Short Answer Questions

Q.1. What do you know about ‘South-Western Monsoon winds?

Ans. Air moves from the high pressure area over the southern Indian ocean, in a south-easterly direction, crosses the equator, and turns right towards the low pressure areas over the Indian subcontinent. These are known as South-West Monsoon Winds.

Q.2. Name the four main seasons of India.

Ans. Four main seasons of India are:

(i) The cold weather season

(ii) The hot weather season

(iii) The advancing monsoons

(iv) The retreating monsoons.

Q.3. What does ‘breaks in rainfall’ mean?

Ans. It means wet and dry spells of rain. The monsoon rainfall takes place only for a few days at a time, these rainless intervals in between are called as “breaks in rainfall.

Q.4. How do heavy floods occur during monsoons?

Ans. When axis of rainfall shifts closer to Himalayas, there are large dry spells in the plains and widespread rain occurs in the mountainous catchment areas of Himalayan rivers. These heavy rains bring devastating floods causing damage to life and property in the plains.

Q.5. How is monsoon known for its uncertainty?

Ans. Monsoon is known for its uncertainties. The alteration of dry and wet spells of rains varies in intensity frequency and duration, while it causes heavy floods in one part, it may be responsible for droughts in the other.

Q.6. Differentiate between climate and weather.

Ans. **(i) Climate:** It refers to the sum total of the weather conditions and variations over a large area for a long period of time.

(ii) Weather: It refers to the state of atmosphere over an area at any point of time.

The elements of weather and climate are the same.

Q.7. What type of climate does India have?

Ans. (i) India has a ‘monsoon type’ of climate.

(ii) This type of climate is found mainly in South and Southeast Asia.

(iii) It is called ‘monsoonal’ since India receives pre-monsoon showers in the month of May, proper monsoon during the hot weather season, winter monsoon due to western disturbances in winter and a little rain when the monsoons retreat.

Q.8. Why does India have a monsoon type of climate?

Ans. (i) Climate of India is strongly governed by the monsoon winds. Monsoon winds are confined to tropical lands between 20° North and 20° South.

(ii) In the Indian subcontinent, the Himalaya’s guide the flow of the monsoon winds bringing the whole of subcontinent under the influence of these winds.

(iii) These winds account for 75% to 90% of annual rainfall from June to September.

(iv) It is influenced by South–West monsoons, Retreating monsoon’s and North–East monsoons.

Q.9. How does the latitude affect India’s climate?

Ans. (i) The Tropic of Cancer passes almost from the middle of the country.

(ii) Almost half of the country, lying south of the Tropic of Cancer, belongs to the tropical area.

(iii) All the remaining area in the north of the Tropic lies in the sub-tropical area.

Therefore, India’s climate has characteristics of tropical as well as sub-tropical type of climate.

Q.10. How does altitude affect the climate of India?

Ans. (i) India has mountains to the north which have an average height of about 6,000 mts.

(ii) The Himalayas prevent the cold winds from Central Asia, from entering the subcontinent.

(iii) It is due to these mountains that the Indian subcontinent experiences comparatively milder winters as compared to Central Asia.

Q.11. What is the coriolis force? Describe its effect briefly on the world climate.

Ans. Coriolis force is an apparent force caused by the Earth's rotation. It is responsible for deflecting winds towards the right in the northern hemisphere and towards the left in the southern hemisphere.

Under the effect of coriolis force, the trade winds moving from sub-tropical high pressure belts to equatorial low pressure belts become north-east trade winds in the northern hemisphere and south-east trade winds in the southern hemisphere. As a result, they bring heavy rainfall to the east coast and the west coast remains dry.

Q.12. What are western cyclonic disturbances?

Ans. (i) 'Western cyclonic disturbances' are a weather phenomenon of the winters.

(ii) They are brought in by the westerly flow from the Mediterranean region.

(iii) They usually influence the weather of the north and north-western regions of India.

Q.13. What are Tropical cyclones?

Ans. (i) They occur during the monsoon, as well as in October and November.

(ii) These disturbances affect the eastern coastal regions of India.

(iii) They originate over the Andaman sea and are often very destructive.

Q.14. Give a brief note on the 'Inter Tropical Convergence Zone'.

Ans. (i) The Inter Tropical Convergence Zone is a trough of low pressure in equatorial latitudes.

(ii) This is where the north-west and the south-east trade winds converge.

(iii) This convergence zone lies more or less parallel to the equator but moves north or south with the apparent movement of the Sun.

Q.15. How is monsoon known for its uncertainties?

Ans. (i) The alternation of dry and wet spells varies in intensity, frequency and duration.

(ii) It may cause heavy floods in one part and drought in the other part.

(iii) It is often irregular in its arrival and retreat.

Hence, monsoons affect the farming schedule of millions of farmers all over the country.

Q.16. What do you understand by 'October Heat'?

Ans. (i) In the month of October, day temperatures are high, nights are cool and pleasant. The land is still moist. Monsoon winds retreat.

(ii) Owing to the conditions of high temperature and humidity, the weather becomes oppressive during the day. Sky is clear.

(iii) This condition is commonly known as October Heat.

Q.17. Why are Thiruvananthapuram and Shillong rainier in June?

Ans. (i) The monsoons break there with full fury, right in the beginning of June. This month as a whole has good rains.

(ii) The monsoon also strikes these places directly. Their location helps them get the first and full impact of the monsoon currents.

Q.18. Why is July rainier in Mumbai than in Thiruvananthapuram?

Ans. (i) Mumbai is located about 10° north of Thiruvananthapuram. The monsoon reaches here in the second week of July.

(ii) The first ten days of June are rainless in Mumbai, but July as a whole is very rainy for it.

(iii) The monsoon breaks with full force on June 1 in Thiruvananthapuram. June is rainier here than July.

Q.19. Why are South West (S.W.) monsoons less rainy in Chennai?

Ans. (i) Chennai is located on the Coromandel coast. It lies in the rainshadow region of the Arabian Sea branch of S.W. monsoons. It first strikes the western coastal region and is almost exhausted by the time it reaches Chennai.

(ii) The Bay of Bengal branch runs nearly parallel to the Coromandel coast. So, it also fails to give rains to Chennai.

(iii) Besides, offshore dry winds blow over this region in the summers.

Q.20. Why is Shillong rainier than Kolkata?

Ans. (i) The Bay of Bengal branch of S.W. monsoons approaches Shillong about a week before it touches Kolkata. So, the early start of monsoons gives Shillong more rains.

(ii) Shillong is also located on the 1500-metre high Meghalaya plateau. A sub-branch of the Bay of Bengal branch strikes it directly. Here the Garo, Khasi Hills capture the clouds like a funnel and cause heavy rains, i.e., more than Kolkata.

Q.21. How does Delhi receive more rainfall than Jodhpur?

Ans. (i) Delhi receives more rainfall since it is better located with respect to the arrival of the monsoons and the western disturbances.

(ii) It gets mild rains from both the branches of S.W. monsoons as well as the western disturbances.

(iii) Jodhpur gets rains mainly from the Arabian Sea branch of the monsoon. Thermal heating during the summer also reduces precipitation. Winter is dry in this region.

Q.22. Why has Leh moderate precipitation almost throughout the year?

Ans. Leh is also called a cold desert.

(i) Leh has moderate precipitation almost throughout the year because of its topographical location.

(ii) It lies on the landlocked high Ladakh plateau, beyond the Himalayas.

(iii) The local precipitation is very less, but it is well distributed in the form of rains in summers and snowfall in winters.