

Long Answer Questions

Q.1. State some economic benefits of rivers and lakes.

Ans. (i) Water from the rivers is a basic natural resource, essential for various human activities.

(ii) The river banks have attracted settlers from ancient times. These settlements have now become big cities.

(iii) Using rivers for irrigation, navigation, hydro-power generation is of special significance.

(iv) Rivers are very significant for countries like India where agriculture is the livelihood for a majority of the population.

(v) Lakes help to develop tourism and provide recreation.

Rivers have been of fundamental importance throughout human history.

Q.2. Define the following drainage patterns: Dendritic, Trellis, Rectangular and Radial.

Ans. (i) Dendritic: The dendritic pattern develops where the river channel follows the slope of the terrain. The stream with its tributaries resembles the branches of a tree.

(ii) Trellis: A river joined by its tributaries at approximately right angles develops a trellis pattern. A trellis drainage pattern develops where hard and soft rocks exist parallel to each other.

(iii) Rectangular: A rectangular drainage pattern develops on a strongly jointed rocky terrain.

(iv) Radial: A radial pattern develops when streams flow in different directions from a central peak or dome-like structure.

Q.3. What types of lakes are found in India? Give suitable examples.

Ans. India has many lakes. They differ in size and other characteristics. Most lakes are permanent, whereas some contain water only during the rainy season. There are lakes which are formed by the action of glaciers and ice sheets, while the others have been formed by human activities.

(i) Salt water lakes: Spit and bars form lagoons or salt water lakes in the coastal areas like the Chilika lake, Pulicat lake and the Kolleru lake.

Sometimes, salt water lakes are formed with island drainage like Sambhar lake in Rajasthan. Its water is used for producing salt.

(ii) Freshwater lakes: Most of these are in the Himalayan region. They are of glacier origin. They are formed when glaciers dug out a basin, which was later filled with snow melt. The Wular lake in Jammu and Kashmir is the largest freshwater lake in India. Other freshwater lakes are the Dal, Bhimtal, Nainital, Loktak and Barapani.

(iii) Man-made lakes: The damming of the rivers for the generation of hydel power has also led to the formation of lakes. These lakes are formed to drain excessive water of the river during floods and adding water to the rivers during the dry season. Such lakes are the Guru Gobind Sagar (Bhakra Nangal Project), Nizam Sagar, Nagarjuna Sagar, Rana Pratap Sagar, etc.

Q.4. Give characteristics of the Ganga-Brahmaputra river system.

Ans. The basin is separated from the Indus by the watershed in Haryana, i.e., Ambala. It covers the Central and the Eastern parts of the northern alluvial plains in Haryana, U.P., West Bengal and Assam. Its large central part is drained by river Ganga and its many tributaries. The general slope of the Ganga plain is from the north-west to south-east and south into Bay of Bengal. Its eastern part is drained by the mighty Brahmaputra river. It slopes from the north-east to south-west and then southward into Bangladesh.

Q.5. Write main features of Indus Basin.

Ans.

- The river Indus rises in Tibet, near lake Mansarovar.
- Flowing west, it enters India in the Ladakh district of Jammu & Kashmir. It forms a picturesque gorge in this part.
- It flows through Baltistan and Gilgit and emerges from the mountain at Attock.
- All its major tributaries—the Satluj, the Beas, the Ravi, the Chenab and the Jhelum—join together to enter the Indus near Mithankot in Pakistan.
- Beyond this, the Indus flows southwards eventually reaching the Arabian Sea, east of Karachi. Indus is 2,900-km long and is one of the longest rivers of the world.

Q.6. Give main characteristics of the Ganga River System.

Ans.

- The headwaters of the Ganga called the 'Bhagirathi' is fed by the Gangotri Glacier and joined by Alaknanda at Devaprayag in Uttarakhand.
- At Haridwar, the Ganga emerges from the mountains on to the plains.
- Its tributaries are flood parts of the northern plains every year, causing widespread damage to life and property but enriching the soil for the extensive agricultural lands.
- Enlarged with the waters from its right and left bank tributaries, the Ganga flows eastward till Farakka in West Bengal. This is the northern most point of Ganga Delta.
- The mainstream flows southwards into Bangladesh and is joined by the Brahmaputra. This mighty river along with Brahmaputra flows into the Bay of Bengal and the delta formed by these rivers is known as Sunderban delta.

Q.7. What are the main characteristics of the mighty river Brahmaputra?

Ans.

- The Brahmaputra rises in Tibet east of Mansarovar Lake, very close to the sources of the Indus and the Satluj.
- It is slightly longer than the Indus and most of its course lies outside India.
- In Tibet, the river carries a smaller volume of water and less silt as it is a cold and a dry area.
- In India, it passes through a region of high rainfall. Here the river carries a large volume of water and considerable amount of silt.
- The Brahmaputra has a braided channel in its entire length in Assam and forms many riverine islands.
- Every year during the rainy season, the river overflows its banks causing widespread devastation due to floods in Assam and Bangladesh.
- Unlike other north Indian rivers, the Brahmaputra is marked by huge deposits of silt on its bed causing the river bed to rise. The river also shifts its channel frequently.

Q.8. Give main characteristics of the largest peninsular river.

Or

Which river is known as 'Dakshin Ganga'? State any two characteristics of it.

Ans. (i) The Godavari is the largest peninsular river.

(ii) Its length is about 1500 km. Its drainage basin is also the largest amongst the peninsular rivers.

(iii) The basin covers the parts of Maharashtra, Madhya Pradesh, Odisha and Andhra Pradesh.

(iv) The Godavari is joined by a number of tributaries such as the Purna, the Wardha, the Pranhita, the Manjra, the Wainganga and the Penganga.

(v) The last three tributaries are very large. Because of its length and the area it covers, it is also known as 'Dakshin Ganga'.

Q.9. How do Indian lakes differ from each other?

Ans. India has many lakes. These differ from each other in size, and other characteristics. Most lakes are permanent; some contain water only during the rainy season, like the lakes in the basins of inland drainage of semi-arid region. There are some of the lakes which are the result of the action of glaciers and ice sheets, while the others have been formed by wind, river action and human activities.

Q.10. Describe the journey of river Ganga in India and which rivers join it en route.

Ans.

- The river Ganga originates from Gangotri Glacier and is called Bhagirathi over here.
- It is joined by Alaknanda at Devaprayag in Uttarakhand.
- At Haridwar, it enters the plains and starts doing the job of transportation and deposition.
- The major Himalayan rivers joining Ganga are the Yamuna, the Ghaghra, the Gandak and the Kosi.
- The river Yamuna flows parallel to the Ganga and as a right bank tributary meets the Ganga at Allahabad.
- The Ghaghra, the Gandak and the Kosi originate from Nepal Himalayas and ultimately join river Ganga.
- These rivers flood northern plains almost every year causing widespread damage to life and property but enriching the soil for the extensive agricultural land.
- The tributaries coming from the peninsular uplands are the Chambal, the Betwa and the Son.
- Enlarged with waters from its right and left bank tributaries, the Ganga flows eastwards till Farakka in West Bengal. This is the northern most point of the Ganga Delta.

- The river bifurcates here; the Bhagirathi—Hooghly flows southwards through the deltaic plains to the Bay of Bengal. With Brahmaputra, it forms the world's biggest delta called the 'Sunderbans Delta'. Here, ends the journey of river Ganga.