#### Rivers in India

- A drainage system is an integrated system of tributaries and a trunk stream which collects and drains surface water into the sea, lake or some other body of water.
- The total area drained by a river and its tributaries is known as a drainage basin.
- The drainage pattern of an area is the result of the geological structure of the Respective areas.
- The drainage system of India is broadly divided into two major groups on the basis of their location.
- They are Himalayan Rivers and the Peninsular Rivers.

### **Himalayan Rivers:**

• These rivers are found in north India and Originate from Himalayas. So, they are also called as Himalayan Rivers. These are perennial rivers.

### The Indus River System:

- The Indus River is one of the largest rivers of the world.
- It originates from the northern slope of the Kailash range in Tibet near Manasarovar Lake at an elevation of about 5,150 m.
- Its length Is about 2,880 km (Only 709 km is in India).
- The river has a total drainage area extending 11,65,500 sq km in which 321,289 sq. km areas Are drained in India.
- The river flows through the Ladakh and Zaskar ranges and creates deep Gorges.
- The river runs through Jammu and Kashmir, turns south near Chillar and enters Pakistan.
- Its major tributaries are Jhelum, Chenab (Largest tributary of Indus), Ravi, Beas and Sutlej.
- It enters into with the Arabian Sea.

# The Ganga River System:

• The Ganga River system is the largest Drainage system of India.

- It extends over an area of 8,61,404 sq. km.
- The Ganga plain is the most Densely populated place in India and many towns are developed on the banks of this river.
- The river Ganga originates as Bhagirathi from the Gangotri Glacier in Uttar Khasi District of Uttarakhand state, at an elevation of 7,010 m.
- The length of the river Ganga is about 2,525 Km.
- Its major tributaries from the north are Gomti, Gandak, Kosi and Ghaghra and from South, Yamuna (largest tributary of Ganga), Son, Chambal etc.
- The river Ganga is known as the River Padma in Bangladesh.
- The combined River of Ganga and Brahmaputra creates the World's largest delta known as Sundarbans in Bangladesh before joining the Bay of Bengal.

## The Brahmaputra River System:

- The river Brahmaputra originates from the Chemayungdung Glacier of the Kailash Range to the east of Lake Manasarovar in Tibet at an elevation of about 5,150 m.
- The total area is about 5,80,000 sq. km but the drainage area found in India is 1,94,413 sq. km this river is Known as Tsangpo (Purifier) in Tibet.
- The Length of this river is about 2,900 km (900 km In India).
- It enters into India through a gorge in Arunachal Pradesh namely Dihang.
- It has many Tributaries.
- Tista, Manas, Barak, Subansiri are Some of them.
- This river is called as Jamuna in Bangladesh.
- After it joins with the river Ganga in Bangladesh, the river is called as Meghna.

# **Characteristics of Himalayan Rivers:**

- Long and wide
- Perennial in nature
- Unsuitable for hydro power generation
- Middle and lower courses are navigable

#### **Peninsular Rivers:**

- The rivers in south India are called the Peninsular Rivers.
- Most of these rivers originate From the Western Ghats.
- These are seasonal Rivers (non-perennial).
- They have a large Seasonal fluctuation in volume of water as they are solely fed by rain.
- These rivers flow in valleys with steep gradients.
- Based on the direction of Flow, the peninsular rivers are divided into the
  - West flowing rivers
  - East flowing rivers

## **West Flowing Rivers:**

#### • Narmada

- This river rises in Amarkantak Plateau in Madhya Pradesh at an elevation of about 1057 m and flows for a distance of about 1,312 km.
- It covers and area of 98,796 sq. km and forms 27 km long estuary before out falling into the Arabian Sea through the Gulf of Cambay.
- It is the largest among the west flowing rivers of Peninsular India.
- Its principal tributaries are Burhner, Halon, Heran, Banjar, Dudhi, Shakkar, Tawa, Barna and Kolar.

# • Tapti

- The Tapti is one of the major rivers of Peninsular India with the length of about 724 Km.
- It covers an area of 65,145 sq km.
- Tapti River rises near Multai tank in the Betul district of Madhya Pradesh at an elevation of about 752 m.
- It is one of only the three rivers in Peninsular India that run from east to west the others Being the Narmada and the Mahi.
- In Kerala Mullaiperiyar and Bharathapuzha the west flowing rivers.

- The major Tributaries are Vaki, Gomai, Arunavati, Aner, Nesu, Buray, Panjhra and Bori.
- Its outfalls into the Arabian Sea through the Gulf of Cambay.

## **East Flowing Rivers:**

#### • Mahanadi:

- The river Mahanadi originates near Sihawa in Raipur district of Chattisgarh and Flows through Odisha.
- Its length is 851 km.
- Seonath, Telen, Sandur and Ib are its major Tributaries.
- The main stream of Mahanadi gets Divided into several distributaries such as Paika, Birupa, Chitartala, Genguti and Nun.
- All these Distributaries form the Delta of Mahanadi Which is one of the largest deltas in India.
- The Mahanadi empties its water in Bay of Bengal.

#### Godavari:

- Godavari is the longest river (1,465 Km) with an area of 3.13 lakh km2 Among the Peninsular rivers.
- It is also called Vridha Ganga.
- It originates in Nasik district of Maharashtra, a portion of Western Ghats.
- It flows through the states of Telangana and Andhra Pradesh Before joining Bay of Bengal.
- Purna, Penganga, Pranitha, Indravati, Tal and Salami are its major Tributaries.
- The river near Rajahmundry gets Divided into two Channels called Vasistha and Gautami and forms one of the largest deltas in India.
- Kolleru, a fresh water lake is located in the deltaic region of the Godavari.

#### • Krishna:

• The river Krishna originates from a spring at a place called Mahabaleshwar in the Western Ghats of Maharashtra.

- Its length is 1,400 km and an area of 2.58 lakh sq km.
- It is the second Longest Peninsular River Bhima, Peddavagu, Musi, Koyna and Thungabhadra are the major Tributaries of this river.
- It also flows through Andhra Pradesh and joins in Bay of Bengal, at Hamasaladeevi.

#### Kaveri

- The river Kaveri originates at Talakaveri, Kudagu hills of Karnataka.
- Its length is 800 Km.
- The river kaveri is called Dhakshin Ganga or Ganga of south.
- In Karnataka the river Bifurcates twice, forming the sacred islands of Srirangapatnam and Sivasamudram.
- While Entering Tamil Nadu, the Kaveri continues through a series of twisted wild gorges until it Reaches Hogenakkal Falls and flows through a Straight, narrow gorge near Salem.
- The Kaveri Breaks at Srirangam Island with two channels, River Coleroon and Kaveri.
- At last, it empties Into the Bay of Bengal at Poompuhar.

#### **Characteristics of South Indian Rivers:**

- Originate from Western Ghats
- Short and narrow
- Non perennial in nature
- Suitable for hydro power generation
- Not useful for navigation