

## Climate (Important Assignment for class 9th)

### Description

## Assignment Questions:

Q.1 What does climate refer to? (2)

Q.2 What are the elements of weather and climate? (2)

Q.3 What type of climate does India have? (1)

Q.4 What role does relief play in climate? (3)

Q.5 What are the major factors affecting India's climate? (3)

Q.6 How do ocean currents and onshore winds affect coastal climate? (2)

Q.7 What is the Southwest Monsoon, and why is it crucial for India's climate? (3)

Q.8 What are western cyclonic disturbances, and how do they influence India's weather? (2)

Q.9 How do tropical cyclones affect India, and during which months are they most likely to occur? (2)

Q.10 How does the Indian monsoon influence the climate of the country? (3)

Q.11 What is the "loo," and what are its effects on the weather during the Hot Weather Season (3)

Q.12 How does the monsoon affect different regions of India, and why does it have breaks in rainfall? (3)

Q.13 Describe the distribution of rainfall in India and the regions with low and high precipitation. (2)

Q.14 How does the monsoon act as a unifying bond for the Indian subcontinent despite variations in temperature and weather conditions? (5)

Q.15 Explain the concept of the advancing monsoon and how it brings a change in weather conditions. (3)

Q.16 Distinguish between weather and climate based on their definitions. (3)

Q.17 How do the coastal areas in India differ from the interior in terms of temperature and rainfall variations? (3)

Q.18 Distinguish between cyclonic disturbances from the west and tropical cyclones in terms of their origin and influence on Indian weather. (3)

Q.19 How do South West Winds differ from North East Winds in their influence on the Indian subcontinent's climate? (3)

Q.20 What is the name of the wind that blows in the northern plains of India during summers?

## Answers:

**Answer 1:** Climate refers to the usual weather conditions in a certain place over a long time. It's about whether it's hot, cold, rainy, or sunny in an area year after year.

**Answer 2:** Weather has elements like temperature, humidity, wind, and precipitation (rain, snow). Climate involves long-term patterns of these elements, showing what weather is typical in an area over many years.

**Answer 3:** Monsoonal climate.

**Answer 4:** Relief, or the landscape, impacts climate. Mountains block moisture, causing rain on one side and dryness on the other. Coasts have milder climates due to the sea. Relief shapes temperature, rainfall, and wind patterns, defining a region's climate.

**Answer 5:** India's climate is the result of a combination of significant factors:

1. **Latitude:** India is situated close to the equator, which means it primarily experiences a tropical climate. This positioning results in consistently warm temperatures throughout the year.
2. **Monsoons:** The Indian subcontinent experiences a distinct monsoonal climate due to seasonal wind patterns. During the summer, moist winds from the southwest bring heavy rainfall, while in the winter, dry winds from the northeast prevail, leading to a dry season.
3. **Geography:** India's unique topography plays a crucial role. The Himalayan mountain range to the north acts as a barrier to cold, dry air masses from the north, helping to maintain warmer temperatures in the northern plains. The surrounding seas, including the Indian Ocean and the Bay of Bengal, significantly influence the country's climate by moderating temperature and providing a source of moisture.
4. **Altitude:** Elevation also impacts India's climate. Higher altitude regions, such as the Himalayas, experience cooler temperatures due to their proximity to the troposphere's cooler layers.
5. **Distance from the sea:** Coastal regions are subject to the moderating influence of the sea, leading to milder and more stable climates compared to the interior. The sea's proximity also contributes to increased humidity and moisture.

**Answer 6:** Ocean currents and onshore winds impact coastal climate. Warm currents raise temperatures, while cold currents lower them. Onshore winds bring moisture, leading to higher rainfall

near coasts.

**Answer 7:** The Southwest Monsoon is a seasonal wind pattern that brings moisture-laden winds from the southwest to India. It's vital for India's climate as it accounts for a major portion of the country's annual rainfall. These winds, full of moisture, lead to the wet season, essential for agriculture and replenishing water resources. The monsoon's timing and strength significantly impact crop yields, making it a crucial element for India's agricultural and economic stability.

**Answer 8:** Western cyclonic disturbances are weather systems that bring rain and snow to northern India. They originate in the Mediterranean and affect India in winter, providing much-needed precipitation for crops and water resources.

**Answer 9:** Tropical cyclones can cause heavy rainfall, strong winds, and flooding in India. They are most likely to occur during the monsoon season, between April and June and from September to December.

**Answer 10:** The Indian monsoon plays a pivotal role in shaping India's climate. It brings heavy rainfall during the summer, essential for agriculture. The southwest monsoon, which begins in June, provides moisture to much of the country, while the northeast monsoon, in the winter months, affects the southeastern coast. These seasonal shifts in wind patterns influence temperature, precipitation, and the timing of agricultural activities. The monsoon's reliability is critical to India's food security and overall economic stability.

**Answer 11:** The "loo" is a term used in South Asia to describe a hot, dry, and scorching summer wind that blows over the region, particularly in North India. During the Hot Weather Season, it can bring extreme heat and discomfort. The loo can raise temperatures significantly, leading to heatwaves, crop damage, and stress on water resources. People often experience dehydration and heat-related illnesses. It's a challenging weather phenomenon that underscores the importance of staying cool and hydrated during this season.

**Answer 12:** The monsoon affects different regions of India in the following ways:

1. **Southern India:** The southwest monsoon, which arrives between June and September, brings heavy rainfall vital for agriculture, particularly in states like Kerala and Tamil Nadu.
2. **Western India:** The monsoon provides relief from arid conditions in regions like Gujarat and Rajasthan, promoting crop growth and supporting water resources.
3. **Northern India:** The northeast monsoon, occurring between October and December, influences this area, contributing to rainfall in states like West Bengal and Odisha.

The breaks in monsoon rainfall happen due to various factors, including geographical features like the Western Ghats and the Himalayas, along with the complex interactions of various weather systems. These breaks, though challenging, are essential for allowing the ground to absorb water and maintain water balance in the soil and reservoirs.

**Answer 13:** Rainfall in India is unevenly distributed. High precipitation areas include the western coast, northeastern states, and the Himalayan region. Low precipitation regions encompass northwestern India and some central areas, leading to arid conditions.

## Category

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