Climate of India

Improve your learning

Q. 1. Read the following statements and find out they are an example of weather or climate

a) During the last few years, many glaciers have melted in Himalayas
b) During the last few decades, drought in Vidarbha region has increased

Answer : (a) Climate. **Weather** is the day-to-day state **of the** atmosphere and its short-term variation in minutes to weeks. **Climate** is the **weather of a** place averaged over a period of time, often 30 years.

(b) Weather.

As due to scanty rainfall the region suffered from drought.

Q. 2. Match the following. Use maps if you cannot locate the places. (There could be multiple correct answers)

a) Trivandrum → is farther from the equator and temperature would be lower in winter
b) Gangtok → is closer to the equator but not close to the seas and has low rainfall
c) Anantapur → is closer to sea, and the climate has a big impact on the seas

Answer : Trivandrum: is closer to sea, and the climate has a big impact of the seas

Gangtok: is farther from the equator and temperature would be lower in winter

Anantapur: closer to the equator but not close to the seas and has low rainfall

Q. 3. Describe India's climate controls.

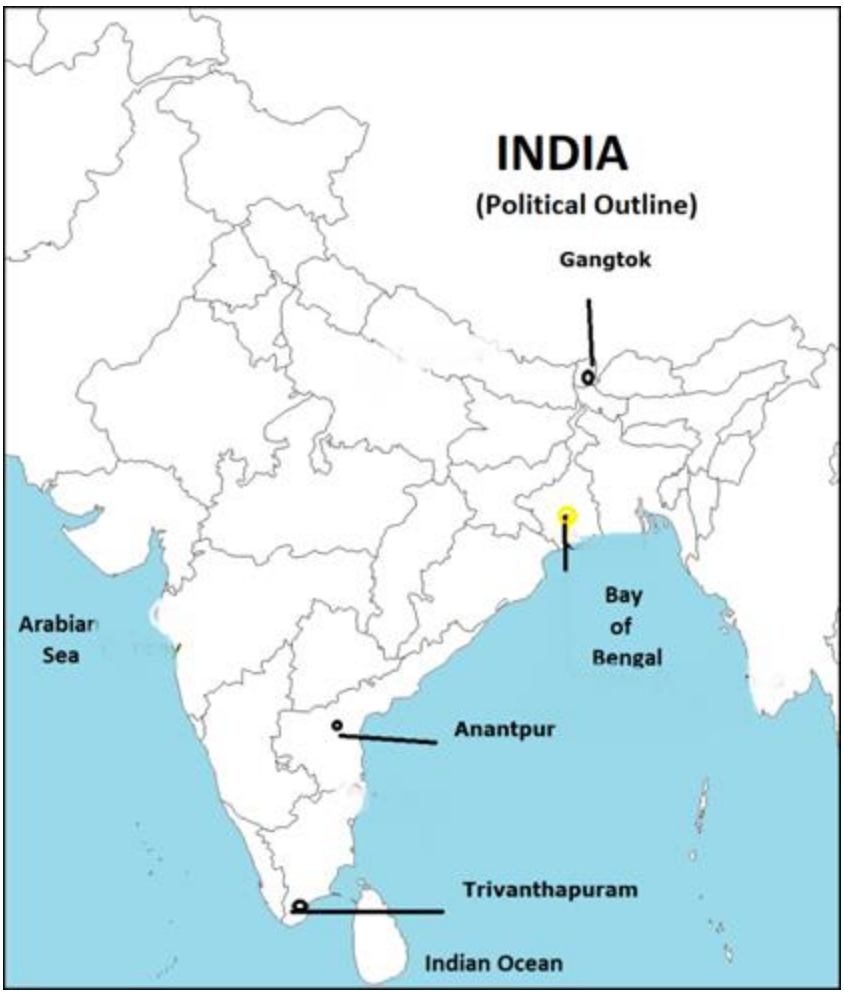
Answer : The factors that affect the climate is called climatic control.

1. Latitude: the temperature decreases as we move away from the equator. India lies closer to equator especially the southern part of India. Hence this region has a high average temperature.

2. Land water relationship: The coastal regions have moderate temperature due to land and sea breeze.

3. <u>Relief</u>: As we move higher the temperature decreases.

4. <u>Upper atmospheric circulation:</u> the fast-flowing air cools the atmosphere and causes rain from clouds.



Q. 4. Write a short note on factors influencing climatic variations in hilly areas and deserts.

Answer :. As we go higher temperature decreases. So the temperature in hilly regions is comparatively lower than the plain regions.

In deserts, during the daytime, the sand heats up quickly and warm the upper air hence daytime the temperature is high comparative at night.

Q. 5. How are human activities contributing to global warming?

Answer : When the energy from Sun falls on earth, the same amount of energy gets reflected back into space, but few amounts of the energy are trapped by the

atmosphere. This keeps the earth warm and keeping us warm is the most important thing that the atmosphere does. This trapping of energy is called the Greenhouse effect.

since 19th century this cooling and warming process has been occurring rapidly. These rapid changes may lead to catastrophic events. This increase in warming is mostly due to the rise in industries, the smoke and gases released from these industries are increasing the warming events. Hence this current global warming trend is also called as Anthropogenic (caused by Humans) Global warming.

Q. 6. What are the disagreements between 'developed' and 'developing' countries about AGW?

Answer : The disagreement is between the developed, industrialized and economically more advanced countries and developing which are not as industrialized.

The disagreement is over the demand that the developed countries want the developing nations to cut down the coal-burning process and other activities that accelerate greenhouses gases. Whereas the developing nations argue that the developed nations became developed by burning these coals at extremes and now when they want to be developed they are being stopped. These nations ask the developed countries to provide some alternatives if not burning coals.

Q. 7. How is climate change causing global warming? Suggest measures to minimize the influence of global warming.

Answer : Due to the increase in industrialization the warming and cooling of the atmosphere have been very frequent and has affected the climate adversely. This warming has increased the level of water, and the glaciers at the poles are also melting.

Measures:

1. Finding alternative ways of generating energy that does not release harmful greenhouse gases.

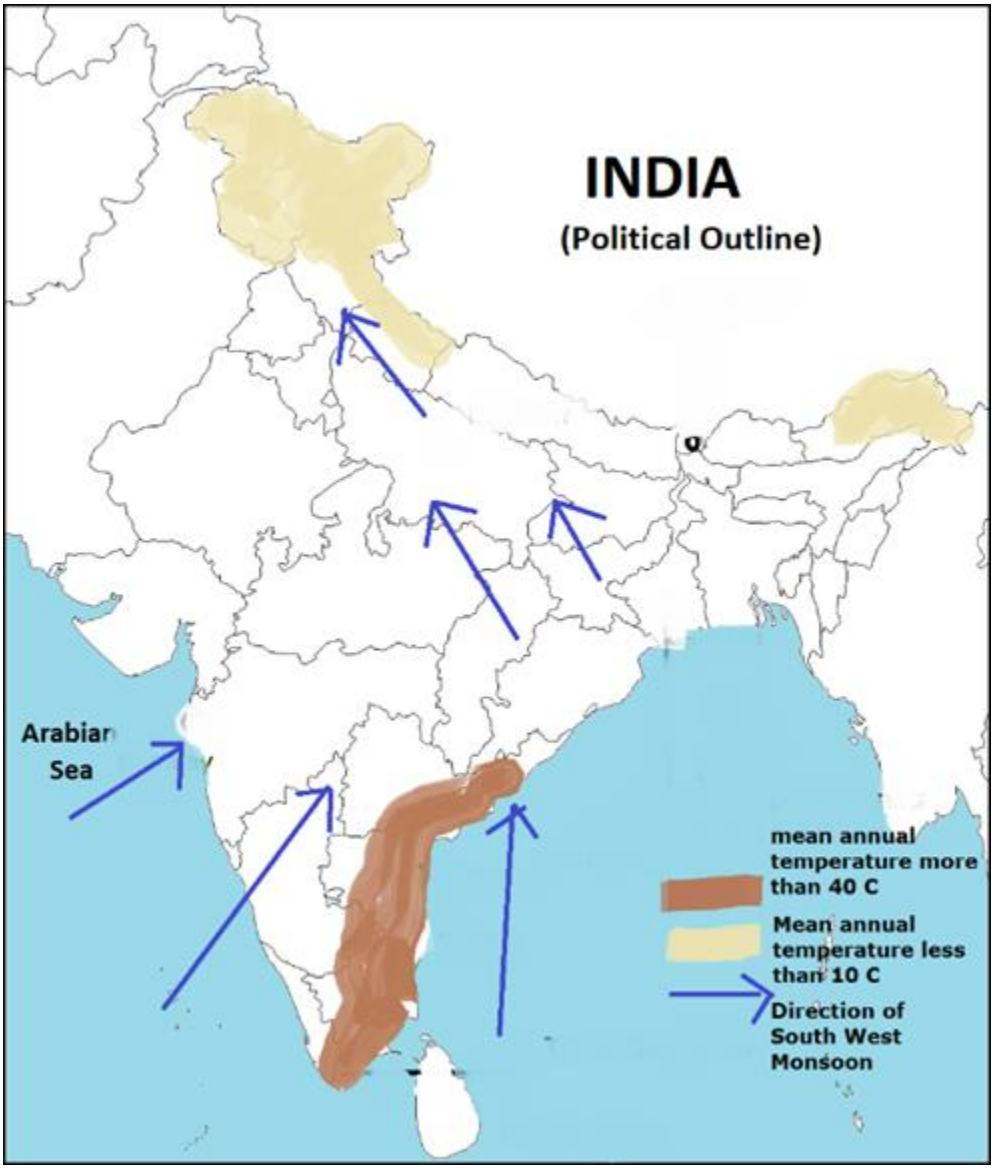
2. Not burning fossil fuels.

3. Afforestation: planting of trees and increasing the green spaces.

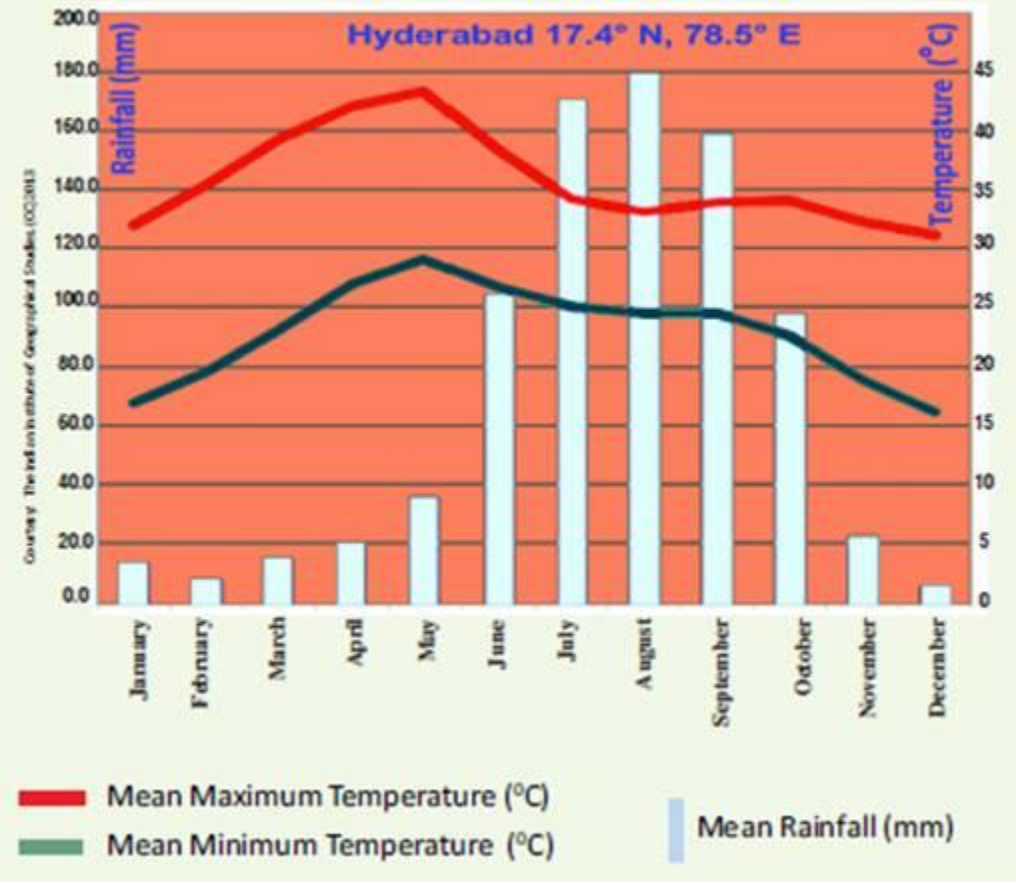
Q. 8. On an outline map of India, show the following:

(i) Areas recorded with more than 400C annual mean temperature
(ii) Areas recorded with an annual mean temperature less than 100C
(iii) The direction of the south-west monsoon over India.

Answer :


INDIA
(Political Outline)
Arabian Sea
mean annual temperature more than 40 C
Mean annual temperature less than 10 C
Direction of South West Monsoon

Q. 9. Observe the following climatograph and answer the following questions.



A. Which month received the highest rainfall?
B. Which months experience the highest and the lowest temperature?
C. Why does the maximum amount of rainfall happen between June and October?
D. Why is the temperature high between March and May?
E. Identify relief conditions causing variation in temperature and rainfall.

Answer : (A) August received 180mm of rainfall.

(B) April has 45-degree temperature, and December has 31-degree temperature.

(C) June is the end of Summer and pre-monsoon showers occur. These are common in Deccan plateau and help in ripening o mangoes. By November low pressure is created in the Bay of Bengal due to this cyclonic depressions appears over the Andaman Sea. Heavy rainfall is derived from this depression in the Coromandel region.

(D) During this month Sun moves between Tropic of cancer and equator. The southern parts of the country are warmer. Heat waves are developed and this further raises the temperature.

(E) Temperature decreases as the height increases. So the hill and the mountainous regions have comparatively low temperature than the plain regions.