

## QUESTION BANK IN SOCIAL SCIENCE CLASS-IX (TERM-I)

### 3

## DRAINAGE

### CONCEPTS

- 'Drainage' is a term signifying the river system of an area.
- A drainage basin or river basin is an area which is drained by a single river system.
- An upland that separates two drainage systems that are next to each other is called a water divide.
- On the basis of origin there are two river systems of India — The Himalayan rivers and the Peninsular rivers.
- Himalayan rivers are rainfed and snowfed, so they have water in them throughout the year, i.e. they are perennial.
- Himalayan rivers create meanders, oxbow lakes and other depositional features on their course.
- Peninsular rivers are seasonal; mostly depending on rainfall.
- Most of the rivers of peninsular India originate in the Western Ghats and flow towards the Bay of Bengal.

#### The Himalayan Rivers

- A river alongwith its tributaries may be called a river system.
- The major Himalayan rivers are the Indus, the Ganga and the Brahmaputra.

#### The Indus River System

- Rising near Lake Mansarovar in Tibet, the Indus enters India in the Ladakh district of Jammu and Kashmir.
- Rivers Satluj, Beas, Ravi, Chenab and Jhelum join Indus near Mithankot, Pakistan and flow southwards to fall into the Arabian Sea, east of Karachi.
- With a total length of 2900 km, the Indus is one of the longest rivers of the world.

#### The Ganga River System

- The headwaters of the Ganga are called 'Bhagirathi'.
- Bhagirathi is fed by the Gangotri Glacier and joined by the Alaknanda at Devprayag.
- Ganga meets the tributaries from the Himalayas such as Ghaghara, Gandak and Kosi.
- A major river Yamuna, arising from Yamunotri Glacier in the Himalayas, joins Ganga at Allahabad.
- Other tributaries — Chambal, Betwa and Son — come from Peninsular uplands to join Ganga.
- Ganga is joined by Brahmaputra and flows through Bangladesh to reach the Bay of Bengal.
- The delta formed when the Ganga and the Brahmaputra flow into the Bay of Bengal is known as the Sunderban Delta.
- The length of the Ganga is over 2500 km and it develops large meanders.

#### The Brahmaputra River System

- Originating in Tibet, very close to the sources of Indus and Satluj, Brahmaputra enters India in Arunachal Pradesh to flow to Assam joined by many tributaries.
- The tributaries that join Brahmaputra are Dibang, Lohit, and Kenula.

- The Brahmaputra has a braided channel in its entire length in Assam to form many riverine islands.
- Unlike other north Indian rivers, the Brahmaputra is marked by huge deposits of silt on its bed, causing the riverbed to rise.

#### **The Peninsular Rivers**

- The major rivers of the peninsula — Mahanadi, Godavari, Krishna and Kaveri — flow eastwards to drain into the Bay of Bengal.
- The Tapi and Narmada are the only rivers which flow west to make estuaries and drain into the Arabian Sea.
- The drainage basins of the peninsular rivers are comparatively small in size.

#### **The Godavari Basin**

- Godavari begins in Nasik district of Maharashtra and is the largest peninsular river.
- Its large basin covers most parts of Maharashtra, Madhya Pradesh, Orissa and Andhra Pradesh.
- The tributaries which join the Godavari include Purna, Wardha, Pranhita, Manjra, Wanganga and Penganga.
- Because of its length and the area it covers, Godavari is also known as the Dakshin Ganga.
- Godavari drains into the Bay of Bengal.

#### **The Mahanadi Basin**

- The Mahanadi, a 860 km long river, rises in Chhattisgarh to flow through Orissa to reach the Bay of Bengal.
- Mahanadi river basin is shared by Maharashtra, Orissa, Jharkhand and Chhattisgarh.

#### **The Krishna Basin**

- The 1400 km long Krishna river rises from a spring near Mahabaleshwar to reach the Bay of Bengal.
- The tributaries of Krishna include Bhima, Musi, Ghatprabha, Koyana and Tungabhadra. The Krishna basin is shared by Maharashtra, Karnataka and Andhra Pradesh.

#### **The Narmada Basin**

- Rising in the Amarkantak hills, Narmada flows to create a gorge in marble rocks of Madhya Pradesh.
- Narmada flows towards the west in a rift valley formed due to faulting.

#### **The Tapi Basin**

- Originating in Betul, Madhya Pradesh, Tapi flows through a basin that covers Madhya Pradesh, Gujarat and Maharashtra.
- The main west flowing rivers are Sabarmati, Mahi, Bharatpuzha and Periyar.

#### **The Kaveri Basin**

- Originating in the Brahmagiri range of the Western Ghats, the Kaveri reaches the Bay of Bengal at Kaveripatnam, sharing its basin with Karnataka, Tamil Nadu and Kerala.

#### **Lakes**

- Most lakes are permanent while other contain water only during the rainy season.
- Some lakes are result of the glacial action and ice sheets and some may have been formed by wind, river action and human activities.
- A river meandering across a floodplain forms cut-offs that later develop into oxbow lakes.
- Glacial lakes are formed when glaciers dig out a basin which is later filled with snowmelt.

- Some lakes like Wular Lake in Jammu and Kashmir result from tectonic activity.
- Apart from natural lakes, the damming of the rivers for the generation of hydel power has also led to the formation of lakes.
- Lakes help to regulate river water flow, prevent flooding, aid to develop hydel power, moderate climate, maintain aquatic ecosystem, enhance natural beauty, develop tourism and provide recreation.

#### **Role of rivers in the economy**

- Rivers are natural sources of water.
- Settlements on the river banks have developed into cities.
- Rivers are used for irrigation, navigation, hydro-power generation, all vital for India, an agricultural economy.

#### **River Pollution**

- Quality of river water is affected by the growing domestic, municipal, industrial and agricultural demand.
- A heavy load of untreated sewage and industrial effluents are emptied into the river affecting the river's self-cleansing property.
- Concern over rising pollution in our rivers led to the launching of various action plans to clean the rivers.

## **I. SUMMATIVE ASSESSMENT**

### **A. NCERT TEXTBOOK QUESTIONS**

#### Questions Within The Lesson

**Q.1. Find out which river has the largest basin in India. (Page 17)**

**Ans.** The Ganga river.

**Q.2. Find out the name of the biggest waterfall in India. (Page 22)**

**Ans.** The Jog Falls in Karnataka.

#### Questions in the Exercise

**Q.1. Choose the right answer from the four alternatives given below: (CBSE 2010)**

(i) Which one of the following describes the drainage patterns resembling the branches of a tree?

- (a) Radial                      (b) Dendritic              (c) Centrifugal              (d) Trellis

**Ans.** Dendritic

(ii) In which of the following States is the Wular Lake located?

- (a) Rajasthan              (b) Uttar Pradesh              (c) Punjab              (d) Jammu and Kashmir

**Ans.** Jammu and Kashmir

(iii) The river Narmada has its source at:

- (a) Satpura              (b) Brahmagir              (c) Amarkantak              (d) Slopes of the Western Ghats

**Ans.** Amarkantak

(iv) Which one of the following lakes is a salt water lake? (CBSE 2010)

- (a) Sambhar              (b) Dal              (c) Wular              (d) Gobind Sagar

**Ans.** Sambhar

(v) Which one of the following is the longest river of the Peninsular India?

- (a) Narmada (b) Krishna (c) Godavari (d) Mahanadi

**Ans.** Godavari

(vi) Which among the following rivers flows through a rift valley? (CBSE 2010)

- (a) Damodar (b) Tungabhadra (c) Krishna (d) Tapi

**Ans.** Tapi

**Q.2. Answer the following questions briefly.**

**(i) What is meant by a water divide? Give an example.**

**Ans.** Any elevated area such as a mountain or an upland that separates two drainage basins is called a water divide. An example of water divide is the Western Ghats.

**(ii) Which is the largest river basin in India?**

**Ans.** The Ganga river basin is the largest river basin in India.

**(iii) Where do the rivers Indus and Ganga have their origin?**

**Ans.** Indus rises in Tibet near Lake Mansarovar.

Ganga has Bhagirathi as the head water which is fed by the Gangotri glacier.

**(iv) Name two headstreams of the Ganga. Where do they form the Ganga?**

**Ans.** The two headstreams of the Ganga are the Alaknanda and the Bhagirathi and they both meet to form the Ganga at Devprayag.

**(v) Why does Brahmaputra in the Tibetan part have less silt despite a longer course?**

**Ans.** Called river Tsangpo in Tibet, Brahmaputra has very little volume of water. So it obviously carries little silt. But once it enters India, Brahmaputra is fed by heavy rains, and it carries lot of water and silt.

**(vi) Which two peninsular rivers flow through troughs? What features do they form while entering the sea?**

**Ans.** The two rivers that flow through troughs are Narmada and Tapi. They form estuaries while entering the sea.

**(vii) Give five economic benefits of rivers and lakes.**

**Ans.** Role of rivers in the economy :

- (a) Rivers create alluvial soils.
- (b) River irrigation is the backbone of agriculture in areas that have insufficient rainfall.
- (c) Many industrial processes depend on river water as a coolant and for generation of hydro-electricity.
- (d) Rivers provide inland channels for transport.
- (e) Rivers provide fisheries, scope for developing adventure sports like rafting and entertainment joints.

Lakes like the Sambhar Lake provide edible salt. They also help develop tourism and provide recreation.

**Q.3. Below are given names of a few lakes of India. Group those under two categories — natural and created by human beings.**

- (a) Wular (b) Dal (c) Nainital (d) Bhimtal
- (e) Gobind Sagar (f) Loktak (g) Barapani (h) Chilika
- (i) Sambhar (j) Rana Pratap Sagar (k) Nizam Sagar

(l) Pulicat (m) Nagarjuna Sagar (n) Hirakud

**Ans. Natural Lakes :** Wular, Dal, Nainital, Bhimtal, Chilika, Pulicat, Sambhar, Barapani, Loktak  
**Created by human beings :** Gobind Sagar, Hirakud, Rana Pratap Sagar, Nagarjuna Sagar, Nizam Sagar

**Q.4. Discuss the significant differences between the Himalayan and the Peninsular rivers.**  
(CBSE 2010)

**Ans.** See Q. No. 1 SECTION D

**Q.5. Compare the east-flowing and the west-flowing rivers of the Peninsular Plateau.**  
(CBSE 2010)

OR

**Why are the rivers of Peninsula seasonal ? Give two differences between the west-flowing and east-flowing rivers of Peninsular Plateau.**  
(CBSE 2010)

**Ans.** See Q. No. 5 SECTION D

**Q.6. Why are rivers important for the country's economy?**  
(CBSE 2010)

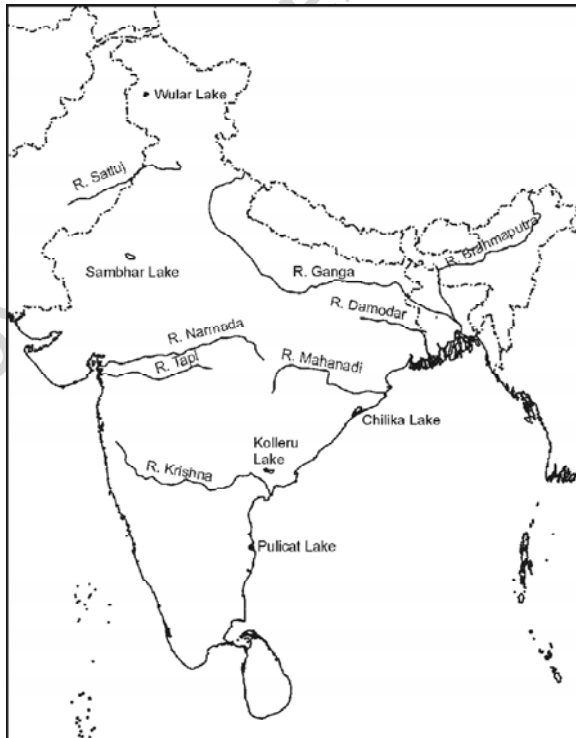
**Ans.** See Q. No. 6 SECTION D

### MAP SKILLS

**Q.1. (i) On an outline map of India mark and label the following rivers : Ganga, Satluj, Damodar, Krishna, Narmada, Tapi, Mahanadi, and Brahmaputra.**

**(ii) On an outline map of India mark and label the following lakes : Chilika, Sambhar, Wular, Pulicat, Kolleru.**

**Ans.**



**OTHER IMPORTANT QUESTIONS (AS PER CCE PATTERN)**

**B. MULTIPLE CHOICE QUESTIONS (1 MARK)**

**Q.1. Which of the following is the result of concern over rising pollution in our rivers?**

- (a) Banning hydroelectric projects                      (b) Various river action plans  
(c) Rainwater harvesting                                      (d) None of the above

**Ans. (b)**

**Q.2. Which of the following affects the self-cleansing capacity of the river?**

- (a) Aquatic organisms                                      (b) Drawing of water for irrigation  
(c) Hydroelectricity generation                              (d) Pollution

**Ans. (d)**

**Q.3. Which of the following is not one of the causes of river pollution?**

- (a) Dumping of garbage                                      (b) Aquatic organisms and algae  
(c) Discharge of untreated sewage                              (d) Discharge of industrial effluents

**Ans. (b)**

**Q.4. Which one of the following cities of India is not located on a river bank?**

- (a) Haridwar                      (b) Allahabad                      (c) Shillong                      (d) Varanasi

**Ans. (c)**

**Q.5. Lakes are of great value to human beings. Which of the following statements about lakes given below is incorrect?**

- (a) Helps to regulate the flow of rivers                      (b) It results in flooding  
(c) Can be used for developing hydel power                      (d) Enhances natural beauty

**Ans. (b)**

**Q.6. Why have the river banks attracted settlers from ancient times?**

- (a) Water is a basic natural resource                      (b) Rivers provide water for irrigation  
(c) Rivers provide facilities for inland navigation                      (d) All the above

**Ans. (d)**

**Q.7. In which of the following states are Nainital and Bhimtal located?**

- (a) Jammu and Kashmir                                      (b) Himachal Pradesh  
(c) Uttar Pradesh    (d) Uttarakhand

**Ans. (d)**

**Q.8. Which of the following is an artificial lake located in Andhra Pradesh?**

- (a) Kolleru                      (b) Nagarjuna Sagar                      (c) Krishnaraja Sagar                      (d) Vembanad

**Ans. (b)**

**Q.9. Which one of the following is not a lake created by human beings?**

- (a) Gobind Sagar                      (b) Nizam Sagar                      (c) Barapani                      (d) Hirakud

**Ans. (c)**

**Q.10. Which one of the following freshwater lakes is the largest?**

- (a) Wular                      (b) Loktak                      (c) Nainital                      (d) Dal

**Ans. (a)**

- Q.11. Which of the following lakes is formed as a result of tectonic activity? (V. Important)**  
(a) Wular Lake (b) Kolleru Lake (c) Loktak Lake (d) Dal Lake  
**Ans. (a)**
- Q.12. Which of the following lake is a lagoon in the coastal region of Orissa?**  
(a) Bhimtal (b) Barapani (c) Chilika (d) Hirakud  
**Ans. (c)**
- Q.13. Which one of the following lakes is a saltwater lake? (Important)**  
(a) Wular Lake (b) Sambhar Lake (c) Barapani Lake (d) Dal Lake  
**Ans. (b)**
- Q.14. Which of the following types of lakes is formed due to river action?**  
(a) Saltwater lakes (b) Glacial lakes (c) Oxbow lakes (d) Lagoons  
**Ans. (c)**
- Q.15. Which type of lakes contain water only during the rainy season?**  
(a) Oxbow lakes (b) Lagoons  
(c) Lakes in basins of inland drainage (d) Glacial lakes  
**Ans. (c)**
- Q.16. Which of the following is a famous lake of Srinagar in Kashmir?**  
(a) Sambhar (b) Bhimtal (c) Chilika (d) Dal  
**Ans. (d)**
- Q.17. Which of the following rivers originates from the Hazaribagh plateau of Chhota Nagpur region and flows eastwards?**  
(a) Amravati (b) Bhima (c) Ghatprabha (d) Damodar  
**Ans. (d)**
- Q.18. Which of the following waterfalls is made by the river Kaveri and is the second biggest waterfall in India? (Important)**  
(a) Jog (b) Sivasamudram (c) Dhuadhar (d) Hundru  
**Ans. (b)**
- Q.19. The drainage basin of which of the following rivers covers parts of Karnataka, Kerala and Tamil Nadu?**  
(a) Godavari (b) Krishna (c) Kaveri (d) Musi  
**Ans. (c)**
- Q.20. The Amravati, Bhavani, Hemavati and Kabini are the tributaries of which of the following rivers?**  
(a) Wainganga (b) Bhima (c) Krishna (d) Kaveri  
**Ans. (d)**
- Q.21. Which of the following rivers rises from the slopes of the Western Ghats in the Nasik district of Maharashtra?**  
(a) Mahanadi (b) Narmada (c) Godavari (d) Koyna  
**Ans. (c)**
- Q.22. Which of the following states is not drained by the Godavari river?**  
(a) Maharashtra (b) Orissa (c) Andhra Pradesh (d) Chhattisgarh  
**Ans. (d)**

- Q.23. Which of the following rivers is not a tributary of river Godavari?**  
(a) Purna (b) Ghatprabha (c) Wardha (d) Pranhita  
**Ans. (b)**
- Q.24. Which of the following rivers is known as the 'Dakshin Ganga'?** (V. Important)  
(CBSE 2010)  
(a) The Godavari (b) The Narmada (c) The Krishna (d) The Kaveri  
**Ans. (a)**
- Q.25. The Wainganga and the Penganga are tributaries of which of the following rivers?**  
(a) The Mahanadi (b) The Narmada (c) The Godavari (d) The Krishna  
**Ans. (c)**
- Q.26. The Tungabhadra and the Koyna are tributaries of which of the following rivers?**  
(a) Godavari (b) Krishna (c) Kaveri (d) Narmada  
**Ans. (b)**
- Q.27. Which of the following rivers rises in the highlands of Chhattisgarh?**  
(a) Mahanadi (b) Godavari (c) Chambal (d) Damodar  
**Ans. (a)**
- Q.28. Which of the following is the second longest river of Peninsular India?** (Important)  
(a) Godavari (b) Krishna (c) Kaveri (d) Mahanadi  
**Ans. (b)**
- Q.29. Which of the following rivers rises from a spring near Mahabaleshwar?**  
(a) Krishna (b) Narmada (c) Tungabhadra (d) Purna  
**Ans. (a)**
- Q.30. Which of the following is not a tributary of river Krishna?**  
(a) Tungabhadra (b) Koyna (c) Wardha (d) Bhima  
**Ans. (c)**
- Q.31. Which place is located on the water divide between the Indus and the Ganga river system ?** (CBSE 2010)  
(a) Ambala (b) Nainital (c) Haridwar (d) Allahabad  
**Ans. (a)**
- Q.32. At which place do the Satluj, Beas, Ravi, Chenab and the Jhelum rivers goin together with Indus ?** (CBSE 2010)  
(a) Ambala (b) Mithankot (c) Pathankot (d) Haridwar  
**Ans. (b)**
- Q.33. In which of the following states is Sambhar Lake situated ?** (CBSE 2010)  
(a) Rajasthan (b) Uttar Pradesh (c) Bihar (d) Jammu and Kashmir  
**Ans. (a)**
- Q.34. Which kind of a drainage pattern is formed when tributaries join rivers at almost right angles ?** (CBSE 2010)  
(a) Dendritic drainage (b) Trellis drainage (c) Rectangular drainage (d) Radial drainage  
**Ans. (b)**



**Q.35. Which of the two states does river Kaveri pass through ? (CBSE 2010)**

- (a) Kerala and Karnataka (b) Karnataka and Tamil Nadu  
(c) Kerala and Tamil Nadu (d) Andhra Pradesh and Tamil Nadu

**Ans. (b)**

**Q.36. The River Mahanadi rises from which one of the following states ? (CBSE 2010)**

- (a) Madhya Pradesh (b) Chhattisgarh (c) Jharkhand (d) West Bengal

**Ans. (b)**

**Q.37. Which of the following cities is located at the confluence of Ganga and Yamuna ? (CBSE 2010)**

- (a) Kanpur (b) Delhi (c) Patna (d) Allahabad

**Ans. (d)**

**Q.38. Which one of the following statements about the river Narmada is not true ?(CBSE 2010)**

- (a) It flows through a rift valley  
(b) It flows through a gorge near Jabalpur  
(c) It plunges over steep rocks at the Dhuadhar falls  
(d) Its tributaries are Tungabhadra and Musi

**Ans. (d)**

**Q.39. Which among the following tributaries of Ganga came from the peninsular uplands ? (CBSE 2010)**

- (a) Gandak (b) Kosi (c) Ghaghara (d) Son

**Ans. (d)**

**Q.40. Which one of the following drainage patterns develops on a strongly jointed rocky terrain ? (CBSE 2010)**

- (a) Radial (b) Centrifugal (c) Trellis (d) Rectangular

**Ans. (d)**

**Q.41. What is the name of the Brahmaputra river in Bangladesh? [2010 (T-1)]**

- (a) Jamuna (b) Dibang (c) Lohit (d) Ravi

**Ans. (a)**

**Q.42. Which river of peninsular India is the longest? [2010 (T-I)]**

- (a) Kaveri (b) Godavari (c) Mahanadi (d) Krishna

**Ans. (b)**

**Q.43. What is an area drained by a single river system called? [2010 (T-I)]**

- (a) Drainage basin (b) Water divide (c) Drainage (d) Doab

**Ans. (a)**

**Q.44. Which river in the following does not make a Delta? [2010 (T-I)]**

- (a) Narmada (b) Kaveri (c) Godavari (d) Mahanadi

**Ans. (a)**

**Q.45. Which one of the following rivers flows towards the west in a rift valley? [2010 (T-I)]**

- (a) Godavari (b) Narmada (c) Kaveri (d) Krishna

**Ans. (b)**

- Q.46. Sivasamudram, the second biggest waterfall of India is made by which river :** [2010 (T-I)]  
 (a) Krishna (b) Kaveri (c) Godavari (d) Mahanadi  
**Ans. (c)**
- Q.47. The river Indus originates in :** [2010 (T-I)]  
 (a) Nepal (b) Bhutan (c) Tibet (d) Bangladesh  
**Ans. (c)**
- Q.48. Which one of the following is not a tributary of the River Ganga?** [2010 (T-1)]  
 (a) Yamuna (b) Beas (c) Ghaghra (d) Kosi  
**Ans. (b)**
- Q.49. Which of the following is not a tributary of Godavari?** [2010 (T-1)]  
 (a) Purna (b) Wardha (c) Wainganga (d) Lohit  
**Ans. (d)**
- Q.50. Meanders are formed in which one of the following courses of a river?** [2010 (T-1)]  
 (a) Upper course (b) Middle course (c) Lower course (d) Both upper and middle  
**Ans. (c)**
- Q.51. Which one of the following is a southern tributary of the Ganga?** [2010 (T-1)]  
 (a) Ghaggar (b) Son (c) Gomti (d) Gandak  
**Ans. (b)**
- Q.52. The Brahmaputra (Tsangpo) river rises in :** [2010 (T-1)]  
 (a) Sikkim (b) Tibet (c) Bhutan (d) Nepal  
**Ans. (b)**
- Q.53. Alaknanda and Bhagirathi converge to be called as Ganga at :** [2010 (T-1)]  
 (a) Haridwar (b) Kedarnath (c) Badrinath (d) Devprayag  
**Ans. (d)**
- Q.54. Which one of the following drainage patterns does the Ganga river form?** [2010 (T-1)]  
 (a) The Trellis Pattern (b) The Radial Pattern  
 (c) The Dendritic Pattern (d) The Rectangular Pattern  
**Ans. (c)**
- Q.55. Which one of the following rivers has the largest drainage pattern in India?** [2010 (T-1)]  
 (a) The Indus (b) The Ganga (c) The Brahmaputra (d) The Mahanadi  
**Ans. (b)**
- Q.56. Which is the largest river of Peninsular Plateau?** [2010 (T-1)]  
 (a) River Narmada (b) River Tapi (c) River Krishna (d) River Godavari  
**Ans. (d)**
- Q.57. Which is the longest river of Peninsular Plateau?** [2010 (T-1)]  
 (a) River Narmada (b) River Tapi (c) River Krishna (d) River Godavari  
**Ans. (d)**
- Q.58. Which of these Peninsular rivers flows towards the west?** [2010 (T-1)]  
 (a) Godavari (b) Krishna (c) Mahanadi (d) Tapi  
**Ans. (d)**

**Q.59. Which one of the following lakes differs from the rest in the group? [2010 (T-1)]**

- (a) The Dal lake (b) The Nainital Lake  
(c) The Guru Gobinda Sagar (d) The Bhimtal Lake

**Ans. (c)**

**Q.60. Which is the largest freshwater lake in India? [2010 (T-1)]**

- (a) Wular Lake (b) Dal Lake (c) Bhimtal (d) Nainital

**Ans. (a)**

**Q.61. Which of these is a freshwater lake of India? [2010 (T-1)]**

- (a) Sambhar (b) Wular (c) Chilika (d) Pulicat

**Ans. (b)**

**Q.62. What is an upland that separates two drainage basins known as? [2010 (T-1)]**

- (a) Drainage basin (b) Drainage system (c) Water divide (d) River system

**Ans. (c)**

**Q.63. Which of the following describes drainage patterns resembling branches of a tree? [2010 (T-1)]**

- (a) Radial (b) Centrifugal (c) Dendritic (d) Trellis

**Ans. (c)**

### C. SHORT ANSWER TYPE QUESTIONS (3 MARKS)

**Q.1. What are perennial and non-perennial rivers? Give reasons why the Himalayan region consists of perennial rivers. (Important)**

**Ans.** The rivers that flow throughout the year are termed as perennial rivers. They have more or less even flow throughout the year, e.g., the Ganga.

The rivers that do not flow throughout the year are termed as non-perennial rivers. They are seasonal rivers that flow mainly during the rainy season and dwindle during the dry period, e.g., the Subarnarekha.

The rivers of the Himalayan region are perennial in nature. They have their sources in the snow fields and glaciers of the Himalayas which supply water to these rivers throughout the year. During monsoons the Himalayas receive very heavy rainfall and rivers discharge heavy flow of water. During dry periods the rivers are fed by the melting snow and glaciers of the lofty great Himalayan range. Hence, the Himalayan rivers flow throughout the year.

**Q.2. Why is the Godavari often referred to as the 'Dakshin Ganga'? Write a note on the river Godavari and its tributaries. (Important)**

**Ans.** The Godavari is the largest Peninsular river. It has a length of 1500 km. It has the largest drainage basin amongst the Peninsular rivers. Its drainage basin covers parts of Maharashtra, Madhya Pradesh, Orissa and Andhra Pradesh. On account of its dominating length and the extent of area it covers, the Godavari is known as the 'Dakshin Ganga'.

The Godavari rises from the slopes of the Western Ghats in the Nasik district of Maharashtra. It flows eastwards and drains into the Bay of Bengal. Nearly half of its drainage basin lies in Maharashtra.

The Godavari is joined by large tributaries—the Wainganga, the Penganga and the Manjra. The Purna, the Wardha and the Pranhita are its other tributaries.

**Q.3. How are salt lakes formed? Give examples of salt lakes in India.**

**Ans.** Lakes which have water with high salt content are called salt lakes. They are usually found in the basins of inland drainage in the regions of arid and semi-arid climate. Such lakes are seasonal in nature.

Hollows may be created in the deserts due to the deflation action of the winds. These may reach the groundwater level which seeps out into these depressions. Small shallow lakes are formed which become salt lakes due to excessive evaporation.

Sometimes short, intermittent streams drain into low depression or a desert basin and form temporary lakes. Such short lived lakes also contain high percentage of salts on account of high rate of evaporation.

An example of such saltwater lake is the Sambhar lake of Rajasthan. The water of this salt lake is used for producing salt.

**Q.4. What is a lagoon? How does it differ from a lake?**

**Ans.** Lagoon is a stretch of brackish or salt water separated from the sea by a sandbank, bars, reefs, etc. The action of wind and waves along coasts builds spits and bars in the inlets of seas isolating lagoons from the sea. They are commonly found off the deltas of large rivers like the Ganges, the Mahanadi, etc.

The Chilika lake of Orissa, the Pulicat lake of Tamil Nadu and the Kolleru lake of Andhra Pradesh are lagoons.

Strong on shore winds are also capable of pushing the coastal sand dunes along beaches landwards. They may enclose marshy lagoons.

- (i) Lagoons are found only in coastal areas, usually near the mouths of rivers, while lakes may be formed in any geographical location, in highlands or in inland basis.
- (ii) Lagoons have brackish water while a lake may have fresh water or salty water.
- (iii) Lagoons are formed due to wind and wave action in the coasts. Lakes may be of tectonic origin or may be formed due to river action, glacial action, wind. They may also be human-made artificial lakes.

**Q.5. What is a gorge? In what type of terrain does a gorge form?**

**Ans.** A gorge is a very steep sided, narrow river valley. It is found in the mountains in the upper courses of the rivers. They are nearly I-shaped in appearance.

In the upper course the river is very swift as it descends down the steep slopes of the mountains. Vertical corrosion or down cutting is the predominant action of the river here. In areas where the rocks are very hard or resistant, the valley that develops is narrow and the sides are steep rising almost vertically. Such narrow river valleys are called gorges.

Thus, gorges are found in mountainous terrain with resistant rocks. They are usually found in the upper reaches of the river in high mountains, e.g. the Indus Gorge, the Brahmaputra Gorge.

Gorges are features of youthful topography. In the Himalayas where the land has been uplifted in recent geological period, gorges are common.

**Q.6. What type of channel does the river Brahmaputra have? Write a short note on the formation of this type of channel.**

**Ans.** The river Brahmaputra has a braided channel in its entire length in Assam.

The northeastern part of India is a region of high rainfall. Assam receives heavy rainfall during the monsoons. This increases the volume of water in the Brahmaputra river. On account of

rapid erosion, the river carries a considerable amount of silt. The silt is deposited in the riverbed when the load becomes excessive. As a result the river splits into several complicated channels called braided channels. The channels frequently shift position. Many big and small river islands are located in between the braided channels. The Majuli Island on the Brahmaputra is the world's largest, riverine island. It has, however, been broken due to floods.

**Q.7. Where are India's most of the freshwater lakes located and why?**

**Ans.** Most of the freshwater lakes of India are located in the Himalayan region.

The lofty ranges of the Himalayas are snow covered and have many glaciers. Glacial activity results in the formation of circular hollows in the mountains. They are known as Cirques. The melting of the glacial snow in later period forms cirque lakes. As the lakes have water from snow melt they are freshwater lakes, e.g., Pangong lake in Ladakh.

Tectonic activity in the Himalayan region also results in the formation of depressions. They are filled with melting snow forming lakes of tectonic origin, e.g., the Wular lake in Jammu and Kashmir, which is the largest freshwater lake in India.

The Dal Lake of Srinagar, Bhimtal and Nainital of Uttarakhand, Loktak Lake of Manipur and Barapani Lake of Meghalaya are some other important freshwater lakes. All are located in the Himalayan region and the Purvanchals.

**Q.8. What is a river basin? Explain briefly.**

**Ans.** The area drained by a single river system, comprising a main river and its tributaries, is called its drainage basin or river basin.

The term drainage describes the river system of an area. Small streams flowing from different directions come together to form the main river. It has number of tributaries and distributaries. The river ultimately drains into a large water body such as a lake or a sea or an ocean. The area drained by the main river, its tributaries and distributaries is termed as the river basin. The river Ganga has the largest river basin in India. The river Indus has a larger river basin but most of it lies outside India.

**Q.9. Write a note on the river Krishna and its tributaries.**

**Ans.** The river Krishna rises from a spring near Mahabaleshwar. It flows eastwards to the Bay of Bengal. It has a length of about 1400 km, which makes it the second longest river of Peninsular India after Godavari which has a length of 1500 km.

The Tungabhadra, the Koyna, the Bhima, the Ghatprabha and the Musi are important tributaries of the river Krishna.

The drainage basin of the river Krishna lies in Maharashtra, Karnataka and Andhra Pradesh.

**Q.10. Name the three Himalayan river system. Give two tributaries of each. (CBSE 2010)**

**Ans.** Three Himalayan river systems are : (i) The Indus river system (ii) The Ganga river system (iii) The Brahmaputra river system.

Tributaries : Indus river system – Satluj, Beas, Ravi (ii) Ganga river system – Yamuna, Ghaghara, Gandak (iii) Brahmaputra river system – Dibang, Lohit, Kenula.

**Q.11. Which of the factors mainly controls the drainage system of the Indian subcontinent? Into which major groups are the Indian rivers divided? Write three points of difference between the two. (CBSE 2010)**

**Ans.** The drainage system of the Indian subcontinent are mainly controlled by the broad relief features. The Indian rivers are divided into two major groups : (a) The Himalayan rivers and

(b) The Peninsular rivers.

Points of difference : (a) The Himalayan rivers mostly originate in the Himalayan ranges whereas the Peninsular rivers mostly originate in the Western Ghats (b) The Himalayan rivers are perennial whereas the Peninsular rivers are seasonal (c) The Peninsular rivers have shorter and shallower courses in comparison to the Himalayan rivers.

**Q.12. Why are lakes of great value to human beings? Explain any three reasons. (CBSE 2010)**

**Ans.** Lakes are of great value to human beings. (i) A lake helps to regulate the flow of a river. During heavy rainfall, it prevents flooding. During dry season, it helps to maintain an even flow of water. (ii) Lakes are also used for developing hydel power. (iii) Lakes help develop tourism and provide recreation.

**Q.13. Write any three features of the rivers originating in the Himalayas. (CBSE 2010)**

**Ans.** Three main features of the Himalayan rivers are : (i) Most of them are perennial. (ii) They have long and deep courses from their source to the sea. (iii) They perform intensive erosional activity in their upper courses and carry huge loads of silt and sand.

**Q.14. What is a lake? How are lakes formed? (CBSE 2010)**

**Ans.** A lake is an area of water surrounded by land on all sides.

- (i) There are lakes which are formed as a result of action of glaciers and ice sheets, while the others have been formed by wind, river action, and human activities.
- (ii) Some lakes are formed as a result of the tectonic activity. For example, Wular Lake in Jammu and Kashmir.
- (iii) The damming of rivers for the generation of hydel power has also led to the formation of lakes.

**Q.15. Which three river systems form the Himalayan river systems? [2010 (T-1)]**

**Ans.** The Indus, Ganga and Brahmaputra have formed the three major Himalayan river systems of the country.

**Q.16. Describe any three important features of the river Brahmaputra. [2010 (T-1)]**

**Ans.** The three important features of the river Brahmaputra are as follows :

- (i) It passes through a high rainfall region and therefore carries a large volume of water and silt.
- (ii) It has braided channel in its entire length in Assam and forms many riverine islands.
- (iii) In rainy season, the river overflows its banks causing widespread floods in Assam and Bangladesh.

**Q.17. How does a river affect the economy of a country? [2010 (T-1)]**

**Ans.** Water from the rivers is a basic natural resource. It is essential for various human activities. Therefore, river banks have attracted settlers of very ancient times. These settlements in course of time become cities. In India, rivers are used for irrigation, navigation and power generation besides agriculture. The agriculture is the major source of livelihood of the population and hence its role in the economy is a great.

**Q.18. What is the name of Brahmaputra in Tibet and Bangladesh? Give one feature of each. [2010 (T-1)]**

**Ans.** Brahmaputra is known as the Tsangpo in Tibet and Jamuna in Bangladesh. One important feature of Brahmaputra in Tibet is that it carries a smaller volume of water and less silt as it passes through a cold and dry area in Tibet. In Bangladesh, however, in rainy season the river

overflows its banks, carries much water and causeds widespread devastation by floods including siltation in the riverbed.

**Q.19. What are the differences between east-flowing and west-flowing rivers of the peninsular plateau?** [2010 (T-1)]

**Ans.** The major rivers of the peninsular the the Mahanadi, the Godavari, the Krishna etc. are flowing eastward and merges into the Bay of Bengal. Only the river Narmada and Tapti are flowing towards west and merge into the Arabian Sea. The essential differences between the two rivers are as follows :

East-flowing Rivers	West-flowing Rivers
<ol style="list-style-type: none"> <li>1. The east-flowing rivers have <b>deltas</b> at their mouth.</li> <li>2. All rivers east-flowing drain into the <b>Bay of Bengal</b>.</li> <li>3. All there rivers passed through a varied topography, i.e. hills, plains, plateaus etc.</li> <li>4. Most rivers are fed by many east-west-flowing long tributaries.</li> </ol>	<ol style="list-style-type: none"> <li>1. The west-flowing rivers do not have deltas at their mouth. They form <b>estuaries</b>.</li> <li>2. All west-flowing rivers merges into the <b>Arabian Sea</b>.</li> <li>3. These rivers are flowed through the <b>rift valley</b>.</li> <li>4. A few small tributaries joining at right angles are only found.</li> </ol>

**Q.20. What is the difference between tributary and the distributary? Write any three points.** [2010 (T-1)]

**Ans.** A smaller stream joining with the main stream is known as **tributary**. A tributary is generally carried water and silt to the main river. River Jamuna is an example of tributary of the river Ganga.

A **Distributary** is formed at the lower coarse of the river when the main channel of the river get blocked with silt which forced river to open branches. The Bhagirathi-Hooghly is a distributary of the river Ganga. The main function of the distributary is to distribute water through newly opened channels.

The three basic differences between tributaries and distributaries are given below :

Tributary	Distributary
<ol style="list-style-type: none"> <li>1. Tributaries can be found in three stages of the river – upper, middle and lower.</li> <li>2. It is useful for irrigation and transportation all through.</li> <li>3. It brings water and silt from its catchment area.</li> <li>4. Tributaries are fast-flowing.</li> </ol>	<ol style="list-style-type: none"> <li>1. It is only found in lower courses of the river.</li> <li>2. It only provides a network of transport in the lower course.</li> <li>3. It deposits silt in its coarse.</li> <li>4. Distributaries are slow-flowing.</li> </ol>

**Q.21. What are the causes of river pollution? Suggest some ways to overcome them?** [2010 (T-1)]

**Ans.** The main causes of river pollution is dumping of untreated sewage and industrial effluents into the rivers. This affects the quality of water.

- (i) Recycling and reuse of waste water is to be done to check waste water.
- (ii) Waste water is to be released after proper treatment.
- (iii) All outlets of effluents from industrial and domestic sources should be diverted to elsewhere.

**Q.22. Describe the three main features of Narmada Basin.** [2010 (T-1)]

**Ans.** The river Narmada emerges from the Amarkantak hills in Madhya Pradesh.

- (i) It flows towards the west in a **rift valley** formed due to faulting.
- (ii) It creates many picturesque places like the Marble Rocks near Jabalpur and Dhuadhar Falls.
- (iii) All the tributaries of the Narmada are very short and most of them join at right angles to the main stream.

#### D. LONG ANSWER TYPE QUESTIONS (4 MARKS)

**Q.1. What are the differences between the Himalayan rivers and the Peninsular rivers?** (Important)

**Ans.** The differences between the two main groups of rivers of India are as follows :

The Himalayan Rivers	The Peninsular Rivers
1. The Himalayan rivers are perennial in nature. They are fed by the melting snow and glaciers of the lofty ranges supplemented by monsoon rains. Hence, the rivers flow throughout the year.	1. The Peninsular rivers are non-perennial in nature. They are fed by monsoon rains and have heavy flow during rainy season followed by reduced flow during dry season. So they are seasonal rivers.
2. The Himalayan rivers have long course from their sources in the mountains to the sea.	2. The Peninsular rivers have shorter and shallower courses as compared to their Himalayan counterparts.
3. The Himalayan rivers rise in the Himadri, Himachal or Shivalik section of the Himalayas and form the Northern Plains with their deposition of alluvium.	3. Most of the rivers of Peninsular India originate in the Western Ghats and flow towards the Bay of Bengal. However, some of them originate in the Central Highlands and flow towards west.
4. The Himalayan rivers flow through geologically unstable areas and are of uncertain nature.	4. Peninsular rivers originate at much lower altitudes and flow through geologically stable areas.
5. They perform intensive erosional activity in upper course. In middle and lower course they form meanders, oxbow lakes, extensive flood-plains and well developed deltas.	5. The Narmada and Tapi are fault-guided rivers. The east-flowing rivers form large deltas. Meanders are not notable in these rivers.

**Q.2. Write a note on the Indus Drainage System.**

**Ans.** The Indus is one of the longest rivers of the world.

The river Indus rises in Tibet, near lake Mansarovar. Flowing west, it enters India in the Ladakh district of Jammu and Kashmir. A spectacular gorge formed by the Indus marks this part. Several tributaries – the Zaskar, the Nabra, the Shyok and the Hunza – join the Indus in the Kashmir region. The Indus flows through Baltistan and Gilgit and emerges from the



mountains at Attock. The tributaries of the Indus – the Jhelum, the Chenab, the Ravi, the Beas and the Satluj – flow partly through Kashmir and Himachal Pradesh and mainly through Punjab. They join together to enter the Indus near Mithankot in Pakistan.

The Indus then flows southwards and eventually reaches the Arabian Sea, east of Karachi. The Indus has a total length of 2900 km. The Indus plain has a very gentle slope. A little over one-third of the Indus basin lies in India in the states of Jammu and Kashmir, Himachal Pradesh and Punjab. Major part of its basin lies in Pakistan.

**Q.3. Write a note on the Brahmaputra Drainage System.**

**OR**

**Name any two major river systems of the Himalayan region. Describe any one in detail. (CBSE 2010)**

**Ans.** The Brahmaputra is one of the longest rivers of the world, but most of its course lies outside India. The river Brahmaputra rises in Tibet east of the Mansarovar lake. The river flows eastwards parallel to the Himalayas in its upper course. It is known as Tsangpo in Tibet. Here it carries smaller volume of water and less silt as it is a cold and dry area.

The river takes a ‘U’-turn bend at Namcha Barwa (7757 m) and enters India in Arunachal Pradesh through a gorge. In Arunachal Pradesh, it is known as Dihang. Here it is joined by the Dibang, the Lohit, the Kenula and many other tributaries. The volume of the river increases and it is known as the Brahmaputra in Assam.

The region receives heavy rainfall during the monsoon which increases the volume of water and silt content of the river. Devastating floods are caused by the river in Assam and Bangladesh every year during the rainy season. The deposition of the silt in the riverbed due to the heavy load, leads to the formation of braided channels intervened by riverine islands. The Brahmaputra has a braided channel in its entire length in Assam. Many riverine islands like the Majuli, the world’s largest riverine island, are formed in between the channels.

The Brahmaputra is known as Jamuna in Bangladesh. Here it is joined by the Ganga, known here as Padma. Together they form the Ganga-Brahmaputra Delta known as Sunderbans, and discharge into the Bay of Bengal.

**Q.4. Write a note on the Ganga Drainage System. (Important)**

**Ans.** The Ganga is the longest and the most important river system of India. It has a total length of over 2500 km. Nearly the entire river basin of the Ganga lies in India with a part of its lower course and delta in Bangladesh.

The headwaters of the Ganga is called the ‘Bhagirathi’. It is fed by the Gangotri Glacier. It is joined by the Alaknanda at Devaprayag in Uttarakhand. At Haridwar, the Ganga emerges from the mountains and enters the plains. The Ganga is joined by a large number of tributaries. The Yamuna, a right-bank tributary of the Ganga, rises from the Yamunotri Glacier, flows parallel to the Ganga and joins it at Allahabad. The Ghaghra, the Gandak, the Kosi and the Sarda are the left-bank tributaries of the Ganga.

The other right bank tributaries of the Ganga – the Chambal, the Betwa and the Son – come from the Peninsular uplands. The Ganga and its tributaries form a major portion of the northern plains. On account of water availability and fertile soil, it is the most important agricultural region of India. The Ganga develops large meanders in the plains.

The Ganga flows eastwards with the increased volume up to Farakka in West Bengal. The river

bifurcates here. Its distributary, the Bhagirathi-Hooghly, flows through the deltaic plains to the Bay of Bengal.

The mainstream flows southwards into Bangladesh. Here it is known as Padma. It is joined by the Brahmaputra. Further downstream it is known as Meghna. Together they form the Ganga-Brahmaputra Delta, also known as Sunderbans delta. It is the world's largest and fastest growing delta.

**Q.5. Write a note on the east-flowing and the west-flowing rivers of Peninsular India.**

**(CBSE 2010)**

**Ans.** The Peninsular Plateau of India is marked by a large number of east-flowing rivers and a few west-flowing rivers.

Most of the major rivers of Peninsular India such as the Mahanadi, the Godavari, the Krishna and the Kaveri and their tributaries flow eastwards. They rise from the Western Ghats, the highlands of the Deccan Plateau, flow towards east and drain into the Bay of Bengal.

Only two big rivers, the Narmada and the Tapi, with long courses flow westwards in Peninsular Plateau region. They rise from the Satpura range and Amarkantak hills, flow westwards through faults and drain into the Arabian Sea. The coastal plains between Western Ghats and the Arabian Sea are very narrow. Hence, the west-flowing coastal rivers are short and swift flowing. The Sabarmati, Mahi, Bharathpuzha and Periyar are the west-flowing rivers. The Sabarmati and the Mahi originate in the Central highlands and flow into the Arabian Sea.

The Western Ghats form the main water divide in Peninsular India.

The east-flowing rivers have wide basins. They have dendritic drainage pattern with many tributaries joining them. They form large deltas at their mouths.

The west-flowing rivers flow between highlands and have elongated courses. They have trellis and rectangular drainage pattern. They flow through rift valleys and are fault guided rivers. They form estuaries at their mouths. The west-flowing rivers do not form deltas.

**Q.6. Why are rivers important for a country's economy?**

**(CBSE 2010)**

**Ans.** Rivers are the lifelines of a nation. Rivers have been of fundamental importance in the settlement and progress of man throughout the human history.

The rivers form broad, fertile alluvial plains that have been the cradle of human civilisation. Water from the river is a basic natural resource, essential for various human activities. They provide water for domestic use. Rivers provide water for irrigation that helps to develop agriculture in the surrounding area.

The fertile soil of the riverine plain, abundant supply of water and the flat land provides opportunities for the development of agriculture. In an agricultural country like India, rivers play a major role in shaping the country's economy.

Rivers supply water for industrial use. Rivers provide for a cheap mode of transportation, inland navigation.

Hydro-electricity harnessed from river water supplies power to our industries, to our homes and to our agricultural fields. Integrated water management of rivers through River Valley Projects by building dams provide hydro-electricity, water for irrigation, inland navigation, fishing, recreation etc.

Hence, rivers are of prime importance in the flourishing of a country's economy.

**Q.7. What are drainage patterns? Write a brief note on the different drainage patterns.**

**Ans.** In highland areas small streams flowing from different directions and join together to form the main river which ultimately drains into some large waterbody, a lake, sea or ocean. The main river is joined by a number of tributaries along its course. The streams within a drainage basin form certain patterns called drainage patterns.

The patterns formed depend on the (i) slope of the land, (ii) underlying rock structure and (iii) the climatic conditions of the area. Dendritic, trellis, rectangular and radial are the four main types of drainage patterns.

When the main stream with its tributaries have a drainage pattern resembling the branches of a tree, it is known as dendritic drainage pattern. The dendritic pattern develops where the river channel follows the slope of the terrain.

When a river is joined by its tributaries, at approximately right angles, trellis drainage pattern is formed. A trellis drainage pattern develops where hard and soft rocks exist parallel to each other. A rectangular drainage pattern develops on a strongly jointed rocky terrain.

When streams flow in different directions from a central peak or dome like structure, the radial drainage pattern develops. The radial drainage pattern resembles the spoke of a wheel on the map.

**Q.8. Write a note about the causes and remedy of river pollution.**

**OR**

**Explain any three reasons for pollution of rivers in India.**

**(CBSE 2010)**

**OR**

**Discuss any three causes of water pollution.**

**(CBSE 2010)**

**Ans.** Pollution of rivers by discharge of untreated sewage water and industrial effluents is a big menace. They are changing the life-giving rivers into toxic streams. Dumping of garbage into the streams is another cause of river pollution.

The growing domestic, municipal, industrial and agricultural demand for water from the rivers due to ever increasing population has led to over-exploitation of water. Excessive, uncontrolled use of this main source of freshwater has reduced their volume and has affected the quality of water. Increasing urbanisation and industrialisation has increased the pollution level of many rivers to such a level that the self-cleansing capacity of the river cannot cope up with it.

Concern over rising pollution in our rivers led to the launching of various river action plans like the Ganga Action Plan, the Yamuna Action Plan, etc., to clean the rivers. The National River Conservation Plan (NRCP) covers 152 towns along 27 interstate rivers in 16 states. Pollution abatement works are being taken up in 57 towns under it. A million litres of sewage is targeted to be intercepted, diverted and treated.

Citizens should also take up responsibility to prevent river pollution. Garbage should not be disposed in rivers. Industrial waste should not be dumped into rivers. Sewage and industrial effluents should be treated before discharging into rivers.

### E. MAP WORK (4 MARKS)

**Q.1. In the outline map of India, trace and label the course of the following rivers:**

(a) Ganga river

(b) Krishna river

(c) Kosi river

(d) Ghagara river

**Q.2. In the outline map of India, trace and label the following:**

- (a) Brahmaputra river (b) Godavari river (c) Chilika lake (d) Dal lake

**Q.3. In the outline map of India, trace and label the following:**

- (a) Narmada river (b) Chambal river (c) Satluj river (d) Tapi river

## II. FORMATIVE ASSESSMENT

### A. PROJECT WORK

**Q.1. Collect pictures of freshwater lakes and saltwater lakes of India and make a collage.**

**Q.2. Construct a drainage system using plaster of paris and fabric colours. Take three blocks to represent the Upper Course, Middle Course and Lower Course. Carve out the features present in each course on the blocks. Place all the three blocks one after the other according to their course, so that they form a comprehensive unit. Show how a river flows from the hills to the sea in a natural way.**

**Requirements :**

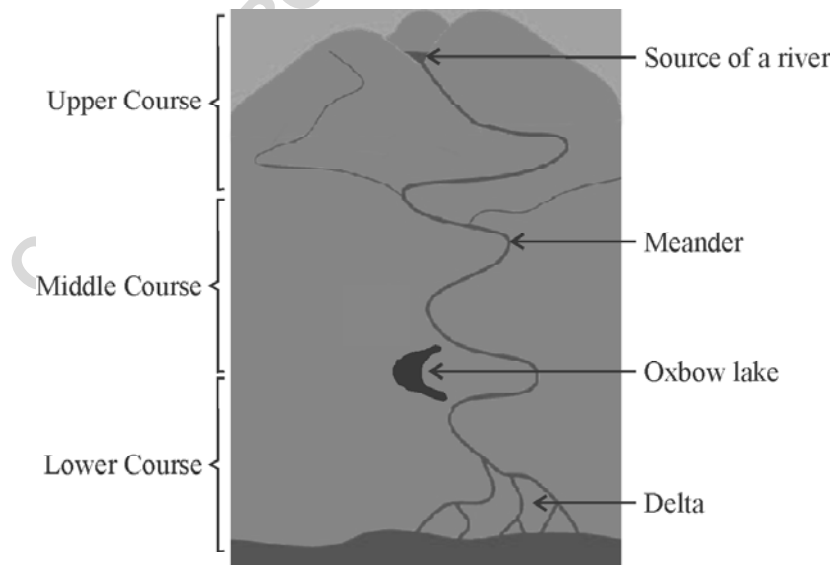
- (i) A wooden or glass board. [1 square feet]
- (ii) Plaster of paris [500 gm]
- (iii) Fabric colours.

### B. ACTIVITIES

**Q.1. Label the following features in the river image alongside:**

**Ox-bow lake, Meander, Delta, Source of the River, Upper Course, Middle Course, Lower Course.**

**Ans.**



Some Features Made by Rivers

**Q.2. Categorise the following rivers into two sections : Himalayan Rivers and Peninsular Rivers.**

Ghaghra                      Narmada                      Mahanadi                      Beas      Sarda  
 Krishna                      Godavari                      Brahmaputra                      Gandak      Tapi

**Ans.**

Himalayan Rivers	Peninsular Rivers
1. Ghaghra	Krishna
2. Brahmaputra	Narmada
3. Beas	Godavari
4. Gandak	Mahanadi
5. Sarda	Tapi

**Q.3. Categorise the following lakes into freshwater and salt lakes.**

Wular Lake      Kolleru Lake      Sambhar Lake                      Pulicat Lake  
 Chilika Lake      Loktak Lake      Bhimtal                      Barapani

**Ans.**

Freshwater lakes	Salt water lakes
Wular Lake	Chilika Lake
Loktak Lake	Kolleru Lake
Bhimtal	Sambhar Lake
Barapani	Pulicat Lake

**Q.4. Direction Hunt**

Write the names of the following peninsular rivers on small chits of paper. Ask some students to volunteer and pick up a chit of paper each. Ask the students to stand in two queues—one at the right hand corner of the room if they represent east-flowing rivers and one at the left corner of the room to represent west-flowing rivers. Ask them to read out the names of the rivers one by one in turn.

Krishna, Tapi, Sabarmati, Damodar, Mahanadi, Kaveri, Mahi, Brahmani, Bharathpuzha, Periyar, Narmada, Godavari.

**Ans.**

West-flowing rivers	East-flowing rivers
1. Tapi	1. Krishna
2. Sabarmati	2. Damodar
3. Mahi	3. Mahanadi
4. Bharathpuzha	4. Kaveri
5. Periyar	5. Brahmani
6. Narmada	6. Godavari

### C. ASSIGNMENTS

**Q.1. The following histogram represents the length of Indian rivers. Label the histogram with the names of the rivers:**

Godavari, Brahmaputra, Ganga, Tapi

**Ans. A :** Brahmaputra (most of it is outside India)

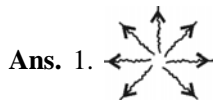
**B :** Ganga

**C :** Godavari

**D :** Tapi

**Q.2. Drainage Pattern Hunt**

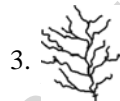
Dendritic Drainage, Radial Drainage, Trellis Drainage, Rectangular Drainage Place the correct label below the diagrams.



Radial



Trellis



Dendritic



Rectangular

**Q.3. Ask students to collect pictures, photographs, newspaper cuttings and information regarding river pollution. Tell them to prepare a collage with the available materials. Display it in class.**

### D. GROUP DISCUSSION

**Q.1. Discuss with the students of your classroom about the techniques adopted by the Government to control river pollution. Take help from your teacher.**

**Q.2. Have a group discussion on River Pollution.**

(a) How is it caused?

(b) What are its ill consequences?

(c) Steps to control river pollution.

### E. QUIZZES

**Q.1. Crossword :**

Solve the following crossword with the help of the clues provided :

Across :

1. Longest river in India

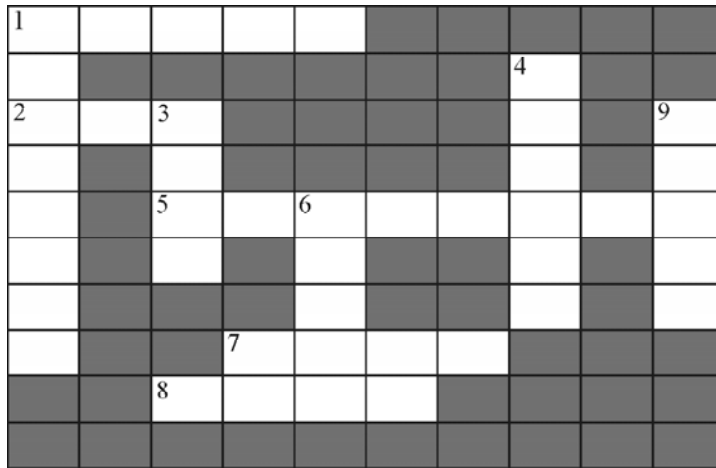
2. Famous lake in Kashmir

5. Freshwater lake and tourist place in Uttarakhand

7. The only large river of Indian Desert

8. River known as 'Sorrow of Bihar'

**Ans. 1. GANGA    2. DAL    5. NAINITAL    7. LUNI    8. KOSI**



Down :

1. River known as 'Dakshin Ganga'
3. River in Rajasthan
4. Freshwater lake in Manipur
6. Major river flowing through Ladakh and flowing into Pakistan
9. Largest freshwater lake in India

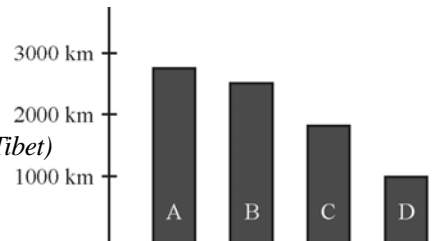
Ans. 1. GODAVARI 3. LUNI 4. LOKTAK 6. INDUS 9. WULAR

### Q.2. Word Jumble

Rearrange the letters in the following words to find the proper meaning as suggested by the hints provided.

- a. RLTELSI (Type of drainage)
- b. NEMADRE (Loop in river)
- c. AETDL (Where river meets sea)
- d. GTASNOP (The river Brahmaputra as known in Tibet)
- e. BECAHN (Tributary of Indus)

- Ans. a. TRELLIS  
 b. MEANDER  
 c. DELTA  
 d. TSANGPO  
 e. CHENAB



### Q.3. Missing Letters

Find the missing letters from the following words using the hints provided :

- Ans. a. GANGOTRI (Source of the Ganga)  
 b. HARIDWAR (Place where Ganga emerges into the Plains of India)  
 c. NARMADA (West-Flowing Peninsular River)  
 d. KAVERI (River which rises from the Brahmagri in Western Ghats)  
 e. TIBET (Place from where the Indus and the Brahmaputra river rises)