

# 04. Climate

Notes (Inside) -

01. Differentiate between climate and weather.

Climate	Weather
[i] Climate refers to the sum total of weather conditions and variations over a large area for a long period of time that is more than 30 years.	[i] Weather refers to the state of atmosphere over an area at any point of time.
[ii] Climate covers a large area.	[ii] Weather covers a small area.
[iii] Climate is studied for more than 30 years.	[iii] Weather is studied at a given point of time

02. Why is the climate of India often described as the monsoon type of climate?

- The climate of India is influenced by monsoon winds to a great extent.
- Monsoon wind causes rainy seasons in India.
- Both monsoon winds-southwest and Northeast winds blow over India affecting the temperatures.

03. Explain the term "monsoon".

The word monsoon is derived from the Arabic word 'mausim' which literally means season. 'Monsoon' refers to the seasonal reversal in the wind direction during a year.

04. Name the elements of weather and climate.

Temperature, Atmospheric pressure, wind, humidity and precipitation.

05. Why is there a wide difference between day and night temperatures in the Thar desert?

The diurnal range of temperature is very high in Thar desert because:

- The land is covered with sand which gets heated up and cools down very quickly.
- The air is dry which again gets heated up and cools down very quickly.
- Thar desert is land locked and hence experiences extreme temperatures.

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06. Why is there hardly any difference in day and night temperatures in the Andaman and Nicobar Islands or Kerala?

There is hardly any difference in the diurnal range of temperatures in the Andaman and Nicobar Islands or Kerala because:

- These places are located in coastal areas, near the sea, hence are affected by sea winds. Due to this they experience moderate temperatures.
- Climate is also humid

07. I. Why the houses in Rajasthan have thick walls and flat roofs?

The houses in Rajasthan have thick walls to protect themselves from extreme temperatures. The thick walls act as insulators maintaining same temperatures inside the houses.

The houses in Rajasthan have flat roofs to collect and store rainwater to fulfil the water scarcity.

07. II. Why is that the houses in the Tarai region and in Goa and Mangalore have sloping roofs?

The houses in Tarai region, Goa and Mangalore have sloping roofs because:

- They receive rainfall above 200cm.
- The sloping roofs allow the rainwater to flow down instead of getting stored on the roofs.
- In this way the houses are saved from leakages and damage from water.

07. III. Why houses in Assam are built on stilts?

Houses in Assam are built on stilts because:

- Assam receives rainfall above 200cm.
- The low-lying areas are flood prone. Hence to avoid the houses from getting flooded, they are built on stilts.

08. Explain the six major climatic controls of any place.

The six major climatic controls of any place are:

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- [i] Latitude –Due to curvature of the earth, the amount of solar energy received varies according to latitude. As a result, air temperature generally decreases from the equator towards the poles.
- [ii] Altitude –As one goes from the surface of the higher altitudes, the atmosphere becomes earth to less dense and temperature decreases.
- [iii] Pressure and wind System - Wind blows from the areas of high pressure to the areas of low pressure, influencing the temperature and rainfall pattern of any place.
- [iv] Distance from the sea – As the distance from the sea increases, its moderating influence decreases and the people experience extreme weather conditions. This condition is known as continentality (i.e. very hot during summers and very cold during winters).
- [v] Ocean Currents – Ocean currents along with onshore winds affect the climate of the coastal areas, for example, any coastal area with warm or cold currents flowing past it, will be warmed or cooled if the winds are onshore.
- [vi] Relief – High mountains act as barriers for cold or hot winds; they may also cause precipitation if they are high enough and lie in the path of rain-bearing winds. The leeward side of mountains remains relatively dry.

09. Explain the factors affecting India's climate.

- [i] Latitude – The Tropic of Cancer passes through the middle of the country from the Rann of Kachchh in the west to Mizoram in the east. The part of India, lying south of the Tropic of Cancer, belongs to the tropical area. All the remaining area, north of the Tropic, lies in the sub-tropics. Therefore, India's climate has characteristics of tropical as well as subtropical climates.
- [ii] Altitude – The altitude of Indian land mass varies from 6000metres metres to 30 metres. The Himalayas prevent the cold winds from Central Asia from entering the subcontinent. It is because of the mountains that this subcontinent experiences comparatively milder winters as compared to Central Asia.

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Note – These are not final notes. Some are yet to be added after the school reopens.

Sources – NCERT TextBook – Chapter 4 (Climate)

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