

Himalayan River System – SSC Notes

1. Characteristics of Himalayan Rivers

- **Origin:** Himalayas → Snow-fed & Rain-fed
- **Flow:** Perennial → Flows throughout the year
- **Gradient:** Steep in upper course → Fast-flowing
- **Features:**
 - Braided channels
 - Wide valleys in lower course
 - High silt & fertile soil in plains
 - Suitable for irrigation & hydroelectric power

2. Major Himalayan Rivers

A. Indus River System

- **Origin:** Tibet (Ladakh) → Flows through India & Pakistan
- **Length:** ~3180 km
- **Major Tributaries (Five Punjab Rivers):**
 1. Jhelum
 2. Chenab
 3. Ravi
 4. Beas
 5. Sutlej
- **Importance:**
 - Irrigation → Punjab, Haryana
 - Hydro-power → Bhakra Nangal Dam (Sutlej)
- **Treaty:** Indus Water Treaty (India-Pakistan)

B. Ganga River System

- **Origin:** Gangotri Glacier, Uttarakhand → Bhagirathi & Alaknanda merge at Devprayag
- **Length:** ~2525 km
- **Major Tributaries:**
 - Left Bank: Yamuna, Ghaghara, Gandak, Kosi, Son
 - Right Bank: Chambal, Betwa, Ken
- **Features:**
 - Fertile plains → Indo-Gangetic Plains
 - Perennial river → Snow + Rain-fed
- **Delta:** Sundarbans → Largest delta in the world
- **Importance:** Agriculture, transportation, religious significance

C. Brahmaputra River System

- **Origin:** Tibet → Yarlung Tsangpo → Enters India (Arunachal Pradesh → Assam) → Bangladesh
- **Length in India:** ~916 km
- **Tributaries:** Dibang, Lohit, Subansiri, Dhansiri
- **Features:**
 - Braided river in Assam → Flood-prone
 - Forms Assam valley → Fertile soil
 - Delta: Joins Ganga → Sundarbans mangrove
- **Importance:** Irrigation, hydro-power, navigation, biodiversity

3. Other Himalayan Rivers (Important SSC)

- Satluj → Sutlej valley → Bhakra Nangal Dam
- Beas → Himachal Pradesh → Punjab → Hydro-power potential
- Ghaghara → Uttar Pradesh → Tributary of Ganga
- Kosi → Bihar → “Sorrow of Bihar” → Flood-prone

4. Features of Himalayan River Systems

- Perennial → Flow year-round
- Fast-flowing in upper course → Erosion & V-shaped valleys
- Form gorges, waterfalls, rapids
- Wide alluvial plains in lower course → Fertile soil → Agriculture hub
- Suitable for navigation & hydro-electric projects

5. Important SSC Points

- Ganga → Longest river in India
- Brahmaputra → Highest discharge in India
- Indus → Flows into Pakistan → Indus Water Treaty
- Major Himalayan rivers → Perennial, snow-fed, rain-fed
- Flood-prone rivers → Kosi, Brahmaputra
- Deltas → Sundarbans → Ganga-Brahmaputra delta