Physiography of India

1. Main Physiographic Divisions – India divided into 5 major physiographical divisions

* The Himalayan Mountains
* The Great Indian Plains
* The Peninsular Plateau
* The coastal plains
* The Islands

1. The Himalayan Mountains
2. Introduction

* Youngest and loftiest mountain chain in the world
* Central axial range stretches for a distance of over *2400 Km, over 22**° longitude. From Indus gorge in the west to the Brahmaputra gorge in the East.*
* Width of Himalayas varies form *500 Km in Kashmir to 200 Km in Arunachal Pradesh*
* Area covered by the Himalayas is nearly *5 lakh Km2*
* *Pamir (roof of the world)* is the connecting link between Himalayas and the high ranges of central Asia
* Number of Himalayan peaks over 8000 m is 14.
* Number of Himalayan peaks over 7500 m is 20
* Numerous peaks over 7000m and 6000m

1. Physiographical Division of the Himalayas – Can be divided into 3 parts
2. ***The Himalayan Ranges***

* Series of several, more or less parallel or converging ranges
* Ridge and valley topography
* Most notable valleys are Kashmir, Karewas, Kangra, Kulu, Dun, Bhagirathi, Kathmandu
* A succession of at least 3 parallel ranges from the Indo-Gangetic plain to the Tibet plateau

**The Shiwaliks**

* + - Outer Himalayas
    - Hogback appearance with steep southern slopes
    - Width varies from 50 Km in Himachal Pradesh to 15 Km in Arunachal Pradesh
    - Gorges of Tista and Raidak have jointly formed a gap of 80-90 Km, in the otherwise unbroken range
    - Altitude varies from 600-1500 m.
    - Shiwaliks were formed last of all the ranges
    - This range at some point obstructed courses of river draining from higher reaches and lakes were created
    - These lakes drained out after the rivers carved out a course through the Shiwaliks
    - ‘Duns’or ‘Doons’left behind in the West and ‘Duars’in the East.
    - The southern slopes of this range in Punjab and Himachal Pradesh, are completely devoid of forests, and are dissected by several seasonal streams called ‘Chos’
    - The Shiwaliks are known by different names on different regions
      * Jammu Hills in Kashmir
      * Dhang, Dhundwa in Uttarakhand
      * Churiaghat in Nepal
      * Miri, Dafa, Abor, Mishmi in Arunachal Pradesh

**The Himachals Or Middle or Lesser Himalayas**

* Intricate system of ranges **60-80 Km wide**
* **Elevation** varying from **3500-4500 m.**
* Steep, bare southern slopes and gentle forest covered northern slopes
* **Important ranges** are – Pir Panjal (Kashmir), Dhauladhar (Himachal Pradesh), Mussourie, Nag Tibba (Uttarakhand), Mahabharat Lekh (Nepal)
* Pir Panjal is the most important range
* It extends from the Jhelum river to the Upper Beas river for 300-400 Km
* It is separated from the Zanskar range by the **Kashmir Valley** (135 Km long 40 Km Wide)
* Kangra, Kullu valley in Himachal Pradesh Kathmandu valley in Nepal are other notable valleys in this range.
* **Best known passes** of the Pir Panjal range are – Pir Panjal pass, Banihal pass, Bidil pass, Golabghar pass.
* Middle Himalayas are friendly to human contact, **majority of Himalayan hill resorts** – Shimla, Mussourie, Almora, Ranikhet, Nainital, Darjeeling are located here

**Greater Himalayas or Himadris**

* Northernmost or innermost of all the Himalayan ranges
* Average elevation of 6100 m.
* Average width of 25 Km.
* Loftiest and most continuous mountain range of the world.
* Abrupt termination or Syntactical bend in the Namcha-Barwa in the north east and the Nanga Parbat in the north west
* Most of the notable peaks of the Himalayas lie in this range
* Major passes of this range are Burzil, Zozila, Bara Lacha, Shipki La, Nathu La, Jelep La, Bomdi La

* 1. ***The Trans-Himalayas***
* The Himalayan ranges immediately north of the Himadri are called the Trans Himalayas or Tibetan Himalayas
* Zaskar, Ladakh, Karakoram and Kailash are the main ranges of the trans Himalayas
* Zaskar range Branches off from the great Himalayas at 80 E longitude, and runs parallel to it
* The Nanga Parbat (8126 m) forms its culmination
* The Ladakh range lies to the north of the Zaskar range
* It is about 300 Km long, average elevation is 5800 m.
* The Kailash range in western Tibet is an offshoot of the Ladakh range
* Its Highest Peak is Mt. Kailash (6714 m)
* Northernmost range of the Trans Himalayas is the Karakoram range or Krishnagiri rang
* K2 is the highest peak of the Karakoram range
* Ladakh plateau lies to the north west of the Karakoram range, elevation about 5000 m.
  1. ***The Eastern Hills***
* Himalayas take a sudden southern turn after crossing the Dihang gorge.
* Extends from Arunachal Pradesh to Mizoram, forms India’s boundary with Myanmar
* **Patkai-Bum** in Arunachal Pradesh
* It formsinternational boundary between India and Myanmar
* **Kangto** is the highest peak of Arunachal Pradesh
* Merges into the **Naga hills** of Nagaland
* **Saramati** is the highest peak of Naga hills (3826 m)
* South of Naga hills are the **Manipur hills**.
* **Barali** range separate Naga hills from Manipur hills
* South of Manipur hills are the **Mizo hills** (Lushai hills)
* Highest point is the **Blue Mountain** (2157 m)
* Elevation of the Eastern hills decrease as we go from North to South

c. *‘Karewas’* a special landform in the Himalayas

* Intermountain valley fill, (lacustrine deposits) made up of unconsolidated grovel and mud
* Formed during Pleistocene period
* Famous for farming of saffron, nuts etc.
* Kashmir valley is known for its Karewa deposits
* Thickness of Karewas is about 1400 m.

d. Glaciers of the Himalayas

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| **Name** | **Length (Km)** | **Location** | **Mountain Range** |
| Siachen | 75 | Ladakh (Nubra Valley) | Karakoram |
| Fedchenko | 74 | S.W Pamir | Karakoram |
| Hispar | 62 | Tributary of Hunza | Karakoram |
| Biafo | 59 | Brabloh valley | Karakoram |
| Batura | 58 | Hunza | Karakoram |
| Baltoro | 58 | Hunza | Karakoram |
| Chogo Lungma | 50 | Rakaposhi Range | Karakoram |
| Khurdopla | 47 | Shingshal Valley | Karakoram |
| Sonapani | 15 | Chandra Valley | Pir Panjal |
| Bara Shigri | 10-20 | Chandra Valley | Pir Panjal |
| Rakhiot | 15 | Nanga Parbat | Pir Panjal |
| Gangri | 13 | Nun Kun Massif | Pir Panjal |
| Chungpar | 13 | Nanga Parbat | Pir Panjal |
| Gangotri | 30 | Source of Ganges | Kumaon |
| Milam | 20 | Gori Ganga | Kumaon |
| Pindari |  |  | Kumaon |
| Yepokangara | 13.5 | Gosaithan | Central Nepal |
| Lidanda | 11 | Mansalu | Central Nepal |
| Chhuling | 11 | Mansalu | Central Nepal |
| Rongbuk | 52 | Tibetan side of Everest | Kanchenjunga |
| Zemu | 25 | Zemu valley (Teesta) | Kanchenjunga |
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