I. Write short notes on the following

1. Cycle of seasons:

Temperature variance, rainfall distribution and monsoon winds cause four different season cycles in India. The names of the main seasons in India are as follows:

* Cold weather season - Mid-November to mid-March
* Hot weather season - Mid-March to May end
* Southwest monsoon season - June to September
* Retreating monsoon season - October to mid-November

2. Cold Weather season:

  The cold weather season lasts from November to March. During this period, most parts of the country experience a very low temperature. This temperature decreases as we move from south to north. January and February are the coldest months of the year.

3. Hot weather season

The hot weather season lasts from April to May. The temperature remains high throughout the country. The Northern Plains witness hot and dusty winds, which cause dust storms.

4. Mango showers

Towards the end of the hot weather season and before the onset of the monsoon season, few parts of the country receive pre-monsoon showers. These pre-monsoon showers in Kerala and Karnataka cause the early ripening of mangoes. Hence, these showers are referred to as mango showers.

5. Retreating monsoon

The monsoon winds start retreating from mid-September and continues till November. The process is very slow. It causes rainfall in the Coromandel Coast of Tamil Nadu and some other areas.​ During this period, the hot, wet season changes to the cold, dry season.

6. Variation in rainfall

  The distribution of rainfall is not uniform. It varies not only from one place to another but also from season to season. Most of the rainfall received is from the southwest monsoon. But the amount of the rainfall decreases as we move from south to north and from east to west. Also, decrease in rainfall is seen when we go from coastal areas to the interiors of the country.

1. Name the main season in India and their duration in the year.

. The names of the main seasons in India are as follows:  
     i) Cold weather season - Mid-November to mid-March  
     ii) Hot weather season - Mid-March to May end  
    iii) Southwest monsoon season - June to September  
     iv) Retreating monsoon season - October to mid-November

2. What do you know about the general temperature conditions during the cold weather season?

During the winter season, temperature remains low throughout the country. This temperature is very low in the northern region and increases as we go towards the south. January and February witness the lowest temperature during this season. Also, the mountains of the north experience heavy snowfall

3. What is the weather condition in the northern plains during the hot weather season?

The weather of the Northern Plains during the hot weather season is mostly dry and hot. The hot and dust-laden winds called loo blow in the Northern Plains. Towards the end of the season, few places receive pre-monsoon showers.

4. How is monsoon season different from the retreating monsoon season?

 The monsoon season is hot and wet and extends from June to September. The retreating monsoon season is cold and dry and extends from the middle of September to November. Only few parts of the country receive rainfall in the retreating monsoon season; the monsoon season, on the other hand, brings rainfall to most parts of the country.

5. What are the main factors affecting the climate of India?

The main factors that affect the climate of India are as follows:  
  
**1. Location:** India is divided into almost two equal halves by the Tropic of Cancer. Hence, half part is tropical, while other half experiences subtropical climate. The Himalayas protect India from cold Siberian winds and is one of the reasons behind the rainfall here.  
**2. Relief:** During summers, most of the country experiences high temperatures except the Himalayas, which experience a relatively low temperature. Also, the places that are near the sea experience moderate climate both in summers and winters.  
**3. Distance from the sea:** The coastal areas experience moderate climate because of the presence of water bodies, but the interior parts of the country experience extreme climatic conditions.

6. How do the Himalayas influence the climate of India?

The Himalayas have a considerable influence on the climate of the Indian subcontinent. On one hand, they protect the Indian mainland from the chilly winds of Siberia. Had they not been there, the Indian lands would have been frozen and covered with snow throughout the year. The Himalayas also act as a barrier to the monsoon winds coming from seas. Hence, they are an important cause of rainfall in India. They help in maintaining both the elements of climate, i.e. temperature and rainfall.

7.Describe the monsoon winds.

Monsoon winds are moisture-laden winds originating from a sea and moving towards the Indian peninsula. India experiences most of its rain from the southwest monsoon winds. They are divided by the Indian peninsula into two parts: the one that originates from the Arabian Sea and the other that originates from the Bay of Bengal. They bring a huge amount of moisture with them, which causes rainfall in most parts of the country. They are very irregular and erratic and causes floods and drought at two places at the same time.

8. Describe the general distribution of rainfall in India.

Rainfall is not evenly distributed across the Indian subcontinent. The fact that one part of the country experiences floods while the other experiences droughts proves unequal rainfall distribution across the country. The average annual rainfall is 120 cm. But the distribution depends on factors like relief features, direction of moisture-laden winds and the location of a place and its distance from the sea. Meghalaya receives more than 800 cm of annual rainfall, while some parts of Rajasthan receive only 10 cm of annual rainfall.

**HOTS**

9. Why do some parts of India experience floods and droughts at the same time?

The distribution of rainfall is highly uneven in India. Meghalaya receives 800 cm of annual rainfall and Rajasthan receives 10 cm of annual rainfall. There are several reasons for the same. For example, Rajasthan has high temperature with low humidity, so the monsoon winds are not seen here in this season; this ultimately leads to droughts here. On the other hand, the northeastern states witness high humidity due to dense forests. So, they receive more rainfall. This is the reason some parts of India experience floods and droughts at the same time.

10. Why do the coastal areas of Tamil Nadu get rainfall during the winter season?

Though most of the country gets rainfall during summers, the coastal areas of Tamil Nadu receive rainfall during winters. This is because of the retreating monsoon, which extends from the middle of September to the middle of November. During this period, cyclones originate in the Bay of Bengal, which make the weather oppressive, causing high humidity. These cyclones hit the Tamil Nadu coast after picking moisture from the Indian Ocean and cause rainfall.

11. Why do the coastal areas enjoy equable climate?

Winds move from a high-pressure region to a low-pressure zone. During summers, high pressure develops over the coastal lands, so the cold winds move from the sea to the land, reducing the temperature of the region. The reverse happens in winters when high pressure develops over the sea. This way an equable temperature is maintained in the coastal areas in which sea breeze plays a very important role.