

Class XI Session 2025-26

Subject - Geography

Sample Question Paper - 8

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. Geography studies the differences of phenomena usually related to different parts of the earth's surface. Who gave this definition? [1]
a) Ratzel
b) Kumari Sample
c) Alfred Hartner
d) Hambolt
2. Which one of the following forest spread over regions which receive rainfall between 70-200 cm? [1]
a) Tropical Deciduous forests
b) Tropical Thorn forests
c) Montane forests
d) Littoral and Swamp forests
3. A galaxy start to form a large cloud of hydrogen gas called [1]
a) Earth
b) Planet
c) Nebula
d) Moon
4. Consider the following statements and choose the correct option from the given options [1]
I. A ship at sea is greatly affected by tsunami and it is easy to detect a tsunami in the deeper parts of sea.
II. Over deep water the tsunami has very short wave-length and virtually unlimited wave-height.
a) Only statement I is correct
b) Both the statements are true and statement II

correctly present the reason for statement I

- c) Only Statement II is correct
d) Both the statements I and II are incorrect
5. Which of the following is not a sub-branch of Biogeography? [1]
a) Zoo Geography
b) Human Geography
c) Climate Geography
d) Plant Geography
6. What is the term used for the percentage of moisture present in the atmosphere as compared to its full capacity at a given temperature? [1]
a) Absolute humidity
b) Specific humidity
c) Saturated humidity
d) Relative humidity
7. The river that is believed to have disappeared in Rajasthan is [1]
a) Ganga
b) Ghaggar
c) Saraswati
d) Yamuna
8. Which one of the following is important in heating the lower layer of the atmosphere? [1]
a) Convection
b) Insolation
c) Advection
d) Conduction
9. **Assertion (A):** The sub-continent of India can be easily located on the world map. [1]
Reason (R): It is located in the South of the Asian continent.
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.
10. Vegetation cover is very scanty in parts of Rajasthan due to [1]
a) Overgrazing
b) Deforestation
c) Over irrigation
d) Overpopulation
11. Arrange the following in correct sequence: [1]
i. It then passes over west Rajasthan and along the Aravalis, causing only a scanty rainfall.
ii. A third branch of Arabian monsoon wind strikes the Saurashtra Peninsula and the Kachchh.
iii. These two branches, reinforced by each other, cause rains in the western Himalayas.
iv. In Punjab and Haryana, it too joins the Bay of Bengal branch.
a) (ii) - (i) - (iv) - (iii)
b) (iv) - (ii) - (i) - (iii)
c) (i) - (iv) - (iii) - (ii)
d) (iii) - (ii) - (iv) - (i)
12. Bamboos are the important raw material for making [1]
a) A match stick
b) Boxes
c) Books
d) Musical instrument
13. Which state in India has a boundary with the maximum number of states? [1]
a) Maharashtra
b) West Bengal
c) Uttar Pradesh
d) Andhra Pradesh



14. Which of the following pairs is matched correctly? [1]

River	Catchment area sq. km
(a) Mahi	(i) 21,674
(b) Kalinadi	(ii) 5,397
(c) Dhandhar	(iii) 2,770
(d) Sabarmati	(iv) 2,029

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

15. Earthquake is [1]

- a) evolution of gases
- b) Rotation of plates
- c) release of heat
- d) shaking of the earth

16. Match column I with column II and select the correct answer using the codes given below. [1]

Column I	Column II
(a) India started its Northward journey towards Asian continent	(i) 200 million years ago
(b) Upliftment of the Himalayas	(ii) 40-50 million years ago
(c) India's location at 50°s latitude	(iii) 140 million years ago
(d) Formation of the Deccan Traps	(iv) Around 60 million years ago

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

17. **Assertion (A):** In humid Sub-tropical climatic regions, rainfall occurs throughout the year. [1]

Reason (R): In this region, the air masses are generally stable.

- 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.

Section B

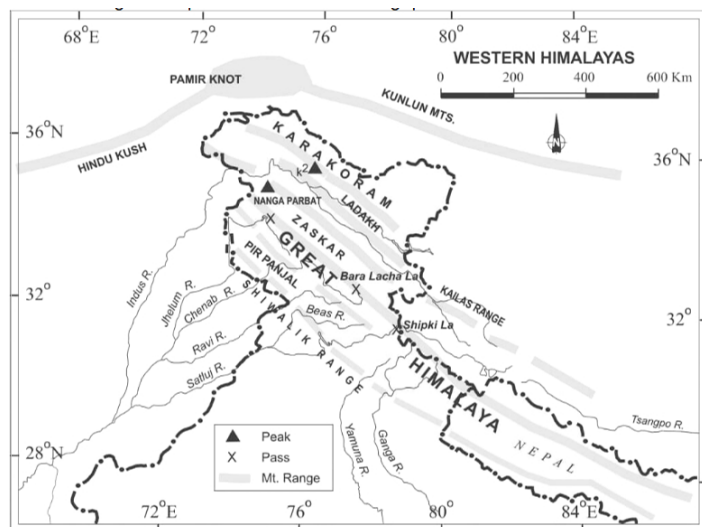
18. Read the following text carefully and answer the questions that follow: [3]

All natural earthquakes take place in the lithosphere. The lithosphere refers to the portion of depth up to 200 km from the surface of the earth. An instrument called ‘seismograph’ records the waves reaching the surface. A curve of earthquake waves is recorded on the seismograph. The curve shows three distinct sections each representing different types of wave patterns. Earthquake waves are basically of two types - body waves and surface waves. Body waves are generated due to the release of energy at the focus and move in all directions travelling through the body of the earth. Hence, the name body waves. The body waves interact with the surface rocks and generate new set of waves called surface waves. These waves move along the surface. The velocity of waves changes as they travel through materials with different densities. The denser the material, the higher is the velocity. Their direction also changes as they reflect or refract when coming across materials with different densities.

- i. Name an instrument that responds to ground noises and shaking such as caused by earthquakes, volcanic eruptions, and explosions. (1)
- ii. Name the two types of body waves. (1)
- iii. State the relation between velocity and density with respect to earthquake waves. (1)

19. Observe the given map:

[3]



- i. Explain the significance of Himalayas. (1)
- ii. What is the approximate length of the Great Himalayan range? (1)
- iii. The Himalayas consist of a series of parallel mountain ranges. Name two important ranges indicated in map. (1)

20. What is the size of India with reference to the World? Name the countries larger in area than India? Explain the location of India on the globe. [3]

OR

Explain in detail about the neighbouring countries of India.

21. It is extremely important to conserve wildlife. What initiatives have been taken in this direction? [3]
22. What are the various mobile and mighty exogenic geomorphic agents and what is the prime job they perform? [3]

OR

How are earth pillars formed?

23. Which two climatic variables are used by Koeppen for classification of the climate? [3]

Section C

24. Explain about disaster management. [5]
25. What were the major post-drift discoveries that rejuvenated the interest of scientists in the study of distribution of oceans and continents? [5]

OR

What is the major difference between the transform boundary, the convergent and divergent boundaries of plates?

26. Describe the general features of submarine relief of a typical ocean floor. [5]

OR

What do incised meanders in rocks and meanders in plains of alluvium indicate?

27. Write a detailed note on tornado. [5]

OR

What factors activate the process of mass movement?

28. Why is the coefficient of variation of annual rainfall low on the west coast of India and high in Kutchh and [5]



Gujarat?

OR

Write a note on National River, Conservation Plan (NRCP) a Ganga Action Plan (GAP).

Section D

29. On the outline map of India, locate and label the following:

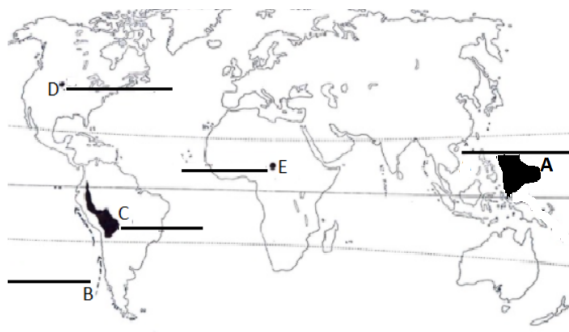
[5]

- i. The highest peak of Himalayas
- ii. Island located in the Arabian Sea
- iii. Biosphere reserve of Nanda Devi
- iv. Areas of Winter Rain
- v. Karakoram Range



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 plate is between the Philippine and Indian plates (North of New Guinea).
- B. This is a cold, low-salinity ocean current also known as Peru Current.
- C. This ecological hotspot comprises areas of Ecuador, Peru, and Bolivia.
- D. This supervolcano is situated in the Western United States.
- E. The Equator runs almost through the middle of this continent.



Solution

Section A

1.
(c) Alfred Hartner
Explanation:
Alfred Hartner
2. (a) Tropical Deciduous forests
Explanation:
Tropical Deciduous forests
3. (c) Nebula
Explanation:
A galaxy starts to form by the accumulation of **hydrogen** gas in the form of a very large cloud called **nebula**. Growing nebula develops localised clumps of gas. These clumps continue to grow into even denser gaseous bodies, giving rise to the formation of stars.
4. (d) Both the statements I and II are incorrect
Explanation:
A ship at sea is **not much affected** by tsunami **and it is difficult to detect** a tsunami in the deeper parts of sea. It is so because over deep water the **tsunami has very long wave-length and limited wave-height**.
5. (c) Climate Geography
Explanation:
Climate Geography
6. (d) Relative humidity
Explanation:
The percentage of moisture present in the atmosphere as compared to its full capacity at a given temperature is known as **relative humidity**. With the change of air temperature, the capacity to retain moisture increases or decreases and the relative humidity is also affected. It is greater over the oceans and least over the continents.
7. (c) Saraswati
Explanation:
The river **Saraswati** has not disappeared but only dried up in some stretches of Rann of Kuchchh.
8. (d) Conduction
Explanation:
Conduction
9. (b) Both A and R are true but R is not the correct explanation of A.

Explanation:

India peninsula is surrounded by the three major water bodies of the Arabian Sea to the west, the Indian Ocean to the south, and the Bay of Bengal to the east. The incredibly famous explorer objective Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep Islands in the Arabian Sea, which is significant for the Republic of India, assembles the nature of India's territory on the world guide.

10. (a) Overgrazing

Explanation:

In the western and southern part of Rajasthan, vegetation cover is very scanty due to low rainfall and **overgrazing**.

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

Explanation:

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

12.

(d) Musical instrument

Explanation:

Bamboos are the important raw material for making **musical instruments**.

13.

(c) Uttar Pradesh

Explanation:

Uttar Pradesh shares its borders with as many as 9 states/Union Territories. In the north, Uttar Pradesh shares its border with the states of Uttarakhand and Himachal Pradesh, in the west with the states of Haryana, Delhi, and Rajasthan, in South with Madhya Pradesh and Chhattisgarh, and in the east with the states of Jharkhand and Bihar.

14.

(c) (c) - (iii)

Explanation:

Dhandhar - 2,770

15.

(d) shaking of the earth

Explanation:

An earthquake in simple words is the **shaking of the earth**. It is a natural event. It is caused due to release of energy, which generates waves that travel in all directions.

16.

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

Explanation:

- India is supposed to have started her northward journey about **200 million years** ago.
- India collided with Asia about 40-50 million years ago causing rapid uplift of the Himalayas.
- About 140 million years before the present, the subcontinent was located as south as 50°S. latitude.
- During the movement of the Indian plate towards the Eurasian plate, a major event that occurred was the outpouring of lava and formation of the **Deccan Traps**. This started somewhere around **60 million years ago** and continued for a long period of time.

17.

(c) A is true but R is false.

Explanation:

Humid subtropical climate lies on the eastern parts of the continent in subtropical latitudes. In this region the air masses are generally **unstable** and cause rainfall throughout the year.

Section B

18.
 - i. Seismograph
 - ii. P-waves and S-waves
 - iii. The velocity of waves changes as they travel through materials with different densities. The denser the material, the higher is the velocity.
19.
 - i. Himalayas are not only the physical barrier, they are also a climatic, drainage and cultural divide. (1)
 - ii. The approximate length of the Great Himalayan range, also known as the central axial range, is **2,500 km** from east to west, and their width varies between 160-400 km from north to south. (1)
 - iii. The Great Himalayas and the Shiwalik. (1)

20. Size of India :

The size of India is 3.28 million square km which accounts for 2.6% of the total land of the world.

Ranking:

India is the seventh largest country in the world. The following countries are larger in area than India: Russia, China, Canada, Brazil and Australia.

Location of India :

- India lies entirely in the Northern Hemisphere.
- India's mainland extends between $8^{\circ} 4' N$ and $37^{\circ} 8' N$ latitudes, and $68^{\circ} 7' E$ and $97^{\circ} 25' E$ longitudes.
- The Tropic of Cancer ($23^{\circ} 30' N$) divides India into two almost equal parts.
- The island groups of Lakshadweep and Andaman & Nicobar are also part of India.
- India's territorial limit extends towards the sea up to 12 nautical miles (about 21.9 km) from the coast.

OR

In the North, India is bounded by the Himalayas. Hindukush and Sulaiman ranges in the north- west, Purvachal hills in the north-east and by the large expanse of the Indian ocean in the south, it forms a great geographic entity known as the Indian subcontinent. It includes the countries namely Bhutan, Nepal, Bangladesh, Pakistan, Nepal and India. In the south-central part of the continent of Asia, India is located bordering the Indian ocean and its two arms extending in the form of Bay of Bengal and the Arabian Sea. This maritime location of Peninsular India has provided links to its neighbouring regions through the sea and air routes. The two neighbouring island countries located in the Indian Ocean are Srilanka and Maldives. By the Gulf of Mannar and Palk Strait Srilanka is separated from India.

21. The protection of wildlife has a long tradition in India. Many stories of Panchtantra and Jungle Books, etc. have stood the test of time relating to the love for wildlife. If wildlife gets disturbed, it disturbs the food chain and thereby the food web. The following steps have been taken for the conservation of wildlife.

- i. In 1972, a comprehensive Wildlife Act was enacted, which provides the main legal framework for the conservation and protection of wildlife in India.
 - ii. There are 105 National Parks and 514 Wildlife Sanctuaries covering an area of about 15.67 million hectares in the country.

22. Weathering, mass movements, erosion, transportation as well as a deposition are the various mobile and mighty exogenic geomorphic agents. All these agents bring geomorphic changes on the surface of the earth.

OR

Earth pillars: Rain washes away soft material in clay regions. The boulders or hard rocks like a cap protect the underlying rocks with the result, earth pillars are formed. When the cap rocks fall, the earth pillars are destroyed. Examples of earth pillars are found in Bolzano (Italy) and Spiti valley (Himalayas).

23. Köppen climate classification is one of the most widely used climate classification systems. It is an empirical classification based on the variables mean annual and mean monthly temperature and precipitation data. He introduced the use of capital and small letters to designate climatic groups and types. Although developed in 1918 and modified over a period of time, Koeppen's scheme is still popular and in use. Koeppen recognised five major climatic groups, four of them are based on temperature and one on precipitation. Koeppen identified a close relationship between the distribution of vegetation and climate. He selected certain values of temperature and precipitation and related them to the distribution of vegetation and used these values for classifying the climates. Over the recent years, there has also been an increasing interest in using the classification to identify changes in climate and potential changes in vegetation over time. These successful applications point to the potential of using the Köppen classification as a diagnostic tool to monitor changes in the climatic condition over various time scales.

Section C

24. Disasters Management refers to the series of actions undertaken due to cyclones, unlike the ones caused by earthquakes, tsunamis and volcanic eruptions are more predictable in terms of the time and place of their occurrences. Moreover, with the help of the



development of techniques to monitor the behaviour of cyclones, their intensity, direction and magnitude, it has become possible to manage the cyclonic hazard to some extent. Construction of cyclone- shelters, embankments, dykes, reservoirs and afforestation to reduce the speed of the winds are some of the steps that can help in minimising the damages.

- i. Pre-disaster management involves generating data and information about the disasters, preparing vulnerability zoning maps and spreading awareness among the people about these.
 - ii. During disasters, rescue and relief operations such as evacuation, construction of shelters and relief camps, supplying of water, food, clothing and medical aids, etc. should be done on an emergency basis.
 - iii. Post-disaster operations should involve the rehabilitation and recovery of victims. It should also concentrate on capacity building in order to cope up with future disasters.
25. A number of discoveries during the post-war period added new information to geological literature. Particularly, the information collected from the ocean floor mapping provided new dimensions for the study of the distribution of oceans and continents.
- i. These currents are generated due to radioactive elements causing thermal differences in the mantle portion. Holmes argued that there exists a system of such currents in the entire mantle portion. This was an attempt to provide an explanation to the issue of force, on the basis of which contemporary scientists discarded the continental drift theory.
 - ii. Detailed research of the ocean configuration revealed that the ocean floor is not just a vast plain but it is full of relief.
 - iii. Expeditions to map the oceanic floor in the post-war period provided a detailed picture of the ocean relief and indicated the existence of submerged mountain ranges as well as deep trenches, mostly
 - iv. located closest to the continental margins.
 - v. The mid-oceanic ridges were found to be most active in terms of volcanic eruptions. The dating of the rocks from the oceanic crust revealed the fact that they are much younger than the continental areas,
 - vi. Rocks on either side of the crest of oceanic ridges and having equidistant locations from the crest were found to have remarkable similarities both in terms of their constituents and their age.

OR

The major difference between the transform boundary and the convergent or divergent boundaries of plates are as follows:

- i. **Transform Boundaries:** Where the crust is neither produced nor destroyed as the plates slide horizontally past each other. Transform faults are the planes of separation generally perpendicular to the mid-oceanic ridges.
 - ii. **Convergent Boundaries:** Where the crust is destroyed as one plate dived under another, it is called convergent boundaries. The location where the sinking of a plate occurs is called a subduction zone.
 - iii. **Divergent Boundaries:** Where the new crust is generated as the plates pull away from each other, these are called divergent boundaries. The sites where the plates move away from each other are called spreading sites. At this, the American Plate is separated from the Eurasian and African Plates.
26. **Submarine relief.** The ocean basins have relief features similar to the land surface. The irregularities on the ocean beds are shown diagrammatically with the help of a hypsographic curve.

According to this curve, the ocean floor can be divided into the following parts:

- i. **Continental Shelf:** It is a shallow zone around a continent from the shoreline to the continental edge, with an average depth of 100 fathoms. Continental shelf is thus a shallow platform sub-merged underwater.

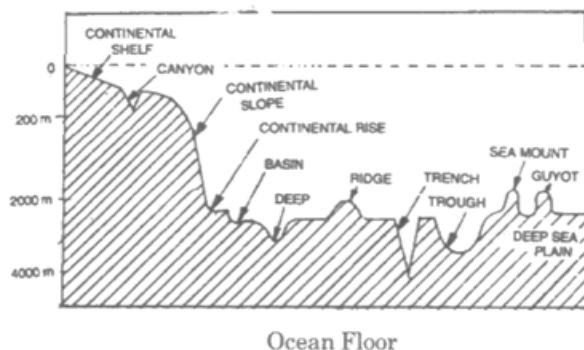
Extent: The continental shelf covers about 7.5% of the total area of the oceans (about 26 million sq. km.). It has the maximum extent (13.3%) in the Atlantic Ocean. It has an average width of 80 km. It is absent along the coast of Chile and an average depth of 30 metres. Some shelves are 600 metres deep. It extends to over 1500 km. around the coast of the Arctic Ocean (The largest shelf). Narrow shelves are found along the coasts having high mountains. The mean slope of the shelf is less than one degree.

Origin of Continental Shelf: There are three different views about the origin of the continental shelf.

- i. Many writers believe that the shelf is an extension of the continents. It has been formed due to a rise in the level of sea or a fall in the level of the land.
 - ii. The shelf has been formed by the erosion of sea waves and ocean currents.
 - iii. The third view is that the continental shelf (Terrace) has been formed by the deposition of sediments by rivers and winds. Importance. The continental shelf is of great economic significance to man. These areas have rich fishing grounds. About 20% of the world production of oil and gas comes from this area. These are sources of fossil fuels. These are large stores of sand and gravel. This area is rich in animals and plants due to the large amount of plankton.
- ii. **Continental slope:** At the edge of the continental shelf, there is an abrupt change of slope towards the ocean floor. This steep slope descending to the ocean bed is known as the continental slope. The slope is the edge of the continental shelf. It has an



average slope of 2° - 5° but near the coast of Spain, it is 36° . Its depth varies from 200 metres to 3000 metres. It covers about 8.5% (31 million sq. km.) area of the oceans. It has a maximum extent (12.4%) in the Atlantic oceans. The continental slope separates the continental shelf and the deep seafloor.



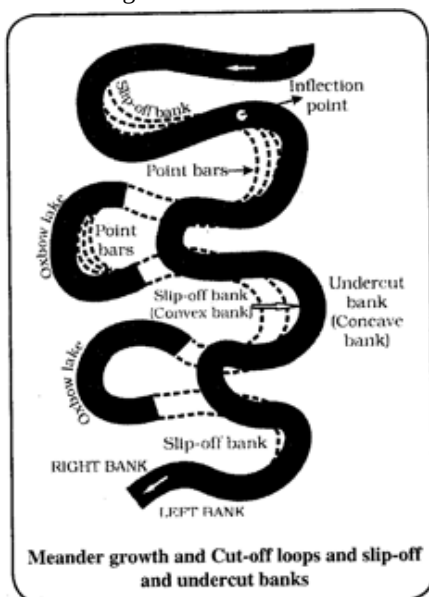
- iii. **Deep-Sea Plain:** Beyond the continental slope, the broad undulating plain is known as a deep-sea plain or Abyssal plain. It covers about 77% area of the oceans. Its maximum extent is 80.3% in the Pacific Ocean. It is uniformly flat with a gradient of less than $1/1000$. This plain has many submarine features like ridges, seamounts, islands, volcanoes etc. Its average depth is between 3000 to 6000 metres covered with sediments.
- iv. **Ocean deeps:** These are the deepest parts of the oceans. It consists of long narrow trenches known as ocean deeps. These cover only 2% of the oceanic area and occupy small areas. These have depths of more than 6000 metres. There are about 57 deeps in the world out of which 32 are in the Pacific Ocean, 19 in the Atlantic Ocean and 6 in the Indian Ocean. The deepest trench in the world is the Mariana trench in the Pacific with a depth of 11022 metres.

The ocean deeps have the following characteristics:

- a. These are found along the continental margins and not in the midst of oceans.
- b. Most of the trenches are found along the island arches.
- c. The trenches are closely related to earthquakes and volcanoes.

OR

A meander, in general, is a bend in a sinuous watercourse or river. A meander forms when moving water in a stream erodes the outer banks and widens its valley and the inner part of the river has less energy and deposits silt. In streams that flow rapidly over steep gradients, normally erosion is concentrated on the bottom of the stream channel. In the case of steep gradient streams, lateral erosion on the sides of the valleys is not much when compared to the streams flowing on low and gentle slopes. Because of active lateral erosion, streams flowing over gentle slopes, develop sinuous or meandering courses. It is common to find meandering courses cut over flood plains and delta plains where stream gradients are very gentle. But very deep and wide meanders can also be found cut in hard rocks. Meander loops develop over original gentle surfaces in the initial stages of development of streams and the same loops get entrenched into the rocks normally due to erosion or slow, continued uplift of the land over which they start. They widen and deepen over time and can be found as deep gorges and canyons in hard rock areas. They give an indication on the status of original land surfaces over which streams have developed.



27. A tornado is a rapidly rotating column of air that is in contact with both the surface of the Earth and a cumulonimbus cloud or, in rare cases, the base of a cumulus cloud. The windstorm is often referred to as a twister, whirlwind or cyclone, although the word



cyclone is used in meteorology to name a weather system with a low pressure area in the center around which winds blow counterclockwise in the Northern Hemisphere and clockwise in the Southern. Tornadoes come in many shapes and sizes, and they are often visible in the form of a condensation funnel originating from the base of a cumulonimbus cloud, with a cloud of rotating debris and dust beneath it. Most tornadoes have wind speeds less than 110 miles per hour (180 km/h), are about 250 feet (80 m) across, and travel a few miles (several kilometers) before dissipating. The most extreme tornadoes can attain wind speeds of more than 300 miles per hour (480 km/h), are more than two miles (3 km) in diameter, and stay on the ground for dozens of miles (more than 100 km).

Tornadoes can have a wide range of colors, depending on the environment in which they form. Condensation funnels that pick up little or no debris can be gray to white. Lighting conditions are a major factor in the appearance of a tornado. Tornadoes normally rotate cyclonically.

Tornadoes emit widely on the acoustic spectrum and the sounds are caused by multiple mechanisms. Tornadoic storms do not contain more lightning than other storms and some tornadic cells never produce lightning at all.

OR

Following factors activate the process of mass movement.

1. The nature and weight of materials- If the layer of the weathered rock is very deep or thinly bedded, it will result in rapid mass wasting. Thin beds increase the tendency of movement as there are more bedding planes over which movement can occur. Massive rock overlying weak rocks such as clay or shale can slide more easily than if they were overlying sand.
 2. Amount of water- A mass of materials saturated with water move more easily than a dry mass. This is because water increases the weight of the materials and at the same time reduces the cohesion between particles of materials between the mass. Water also acts as a lubricant along the bedding plane thus facilitating movements.
 3. The angle of the slope- The steeper the slope the faster the movement. This is because gravity becomes stronger with increasing angle of the slope. On gentle slope the movement is slower but is the slowest on plain which are almost flat.
 4. Climate of the area- The amount and nature of rainfall received in the area determines the amount of the movement that will occur. Area which receives heavy rainfall experiences massive landslides especially where slope is steep.
 5. Vegetation covers of the area- Plants such as grasses, shrubs and large trees, help to hold rock materials together thus reducing their movement on the earth's surface. Bare surface are more likely to experience mass wasting than surface that have vegetation cover.
 6. Human activities- People affect the stability of the earth's surface through various activities such as cultivation, building, grazing animals, mining, clearing vegetation and road construction. Vibration from moving trains and vehicles as well as tremors caused by explosions may shake the ground causing some materials to move down slope.
 7. Tectonic movement-- Earthquake and volcanic eruption cause the vibration of the earth which often trigger off widespread movement of the materials such as landslide.
28. The main features of the monsoon rainfall in India are its variability from year to year. The same place gets different amounts of rainfall every year. When the actual rainfall of a place in a year deviates from its mean annual rainfall, it is known as variability of rainfall. The variability of annual rainfall is calculated with the help of the following formula :

$$\text{Co-efficient of variation} = C_v = \frac{\text{Standard deviation}}{\text{Mean}} \times 100$$

The coefficient of variation is as low as 15 percent on the west coast of India.

In these areas, the monsoons have a similar effect every year due to the nearness to the sea. The coefficient of variation is as high as 40 percent in Kutchh and Gujarat. In these areas, monsoons are sometimes weak and inconsistent. These are semi-desert areas. Some parts experience a coefficient of variation between 50% to 80%. There is no high mountain in this area to check the monsoons.

OR

The activities of the Ganga Action Plan (GAP) Phase-I, initiated in 1985, were declared closed on 31st March 2000. The steering committee of the National River Conservation Authority reviewed the progress of the GAP and necessary correction of the basis of lessons learned and experiences gained from GAP Phase I. These have been applied to the major polluted rivers of the country under the NRCP.

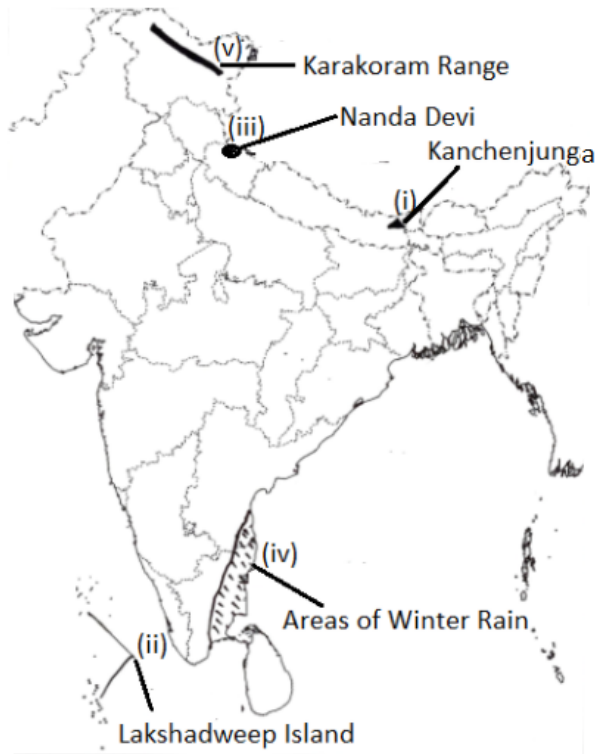
The Ganga Action Plan (GAP) Phase-II, has been merged with the NRCP. The expanded NRCP now covers 152 towns located along 27 interstate rivers in 16 states. Under this action plan, pollution abatement works are being taken up in 57 towns. A total of 215 schemes of pollution abatement have been sanctioned. So far, 69 schemes have completed under this action plan. A million litre of sewage is targeted to be intercepted diverted and treated.

Section D

29. i. **Kanchenjunga**: Located at the border of Sikkim state and Nepal.
ii. **Lakshadweep**: Part of the union territory of India located in the Arabian sea.



- iii. **Nanda Devi:** Located in Uttarakhand state.
- iv. **Areas of Winter Rain:** Coastal areas of Tamil Nadu.
- v. **Karakoram Range:** Located in Kashmir.



30. i. Caroline plate
 ii. Humboldt Current
 iii. Tropical Andes
 iv. Yellow stone
 v. Africa