

9th Geography

Climate

Textual Help:

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- a. India's climate is affected by latitude, altitude, pressure and winds, distance from the sea, ocean currents and physiography.
- b. India has a monsoon type of climate because it is strongly governed by the monsoon winds. It gets about 90% of its rainfall due to the monsoons.
- c. The Thar desert experiences the highest diurnal range of temperature because at the Thar desert the weather conditions drastically change from the day to the same night. This creates a great difference between the two.
- d. Malabar Coast falls in the Arabian Sea. The Arabian branch of monsoon or western trade winds that cause heavy rainfall in Malabar. Collision of rain bearing clouds is against deviated landform of Western Ghats. It causes rainfall along the Malabar Coast during July month every year.
- e. Jet streams blow above 12,000 meters over the troposphere. These are actually westerly winds blowing at higher altitude. These streams are located over 27⁰ to 30⁰ north latitudes. These create westerly disturbances. These disturbances are formed in the north and north eastern parts therefore, replaced by an easterly jet stream. These cause heavy rain over peninsular India consisting of coastal plains, western and Eastern Ghats, central highland and Deccan plateau.
- f. The term "Monsoon" has been taken from the Arabic word mausim which means season. There are rain bearing and directing winds.
- g. Unifying bond means an attachment or affection of something with another. Such conditions are formed when we talk to monsoon's attachment with India. The peninsular India is surrounded by the seas from three sides. This arrangement also ensures a moderate temperature in India. People of India from north to south and from east or west eagerly await the arrival of the monsoon. These monsoon winds unite the whole country because it provides water to set the agricultural activities in nation. The river valleys which carry this water also unite as a single river valley unit.

3. We know that monsoons rise from the two sides in the summer season: The Bay of Bengal and the Arabian Sea. The Bay of Bengal branch of monsoon causes heavy rainfall in the Brahmaputra valley. Due to the Himalayas, they take a western turn and move up the Ganga valley. But as they move westwards, they become drier, thereby decreasing rainfall from east to the west. As we move towards, the distance from the Bay of Bengal also becomes more that leads to the decrease in the

rainfall. On the other hand, the Arabian branch of monsoon move parallel to the Aravali hills of Rajasthan, so they do not check the monsoon and consequently Rajasthan remains dry.

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5. Generally, the climate of India is described as the 'monsoon' type. Temperature and precipitation are the two important elements that determine the climate of a place.

Temperature: In summer, the temperature is about 50°C in some parts of the Rajasthan desert, whereas it can be around 20°C in Phalgaam in J&K may be as low as -45°C . Thiruvananthapuram (Kerala) on the other hand may have a temperature of 20°C .

Precipitation: India is a vast country. There are variations not only in the form and types of precipitation but also in its amount and the seasonal distribution. The annual precipitation varies from over 400cm at Mawsynram in Meghalaya to less than 10cm, in Ladakh and western Rajasthan. Most of the country receives rainfall from June to September. But some parts like the Tamil Nadu coast get most of its rain during October and November. Coastal areas experience less contrasts in temperature conditions. Seasonal contrasts are more in the interior of the country. There is decrease in rainfall generally from east to west in the northern plains.

6. **Mechanism of Monsoons:** Monsoons are rain bearing winds. Mechanism denotes arrangement or pattern of something duly observed and recorded. India falls in monsoon type of climate. Half of India in north falls in subtropical and another southern part (i.e. peninsula) falls in tropical region.

There is fluctuating relationship between the meteorological changes going on over the Pacific and the Indian Ocean. Whenever, there is high pressure in the subtropical region of the Pacific ocean in the northern hemisphere, the pressure in the southern part of Indian Ocean tends to be low and vice-versa. This very fact causes the shifting of winds across the equator in different directions. The difference in pressure at these two places tells the intensity of moisture bearing monsoon winds.