Class XI Session 2025-26
Subject - Geography
Sample Question Paper - 4

Time Allowed: 3 hours **Maximum Marks: 70**

General Instructions:

Read the following instructions carefully and follow them:

1. This question paper contains 30 questions. All questions are compulsory.
2. Question paper is divided into five sections A, B, C, D and E.
3. Section A Questions no. 1 to 17 are Multiple Choice type questions. Each question carries 1 mark.
4. Section B Questions no. 18 and 19 are Source-based questions. Each question carries 3 marks.
5. Section C Questions no. 20 to 23 are Short Answer type questions. Each question carries 3 marks. Answer to these questions shall be written in 80 to 100 words.
6. Section D Questions no. 24 to 28 are Long Answer type questions. Each question carries 5 marks. Answer to these questions shall be written in 120 to 150 words.
7. Section E Questions no. 29 and 30 are Map-based questions. Each question carries 5 marks.
8. There is no overall choice given in the question paper. However, an internal choice has been provided in a few questions in all sections other than Section A.

Section A

1. **Assertion (A):** India's central location at the head of the Indian Ocean gives it great strategic importance. **[1]**
Reason (R): Its location help in trading with other countries.

a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false.
d) A is false but R is true.

2. Match the following. **[1]**

List I (Climatic Groups Letters)	**List II (Climatic Types)**
(a) Af	(i)Tropical wet
(b) Am	(ii) Tropical monsoon
(c) Aw	(iii) Tropical wet and dry
(d) Cfa	(iv) Humid sub-tropical

a) (a) - (iv), (b) - (i), (c) - (ii), (d) - (iii)
b) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv)
c) (a) - (iii), (b) - (ii), (c) - (i), (d) - (iv)
d) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv)

3. Which one of the water bodies separates the Andaman from the Nicobar? **[1]**

a) Gulf of Mannar
b) Andaman Sea
c) 10° Channel
d) 11° Channel

4. Consider the following statements and choose the correct option from the given options **[1]**

I. The desert floors get heated up too less and too slowly.
II. The desert floors are very dry and barren.

a) Both the statements I and II are incorrect
b) Both the statements are true and statement II correctly present the reason for statement I
c) Only statement I is correct
d) The desert floors get heated up too much and too quickly because of being dry and barren.

5. The temperature at which the water starts evaporating is referred as: **[1]**

a) Dew point
b) Condensation
c) Latent heat of vapourisation
d) Sublimation

6. In the mature stage, loop-like channel patterns develop in rivers. These are called: **[1]**

a) Cirque
b) Delta
c) Canyon
d) Meanders

7. **Assertion (A):** The Brahmaputra is well-known for floods, channel shifting, and bank erosion. **[1]**
Reason (R): It receives heavy rainfall in its catchment area.

a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false.
d) A is false but R is true.

8. They are deep, long and wide troughs or basins with very steep concave to vertically dropping high walls at its head as well as sides. What are they? **[1]**

a) Esker
b) Horne
c) Drumlin
d) Cirque

9. Which one of the following describes the lithosphere? **[1]**

a) Mantle and core
b) Crust and upper mantle
c) Crust and core
d) Upper and lower mantle

10. The common name for the gases like carbon dioxide, methane, ozone and chlorofluorocarbons is: **[1]**

a) Atmospheric gases
b) chemical gases
c) Greenhouse gases
d) Heat producing gases

11. Arrange the following in correct sequence: **[1]**

i. Flowing in a rift valley between the Satpura in the south and the Vindhyan range in the north.
ii. The Narmada originates on the western flank of the Amarkantak plateau at a height of about 1,057 m.
iii. After flowing a distance of about 1,312 km, it meets the Arabian sea south of Bharuch, forming a broad 27 km long estuary.
iv. It forms a picturesque gorge in marble rocks and Dhuandhar waterfall near Jabalpur.

a) (iii) - (ii) - (iv) - (i)

b) (iv) - (ii) - (i) - (iii)

c) (ii) - (i) - (iv) - (iii)

d) (i) - (iv) - (iii) - (ii)

12. What is the tropical cyclone known as in Western Australia? **[1]**

a) Hurricane

b) Willy-Willies

c) Typhoons

d) Cyclones

13. The world's richest region from marine biodiversity is **[1]**

a) Gulf of Myanmar

b) Sunderbans

c) Nilgiri Biosphere Reserve

d) Gulf of Mannar Biosphere Reserve

14. Which of the following is incorrectly matched? **[1]**

Physiography	**Features**
(a) Western coastal plains	(i) Kayals
(b) Eastern coastal plains	(ii) Deltas
(c) Lakshadweep	(iii) Minicoy
(d) Andaman and Nicobar	(iv) Corals

a) (c) - (iii)

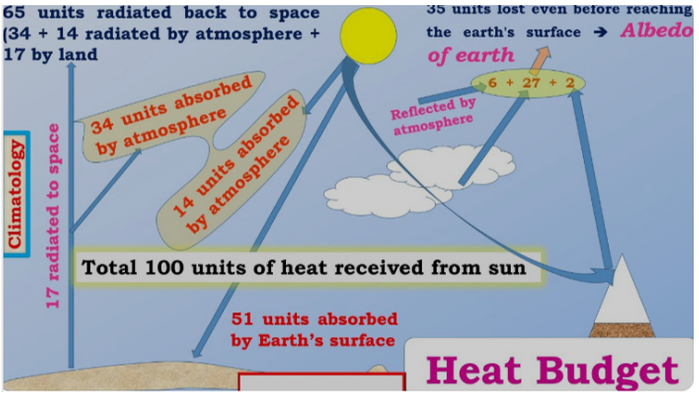
b) (b) - (ii)

c) (a) - (i)

d) (d) - (iv)

Question No. 15 to 17 are based on the given text. Read the text carefully and answer the questions: **[3]**

Read the diagram.



15. What is the term used to describe the radiation emitted by the Earth's surface?

a) Terrestrial radiation

b) Net radiation balance

c) Albedo

d) Insolation

16. Out of the remaining 65% of the energy, what percentage is absorbed by the surface of the earth as scattered radiation?

a) 14%

b) 51%

c) 34%

d) 17%

17. What does the heat balance of the earth describe?

a) How the earth manages its temperature despite heat exchange.

b) How the earth exchanges heat with other planets.

c) How the earth loses heat to outer space.

d) How the earth gains heat from volcanic

activity.

Section B

18. **Read the following text carefully and answer the questions that follow:** **[3]**

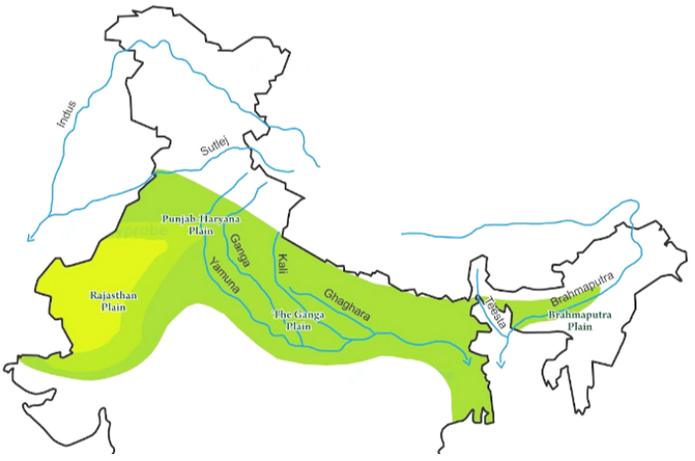
There are two types of body waves. They are called P and S-waves. P-waves move faster and are the first to arrive at the surface. These are also called 'primary waves'. The P-waves are similar to sound waves. They travel through gaseous, liquid and solid materials. S-waves arrive at the surface with some time lag. These are called secondary waves. An important fact about S-waves is that they can travel only through solid materials. This characteristic of the S-waves is quite important. It has helped scientists to understand the structure of the interior of the earth. Reflection causes waves to rebound whereas refraction makes waves move in different directions. The variations in the direction of waves are inferred with the help of their record on seismograph. The surface waves are the last to report on seismograph. These waves are more destructive. They cause displacement of rocks, and hence, the collapse of structures occurs.

i. Describe one distinction between P and S waves in terms of the states of matter. (1)

ii. How is it feasible to claim that S-waves are more destructive? (1)

iii. What role does the seismograph play in the study of waves? (1)

19. Observe the given map: **[3]**



i. The northern plains are formed by the alluvial deposits brought by the rivers. Name the three major rivers. (1)

ii. Name the states forming a water divide between the Indus and the Ganga River systems. (1)

iii. Name the river that flows from the northeast to the southwest direction before it takes an almost 90° southward turn at Dhubri before it enters into Bangladesh. (1)

20. Write the difference between Physical weathering and chemical weathering **[3]**

OR

It is weathering that is responsible for bio-diversity on the earth. How?

21. **Geography is known as a science of integration or synthesis.** Discuss. **[3]**

22. What do you understand by atmosphere? **[3]**

OR

"Monsoon is a gambling for Indian farmers." Explain.

23. What is the significance of small solid particles in the atmosphere? **[3]**

Section C

24. What are the waves? **[5]**

25. What is meant by the process of differentiation? **[5]**

OR

Explain different phases of evolution of planets.

26. What are the aims of National Forest Policy? **[5]**

OR

Explain in short about four important Biospheres of India.

27. Differentiate the following: **[5]**

(a) Gulf and Strait

(b) Gulf and Bay

OR

Explain the importance of Geographical location of India.

28. Explain about Indus River System. **[5]**

OR

What factors determine volume of water in a river?

Section D

29. On the outline map of India, locate and label the following: **[5]**

i. Regions of forests the can develop in sweet as well as saline water

ii. River that rises in the Gangotri glacier

iii. Biosphere Reserve of Pachmarhi

iv. Areas to the east where montane forest are located

v. Archipelagos having seasonal Rainfall above 400 cms during June-September

30. With the help of the following key, identify the areas marked as A, B, C, D, and E on the given outline map of the World. Write the correct name of the place in the blank space given on the map. **[5]**

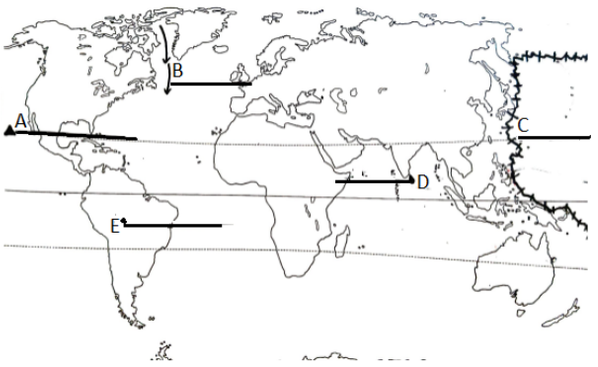
A. This currently active shield volcano is one of the most active of the volcano.

B. This is a cold current in the North Atlantic Ocean that flows from the Arctic Ocean south.

C. This tectonic plate is largely an oceanic plate.

D. This ecological hotspot is located in Srilanka.

E. This continent was part of Pangea millions of years ago.



Solution

Section A

1. **(a)** Both A and R are true and R is the correct explanation of A.
   Explanation:
   India's central location at the head of the Indian Ocean gives it great strategic importance and helps in maintaining trade and commerce. It helps India to keep close contact with West Asia, Africa, and Europe from the western coast and southeast and east Asia from eastern Asia.
2. **(d)** (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv)
   Explanation:
   (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv)
3. **(c)** 10° Channel
   Explanation:
   The **Andaman** and the **Nicobar** islands are separated by a waterbody which is called the **Ten degree channel**. It is believed that these islands are an elevated portion of submarine mountains. However, some smaller islands are volcanic in origin.
4. **(d)** The desert floors get heated up too much and too quickly because of being dry and barren.
   Explanation:
   The desert floors get heated up too much and too quickly because of being dry and barren.
5. **(c)** Latent heat of vapourisation
   Explanation:
   Latent heat of vapourisation
6. **(d)** Meanders
   Explanation:
   Meanders
7. **(a)** Both A and R are true and R is the correct explanation of A.
   Explanation:
   The Brahmaputra is well-known for floods, channel shifting, and bank erosion. This is due to the fact that most of its tributaries are large, and bring a large quantity of sediments owing to heavy rainfall in its catchment area.
8. **(d)** Cirque
   Explanation:
   Cirque
9. **(b)** Crust and upper mantle
   Explanation:
   Crust and upper mantle

10.

(c) Greenhouse gases

Explanation:

Gases like **methane**, **chlorofluorocarbons**, and **nitrous oxide** which are present in much smaller concentrations in the atmosphere, together with carbon dioxide are known as **green house gases**.

11.

(c) (ii) - (i) - (iv) - (iii)

Explanation:

(ii) - (i) - (iv) - (iii)

12.

(b) Willy-Willies

Explanation:

Tropical cyclones are known as Cyclones in the Indian Ocean, Hurricanes in the Atlantic, Typhoons in the Western Pacific and the South China Sea, and **Willy-willies in Western Australia.**

13.

(d) Gulf of Mannar Biosphere Reserve

Explanation:

The **Gulf of Mannar Biosphere Reserve** is one of the world's richest regions from a marine biodiversity perspective.

14.

(d) (d) - (iv)

Explanation:

Andaman and Nicobar - Corals

15. **(a)** Terrestrial radiation

Explanation:

Terrestrial radiation

16. **(d)** 17%

Explanation:

17%

17. **(a)** How the earth manages its temperature despite heat exchange.

Explanation:

How the earth manages its temperature despite heat exchange.

Section B

18. i. P-waves can travel through gaseous, liquid and solid materials whereas S-waves can travel only through solid materials.
ii. S-waves are more destructive because they cause displacement of rocks, and hence, the collapse of structures occurs.
iii. The variations in the direction of waves are inferred with the help of their record on seismograph.

19. i. The Indus, the Ganga and the Brahmaputra.
ii. Haryana and Delhi
iii. The Brahmaputra River

20.

S.no.	Physical Weathering	Chemical weathering
1.	Physical weathering gets known in science as the process that helps with the breaking of rocks without changing the actual form of them.	Chemical weathering gets known in science as the process that helps with the breaking of rocks by changing the actual composition of them.
2.	Some of the leading causes of physical weathering become the temperature, sun, wind, ice and weather changes	The main reason for chemical weathering to occur always is water.

3.	Most of the roots grow within the rocks placed on the surface exert pressure on those rocks and finally break them into pieces causing physical weathering.	Roots that grow within the rocks, while they have the strength, the water from them gets soaked by stones, and different chemical reactions start taking place within them forming chemical weathering.
4.	Four main types of physical weathering exist, and they are wedging, exfoliation, abrasion and thermal expansion.	Oxidation and reduction carbonation, hydration and soil are the agents.
5.	Rocks are affected at the greater depth.	Rocks are affected on the surface only.
6.	Changes that occur due to physical weathering become permanent as the actual object become divided into many others.	Changes that occur due to chemical weathering entirely alter the object that in some cases, disappear.

OR

Weathering processes lead to breaking down the rocks into smaller fragments and preparing the way for the formation of not only regolith and soils but also erosion and mass movements. Biodiversity is basically a result of forests and vegetation Forests and vegetation depend upon the depth of weathering mantles. Erosion cannot be significant if the rocks are not weathered. It implies that weathering aids mass wasting, erosion, and reduction of relief and changes in landforms are a consequence of erosion.

21. The subject of Geography has a close relationship with other subjects. Different subjects provide useful information, but only those factors are studied, which help Geography. There are many inter-disciplinary areas in the study of geography. Therefore, it is called a science of integration and synthesis. The maps of Relief, Agriculture, Transportation, etc. are studied individually, but these maps studied in an integrated way, give very useful results. This approach is called the Holistic approach.
22. One of the four components of the Earth's ecosystem (the other three are biosphere , hydrosphere, and lithosphere), it is a band of gases enveloping the Earth's surface. Ninety-nine percent of its mass is concentrated within 20 miles of the earth's surface, and its two largest constituents (in the lowest part) are nitrogen (about 78 percent) and oxygen (about 21 percent). The remaining one percent includes mostly argon and minute amounts of carbon dioxide, helium, krypton, methane, neon, sulfur dioxide, water vapour , and xenon. In meteorology, atmosphere is divided into seven layers called regions (from the lowest to the highest): troposphere, stratosphere, mesosphere, chemosphere, thermosphere, ionosphere, and exosphere. The atmosphere is composed of gases, water vapour and dust particles. The proportion of gases changes in the higher layers of the atmosphere in such a way that oxygen will be almost in negligible quantity at the height of 120 km. Similarly, carbon dioxide and water vapour are found only up to 90 km from the surface of the earth.

OR

The agricultural property of India depends very much on time and adequately distributed rainfall. If it fails, agriculture is adversely affected particularly in those regions where means of irrigation are not developed. Monsoon is the axis around which revolves the entire agricultural cycle of India. Around 64% of people of India depend on agriculture for their livelihood and agriculture itself is based on south-west monsoon. Except for Himalayas, all the parts of the country have a temperature above the threshold level to grow the crops or plants throughout the year. Regional variations in monsoon climate help in growing various types of crops. Variability of rainfall brings droughts or floods every year in some parts of the country.

23. The small solid particles present in the atmosphere originate from different sources and include sea salts, fine soil, smoke-soot, ash, pollen, dust, and disintegrated meteors. Most of the solid particles are kept in suspension in the atmosphere. These particulates help in scattering solar radiation, which adds the varying charming colour of red and orange at dawn and dusk. The selective scattering of solar radiation by dust particles make the sky appear blue. Dust and salt particles act as hygroscopic nuclei around which water vapour condenses to produce clouds. Thus there is a great significance of small solid dust particles (the particulate matter) in the atmosphere.

Section C

24. Waves are oscillatory movements in water, manifested by an alternate rise and fall of the sea surface. In other words, waves are actually the energy, not the water as such, which moves across the ocean surface. Water particles only travel in a small circle as a wave passes. The maximum wave height is determined by the strength of the wind, i.e. how long it blows and the area over which it blows in a single direction. Waves travel because the wind pushes the water body in its course while gravity pulls the crests of the waves downward. The falling water pushes the former troughs upward, and the wave moves to a new position. The actual motion of the water beneath the waves is circular. It indicates that things are earned up and forward as the wave approaches, and down and back as it passes.
25. Planetesimal moved together to form the planets. The collection of the mass forming the earth also believed to have followed the same sequence. As the material was following collected through gravitation the bodies getting collected had an impact on the

existing materials. These impacts generated lots of heat. The process continued and the heat generated caused the melting of the materials. This occurred during and soon after the formation of the earth. The mix of lighter and denser material on melting started getting separated depending on their dermatitis. This allowed the heavier material like iron to sink towards the centre of the earth and the lighter ones to move towards the surface. This process of separation of lighter and denser material is called differentiation.

OR

The following are considered to be the stages in the development of planets :

(i) The stars are localised lumps of gas within a nebula. The gravitational force within the lumps leads to the formation of a core to the gas cloud and a huge rotating disc of gas and dust develops around the gas core.

(ii) In the next stage, the gas cloud starts getting condensed and the matter around the core develops into small- rounded objects. These small-rounded objects by the process of cohesion develop into what is called planetesimals. Larger bodies start forming by collision, and gravitational attraction causes the material to stick together. Planetesimals are a large number of smaller bodies.

(iii) In the final stage, these large number of small planetesimals accrete to form a fewer large bodies in the form of planets.

26. A new National Forest Policy was adopted in 1988 to stop the further decrease in forest cover.

i. The policy aimed at bringing 33 percent of India's landmass under forest cover. The world coverage was 27 percent, and India's own coverage at that time was only 19 percent.
ii. The policy further stated that the effort would be made to maintain environmental stability and to restore forests where the ecological balance was disturbed.
iii. The other objective was to conserve the natural heritage of the country, its biological diversity, and the genetic pool.
iv. The policy further aimed to check soil erosion, an extension of the desert lands, and the reduction of floods and droughts.
v. Other objectives of the policy were to increase the forest cover through social forestry and afforestation on denuded and unproductive land, increase in productivity of forests to make timber, fuel, fodder, and food available to rural and tribal population dependant on forests, and encourage the substitution of wood.
vi. Lastly, it emphasized the creation of a massive people's movement involving women to encourage planting of trees, and stop felling of trees.

OR

Four important Biospheres of India:

i. **Nilgiri Biosphere Reserve:** Location - the western Ghats and Nilgiri Hills in South India
Area - 5,520 square kilometre
Fauna - 100 species of mammals, 350 species of birds, 80 species of reptiles including Tiger, Asian elephant Lion-tailed macaque and Nilgiri tahr. Nilgiri has the largest population of Lion-tailed macaque and Nilgiri tahr, which are two endangered species
Flora - 3,300 species of flowering plants grow in Nilgiri and out of them, 132 are endemic to this region. Sholas or the local tropical forests host most rare plant species.
ii. **Nanda Devi Biosphere Reserve:** The Nanda Devi Biosphere Reserve is situated in Uttarakhand. It includes parts of Chamoli, Almora, Pithoragarh and Bageshwar districts. The major forest types of the reserve are temperate. A few important species are silver-weed and orchids like latifolie and rhododendron. The biosphere reserve has a rich fauna like the snow leopard, black bear, brown bear, musk deer, snow- cock, golden eagle and black eagle.
iii. **Sunderbans Biosphere Reserve:** It is located in the swampy delta of the river Ganga in West Bengal. It extends over a vast area of 9,630 sq. km and consists of mangrove forests, swamps and forested islands. Sunderbans is the home of nearly 200 Royal Bengal tigers.
More than 170 birds species are known to inhabit these mangrove forests. In the Sunderbans, the mangrove forests are characterised by Heritiera fomes, a species valued for its timber.
iv. **Gulf of Mannar Biosphere Reserve:** The Gulf of Mannar Biosphere Reserve covers an area of 105,000 hectares on the south-east coast of India. It is one of the world's richest regions from a marine biodiversity perspective. The biosphere reserve comprises 21 islands with estuaries, beaches, forests of the nearshore environment, sea grasses, coral reefs, salt marshes and mangroves.

27. (a) Difference between Gulf and straits

(i) Meaning: A gulf is a large body of water almost encircled by land except for a small mouth that opens out to the sea. A strait is a strip of water that separates two lands or two large bodies of water.

(ii) Use: Straits are used for navigational purposes and have played an integral part when it comes to shipping routes. Gulfs are more useful for human settlements, as such areas provide easy access to the ocean while being well protected as well.

(iii) Association: Gulfs can be easily associated with inland bodies of water as well as the ocean. Straits are mostly discussed with regards to the ocean.

(b) Difference between Gulf and Bay

(i) A bay is not as enclosed by land masses as a gulf.

(ii) Gulf is formed because of erosion of the rocks as water makes in roads into adjoining land.

(iii) Gulfs take any form while bays are mostly oval or round shaped.

OR

Importance of Geographical location of India:

i. **Central Locations:** India is centrally located in the Eastern hemisphere. Europe and the Western Parts of America are equidistant from India.
ii. **Trade Routes:** India is favourably located for international trade. Many trade routes are through the Indian ocean.
iii. **Nearness to Tropic of Cancer:** The tropic of cancer passes through the centre of India. So India is a tropical country. The long growing season makes India an agricultural country.
iv. **Long Coastline:** India has a long coastline that provides many deep, protected and natural harbours.
v. **Defence:** The natural boundaries are favourably located from a defence point of view.
vi. **Effect of the Indian Ocean:** The Indian ocean leads to the origin of rain giving monsoons.
vii. **Effect of Himalayas:** The unbroken chain of the Himalayas acts as a climatic barrier. It forces monsoons to give rainfall and protects northern India from cold polar winds.

28. The Indus River system:

1. It is one of the largest river basins of the world, covering an area of 1,114 km in India.
2. The Indus also known as the Sindhu, is the westernmost of the Himalayan rivers in India.
3. It originates from a glacier near Bokhar Chu in the Tibetan region at an altitude of 4,164 m in the Kailash Mountain range.
4. In Tibet, it is known as 'SingiKhamban; or Lion's mouth.
5. The Indus receives a number of Himalayan tributaries such as the Shyok, the Gilgit, the Zaskar, the Hunza, the Nubra, the Shigar, the Gasting and the Dras.
6. It finally emerges out o the hills near Attock where it receives the Kabul river on its right bank.
7. The river flows southward and receives 'Panjnad' a little above Mithankot.
8. The Panjnad is the name given to the five rivers of Punjab, namely the Satluj, the Beas, the Ravi, the Chenab and the Jhelum.
9. It finally discharges into the Arabian Sea, east of Karachi.
10. The Indus flows in India onlythrough the Leh district in Jammu and Kashmir.

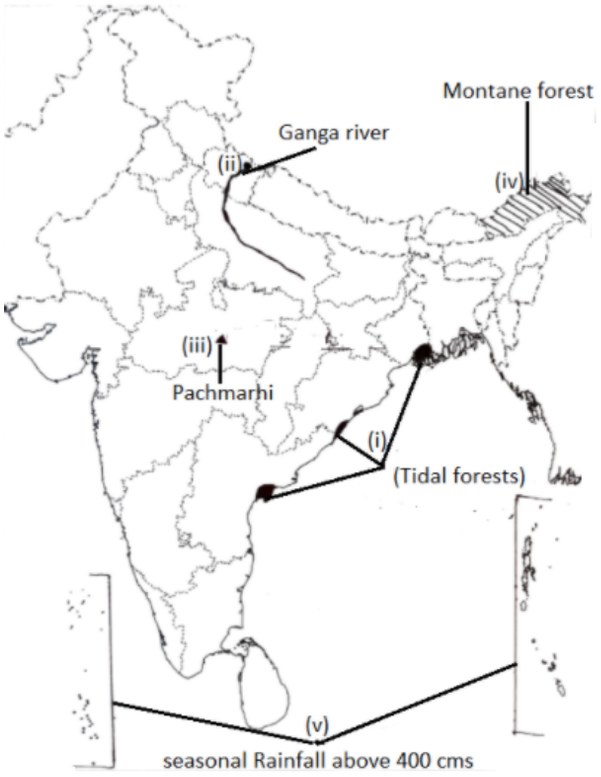
OR

The factors affecting the volume of water in a river are

1. **Size of the drainage basin:** A drainage basin in an area drained by one main river and its tributaries. If the drainage basin is large, the volume of water in the river will be more. When the drainage basin is large the surface run off flourished the river is more runoff in the amount of rainwater that flows on the ground and ultimately into the river or lake. On the other hand, if the drainage basin is small volume of water in the river will be less because there is less surface area for the rain to fall on.
2. **Vegetation** : It is also an important factor vegetation intercepts rain and allows more water to infiltrate or seep into the ground. Abundant vegetation allows more rainwater to infiltrate the ground, thus its reducing the flow of surface runoff which result the volume of water in the river becomes smaller. Sparse vegetation does not allow much rainwater to infiltrate the ground, thus increasing the flow of surface runoff which results the volume of water in the river becomes large.
3. **Permeability of rocks:** In area with permeable or porous rocks, much of the rainwater sweeps through the pores in the rocks into the ground. In such areas, surface run off is less and water flowing into the river channel will also be less.
4. **Climate:** In areas with hot and wet climate such as equatorial area, volume of water rivers will be high. However, the amount of water will be less in areas with dry climate receiving less rainfall. In areas with prominent wet or dry seasons, volume of water in the river will vary according to the amount of rainfall received.

Section D

29. i. **Tidal (Mangrove) forests:** Located in the Sunderbans of West Bengal, the Mahanadi, the Godavari, and the Krishna deltas.
ii. **Ganga River:** Rises in the Gangotri glacier near Gaumukh in the Uttarkashi district of Uttarakhand.
iii. **Pachmarhi:** Located in the Hoshangabad district of Madhya Pradesh.
iv. **Montane forests:** Located in Arunachal Pradesh.
v. **Andaman and Nicobar and Lakshadweep islands:** Andaman and Nicobar archipelago in Bay of Bengal and Lakshadweep islands in the Arabian Sea.



30. A. Hawaii (Mount Kilauea)
    B. Labrador Current
    C. Pacific plate
    D. Sinharaja forest
    E. South America