

(i) erosional plains

(ii) depositional plains

(3) ACCORDING TO SITUATION

(1) Inland plains

(2) Coastal plains



(4) SIMPLIFIED CLASSIFICATION

- (1) Constructional or diastrophic plains
 - (2) Erosional plains
 - (3) Depositional plains

DIASTROPHIC PLAINS

Plains are formed due to upliftment or subsidence of land areas or emergence of land areas from beneath the oceanic water or submergence of coastal lands under oceanic water e.g. **The Great Plains.**

EROSIONAL PLAINS

Erosional Plains are formed by River

**Erosion- Peneplains are the most
characteristics**

Glaciated Plains : Glaciers transform highland areas through their slow but continued erosive works into lowland with flat surface with sufficient low relief's.

Wind Eroded Plains : Rocks become loose due to disintegration caused by mechanical (physical) weathering in the hot desert areas. Strong winds pick up these weathered and communitied fine particles and deposite them else where. The repetition of this process over longer period of time results in the transformation of stony areas into plains. Serir and Hamada.

Karst Plains: The plateaus composed of massive limestones are subjected to chemical weathering and erosion by groundwater and are ultimately transformed into subdued topographic surface. Such plains are called Karst plains.

DEPOSITIONAL PLAINS :

Depositional plains are formed due to gradual deposition of sediments by different geological agents e.g. rivers, wind, glaciers etc. The Ganga-Yamuna plains, Mississippi-Missouri Plains, Yangtze plain, Yellow plain (Hwang Ho plain) etc. are very extensive depositional plains).

