



INDIAN SCHOOL AL WADI AL KABIR

Class: IX	Department: : SOCIAL SCIENCE	Subject: Geography
Chapter 4 Question Bank:4	Topic: Climate	Year:2025-26

1. A.	Define weather and climate. Weather – Weather refers to the state of the atmosphere over an area at any point of time regarding its temperature, atmospheric pressure, wind, humidity, and precipitation. Climate – Climate refers to the sum total of weather conditions and variations over a large area for a long period of time (more than thirty years).
2. A.	What are the elements of weather and climate? The elements of weather and climate are temperature, atmospheric pressure, wind, humidity, and precipitation.
3. A.	What do you understand by the word ‘monsoon’? ➤ It is derived from the Arabic word ‘mausim’, which means season. ➤ The term refers to the seasonal reversal of the wind direction through the year.
4. A.	Describe the regional variations in temperature conditions as observed in various parts of India. ➤ In summer, the mercury occasionally touches 50°C in some parts of the Rajasthan desert, whereas it may be around 20°C in Pahalgam in Jammu and Kashmir. ➤ On a winter night, the temperature at Drass in Jammu and Kashmir may be as low as minus 45°C. ➤ Thiruvananthapuram, on the other hand, may have a temperature of 20°C. ➤ In the Thar Desert, the day temperature may rise to 50°C, and drop to near 15°C the same night. ➤ On the other hand, there is hardly any difference in day and night temperatures in the Andaman and Nicobar islands or in Kerala.
5. A.	Which part of India experiences the highest diurnal range of temperature, and why? ➤ The Thar Desert, located in the northwestern part of the country, in the state of Rajasthan experiences the highest diurnal range of temperature This is because sand gets heated up quickly during day and cool-down very quickly during night. ➤ There is no sea/water body closer to this area to have a moderating effect on the climate.
6. A.	What are the controls affecting the climate of India? OR Explain the major factors influencing the climate of India. The important factors that influence the climate of India can be identified as follows: (a) Latitudinal Location- India lies in the Northern Hemisphere with the Tropic of Cancer (23°30'N) passing almost through the middle of India. Areas to its south have tropical type of climate, while areas to its north have characteristics of sub-tropical climate. (b) Altitude - The mountainous areas to the north of India have average altitude of about 6,000 meters. The Himalayas prevent the cold winds from Central Asia from entering the subcontinent. It is because of these mountains that Indian sub-continent experiences comparatively milder winters as compared to central Asia. (c) Relief Features – Relief plays a major role in determining the climate of a place. High

	<p>mountains act as barriers for cold or hot winds. They may also cause precipitation if they are high enough and lie in the path of rain-bearing winds.</p> <p>(d) Pressure and Winds. The pressure and wind conditions over India are unique. They result in a seasonal reversal of the wind system and monsoon winds dominate the climate of India.</p> <p>(e) Distance from the sea. Places at coastal locations, e.g. Mumbai, Chennai, Kolkata, have maritime or equable climate due to the moderating influence of the sea. But places in the interior of the country, far from the sea, experience extreme climate due to continentality, e.g. Delhi.</p>
7. A.	<p>The bulk of rainfall in India is concentrated over a few months. Why?</p> <ul style="list-style-type: none"> ➤ The bulk of rainfall is concentrated over the months of June-September. ➤ As winter approaches, there is a reversal in the direction of surface winds due to a change in pressure conditions, which causes monsoons to withdraw from the Northern Plains.
8. A.	<p>Why do the south-westerly winds cause rain in India?</p> <ul style="list-style-type: none"> ➤ The south-east trade winds cross the equator and blow in a south-westerly direction, entering the Indian peninsula as the south-west monsoon. ➤ As these winds blow over warm oceans, they bring abundant moisture to the subcontinent.
9. A.	<p>Why does India have a monsoon-type of climate?</p> <ul style="list-style-type: none"> ➤ India has a monsoon-type of climate because of the strong influence of the monsoon winds on the Indian Subcontinent. The summer monsoon causes heavy rainfall when it blows from the sea to land. ➤ The winter monsoon winds blow from the interior of the continent to the sea and do not cause much rain.
10 A	<p>What is meant by Loo? State the main effect of the loo.</p> <ul style="list-style-type: none"> ➤ A striking feature of the hot weather season is the Loo. ➤ These are strong, gusty, hot, dry winds blowing during the day across northern and northwestern India. ➤ Sometimes they even blow during the evening. Direct exposure to these may even prove fatal.
11. A.	<p>What are “Kaal Baisakhi” winds?</p> <ul style="list-style-type: none"> ➤ These are localized thunderstorms, associated with violent winds, torrential downpours, and accompanied by hail. ➤ In West Bengal, these storms are known as the “Kaal Baisakhi” calamity for the month of Baisakh.
12. A.	<p>How are the ‘breaks’ in monsoon rainfall explained?</p> <ul style="list-style-type: none"> ➤ Monsoon season is interwoven with wet and dry spells. ➤ The monsoon rains occur only for a few days at a time, followed by rainless intervals. ➤ The breaks in monsoon rains are related to the movement of the ‘monsoon trough of low pressure’. ➤ When the axis of the monsoon trough lies over the plains, rainfall is good in these parts. ➤ When the axis shifts closer to the Himalayas, there is widespread rainfall in the mountains and longer dry spells in the plains.

<p>13. A.</p>	<p>Describe the general weather conditions of the cold weather season.</p> <ul style="list-style-type: none"> ➤ Starts by mid-November in northern India and continues till February. ➤ December and January are the coldest months in the northern part of India. ➤ Temperature decreases from the south (24°C - 25°C) to north (10°C - 15°C). ➤ Days are warm and nights are cold. ➤ Frost is common in higher regions. ➤ The cold North-East trade winds prevail over the country. They give rainfall to the eastern coast along Tamil Nadu. ➤ The north-western plains get light rainfall from western disturbances which are of great importance for the growing of rabi crops. ➤ Peninsular India does not have a well-defined cold weather season. ➤ It is generally cool, dry, fine weather with clear skies, feeble winds and low humidity and low temperatures.
<p>14 A.</p>	<p>Describe the main features of the hot weather season.</p> <ul style="list-style-type: none"> ➤ It is experienced from March to May. ➤ In March, the highest temperature is about 38° Celsius, recorded on the Deccan plateau. ➤ In April, temperatures in Gujarat and Madhya Pradesh are around 42° Celsius. ➤ In May, a temperature of 45° Celsius is common in the north-western parts of the country. ➤ In peninsular India, temperatures remain lower due to the moderating influence of the oceans. ➤ During the summer months, temperatures rise and air pressure decreases in the northern part of the country. ➤ Towards the end of May, a vast low-pressure area develops in the region extending from the Thar Desert to the Chota Nagpur plateau. ➤ Loo, strong, hot, and dry winds blow during the day over northern and north-western India. which further increases the temperature.
<p>15 A</p>	<p>Explain the progress of the advancing monsoon in India along with its characteristic features.</p> <p>A low-pressure area is developed over the interior parts of India in summer. Winds from the southern hemisphere are attracted towards this low-pressure area. They cross the equator and reach India as the south-west monsoon winds. Near peninsular India, they divide into 2 branches – the Arabian Sea Branch and the Bay of Bengal Branch.</p> <p>Arabian Sea Branch of the monsoon is obstructed by the Western Ghats and brings heavy rainfall to the windward side of the Western Ghats.</p> <p>They bring a fair amount of rainfall in the Deccan Plateau and Madhya Pradesh. Thereafter, they enter the Ganga plains and mingle with the Bay of Bengal Branch. Rajasthan and parts of Gujarat get scanty rainfall.</p> <p>The Bay of Bengal branch strikes the north-eastern parts of the country, causing heavy rainfall in the region.</p> <p>The lofty mountains deflect the winds towards the west, over the Ganga Plains.</p> <p>The monsoon is known for its uncertainties. The alternation of dry and wet spells vary in intensity, frequency and duration. While it causes heavy floods in one part, it may be responsible</p>

	<p>for droughts in the other.</p> <p>These winds are irregular in their arrival as well as retreat. Hence, it sometimes disturbs the farming schedule of millions of farmers all over the country.</p>
<p>16.</p> <p>A.</p>	<p>Why does the rainfall decrease from east to west in the Ganga valley?</p> <ul style="list-style-type: none"> ➤ The Bay of Bengal branch of the Indian Monsoon enters from the Bengal coast and strikes the Purvanchals. ➤ The winds get deflected due to the topography (Himalayas to the north and peninsular plateau to the south) and start moving up the Ganga plain. ➤ The amount of rainfall decreases up the Ganga valley from Kolkata to Delhi. ➤ Hence as we move away from the sea coast, the factor of distance from the sea operates (winds lose moisture as they move away from the coast) and rainfall decreases from the east to the west.
<p>17.</p> <p>A.</p>	<p>Mawsynram receives the highest rainfall. Why?</p> <p>Mawsynram lies in the funnel shaped depression caused by the Khasi range in Meghalaya. The Bay of Bengal branch of monsoons is trapped in it and causes heavy rainfall.</p>
<p>18.</p> <p>A.</p>	<p>Parts of Rajasthan, Gujarat, and the leeward side of the Western Ghats are drought-prone. Why?</p> <ul style="list-style-type: none"> ➤ Parts of Rajasthan, Gujarat and the leeward side of the Western Ghats are drought-prone due to the following reasons: ➤ The Aravallis do not obstruct the Monsoon winds due to their parallel alignment to the winds and low heights of Aravallis. ➤ The Arabian Sea branch of the monsoon enters the Indian subcontinent from the western coast and brings heavy rainfall on windward side of Western Ghats. The leeward side gets very little rainfall as it falls in rain shadow area. ➤ The Bay of Bengal branch of the monsoon gradually sheds its moisture as it moves from east to west. By the time it reaches Rajasthan and Gujarat which are located in the northwestern part of the country, it doesn't have much moisture left to cause adequate rainfall.
<p>19.</p> <p>A.</p>	<p>What is October Heat?</p> <ul style="list-style-type: none"> ➤ The months of October and November are a period of transition from hot rainy season to dry winter condition. ➤ Due to this temperature falls and the pressure rises. ➤ The increase in pressure is marked by clear skies and rise in temperature. But the land is still moist. ➤ Due to high temperature conditions and humidity, the weather becomes oppressive. We perspire and feel uneasy. This is known as October Heat.
<p>20.</p> <p>A.</p>	<p>What are the characteristic features of the retreating monsoons?</p> <ul style="list-style-type: none"> ➤ Season starts from October to November. ➤ The monsoon trough of low pressure becomes weaker and is replaced by high pressure. ➤ High temperatures and humidity, weather becomes oppressive due to October heat. ➤ Tropical cyclones, originating in the Bay of Bengal, hit the eastern coast of India and cause heavy rainfall.

	<ul style="list-style-type: none"> ➤ Coromandel Coast receives the bulk of its rains in this season.
21.	The deltas of the Godavari, Krishna and Cauvery/eastern coast are struck by cyclones frequently. Why?
A.	The shift of the low-pressure area from north-western India to the Bay of Bengal in the retreating monsoon season, leads to the formation of tropical cyclones in the latter. They move out and strike the eastern coast of the southern peninsula.
22	What are retreating monsoons?
A	<ul style="list-style-type: none"> ➤ During October-November, with the apparent movement of the sun towards the south, the monsoon trough or the low-pressure trough over the northern plains becomes weaker. ➤ The south-west monsoon winds weaken and start withdrawing gradually. By the beginning of October, the monsoon withdraws from the northern plains and blows towards the sea.
23.	Seasonal reversal of the wind direction takes place over the Indian subcontinent. Why?
A.	<ul style="list-style-type: none"> ➤ India lies in the belt of the north-east trade winds. ➤ With the apparent northward movement of the sun, temperature rises over the subcontinent. An intense low-pressure area develops over the dry north-western part of the country by May. ➤ The trade winds from the southern hemisphere are attracted towards it. They cross the equator and blow over the Indian Ocean, reaching India as the south-west Monsoon winds. ➤ These moisture-laden winds replace the north-east trade winds in the summer.
24.	Discuss the unifying role of the monsoons in India.
A.	<ul style="list-style-type: none"> ➤ The Himalayas protect the sub-continent from extremely cold winds and enable northern India to have a uniformly high temperature. ➤ The peninsular plateau under the influence of the sea has a moderate temperature. ➤ The seasonal alternation of wind systems and weather conditions provides a rhythmic cycle of seasons. ➤ The Indian landscape, its animal and plant life, its entire agricultural calendar, and the life of the people, including their festivities, revolve around the phenomena of monsoon. ➤ Year after year, the people of India, from north to south and from east to west, eagerly await the arrival of the monsoon despite its uncertainties and uneven distribution of rainfall. ➤ Monsoon winds bind the whole country by providing water to set agricultural activities in motion. ➤ River valleys that carry water also unite as a single river valley unit.