

Tenth Social Studies

Climate of India

4 Marks Questions

1. Describe India's climate controls.

A: India's climate controls depends upon the following.

i. Latitude: India is located between $8^{\circ}4'$ and $37^{\circ}6'$ N latitudes and the country is divided into almost equal parts by the Tropic of Cancer. The part north to the Tropic of Cancer lies in the Temperate zone. The part south to the Tropic of Cancer lies in the tropical zone.

★ The southern part of India lies in the tropical belt. It is very closer to the equator. Therefore, southern India receives more temperature than that of northern India.

ii. Land – Water relationship: South India is mainly surrounded by water on the three sides. The coastal region records moderate temperatures. The location of Indian Ocean is the reason for the formation of monsoons.

iii. Relief: The climate of India is controlled by the Northern Himalayas, the Western Ghats, the Eastern Ghats and the Indo-Gangetic plains. These relief features are responsible for the formation of snow in the Himalayas, for the formation of hill stations and rain shadow regions in the Deccan Plateau.

★ The low pressure formed in the Indo-Gangetic Plain attracts the monsoons.

iv. Upper air circulation: The climate of India is also affected by the movement of upper air currents which are known as "Jet Streams". These air currents flow very fast in a narrow belt in the upper atmosphere above 12,000 m. An easterly jet stream develops at about 25° N. A jet stream causes the neighbouring atmosphere to cool.

★ This cooling effect of the easterly jet stream causes rain from clouds already found over this latitude.

2. How are the human activities contributing to global warming?

A: Carbon dioxide produced by human activities is a major cause for global warming.

- ★ This is generated in abundant because of fossil fuel burning and deforestation.
- ★ Global warming is caused by some other gases that are commonly present in very small concentration like Methane, Nitrous Oxide, Ozone and other gases.
- ★ These gases are released by burning of Bio mass.
- ★ The human beings collect the garbage and fill the low lands and paddy fields.
- ★ They are using refrigerators and air conditioners which cause for more radiation.
- ★ Using more fertilizers in agriculture also causes for the Global warming,

2 Marks Questions

3. Compare the climate of Delhi and Chennai. How are they different?

A: The Annual range of temperature in Chennai is very low.

- ★ Irrelevant to this, the Annual range of temperature in Delhi is very high.
- ★ As Chennai is located in the coastal area of Bay of Bengal, the influence of the ocean is high on it, and so the Annual range of temperature is low.
- ★ As Delhi is located in the interior part of the country and the influence of the ocean on it is nil, the Annual range of temperature is high.
- ★ Due to South–West monsoons, Delhi receives rainfall in the months of July, August and September and Chennai receives rainfall in the months of October, November and December due to North–East trade winds.

4. How do you say that the deforestation affects global warming?

A: Deforestation means cutting down the trees.

- ★ If we cut the trees the carbon in the atmosphere is increased.
- ★ If trees are there they absorb Carbon and store in them.
- ★ In that way they are removing the Carbon from the atmosphere.
- ★ This helps to slow down global warming.
- ★ Hence it is necessary to plant and grow more plants to avoid global warming

5. What measures you suggest to reduce the influence of global warming?

A: Burning of fuel like petrol, diesel and other gases are to be avoided.

- ★ Hydro electric power stations should be established.

- ★ Afforestation is to be given more important.
- ★ Using of bio chemical in agriculture is to be encouraged.
- ★ Factory effluents and chemical releasing are to be recycled.

1 Mark Questions

6. What are the Western Disturbances?

A: Cyclone depressions coming from Mediterranean Sea are called Western Disturbances. These cause low to moderate rainfall over North India.

7. Why does Darjeeling have pleasant weather when compared to Kolkata during summer season?

A: Kolkata not only records maximum temperature during summer but also has high humidity. On the other hand, Darjeeling is a hill station. Therefore Darjeeling records low temperature and so it has pleasant weather during summer.

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