

Study Notes

- Climate refers to the sum total of weather conditions and variations over a large area for a long period of time (approximately more than thirty years).
- The climate of India is tropical monsoon type.
- India experiences four seasons viz. hot and dry summer season, hot and wet rainy season, retreating monsoon season and cold and dry winter season.
- There is great variation in climatic conditions in India due to large latitudinal extent, proximity to sea, northern mountain range, upper air circulation and seasonal variation in wind.
- Maritime climate refers to climate experienced by the places close to the sea. It is neither too hot nor too cold.
- Extreme or continental climate refers to great variation in maximum and minimum temperature.
- India receives rain from SW monsoon, NE monsoon and also from western disturbance.
- Distribution of rainfall in India is uneven.
- The climate of India greatly affects the economy of India.
- Range of temperature refers to the difference between maximum and minimum temperature. If the annual range is about 10°C, the place has equable climate. If the range is more, then the place experiences extreme climate.
- Annual rainfall is total rainfall in a year.
- Orographic rainfall occurs when moisture-laden winds are obstructed by mountains which are forced to rise up and precipitate.
- Windward side refers to the side facing the moisture-laden winds and which receives more rainfall.
- Leeward side refers to the side opposite to the windward side where the rainfall is less than the windward side.
- Tropical depression is a low pressure system originating in the tropics and is associated with strong cyclonic winds, high waves and heavy rainfall.
- Temperate cyclone is a low pressure weather system that develops in mid-latitudes.

QUESTION BANK

I. Short answer questions (2 Marks)

1. Name any four factors affecting the climate of India.

Ans. The factors that affect the climate of India include:

- (i) The Himalayas.
- (ii) Influence of water bodies such as the Bay of Bengal, the Arabian Sea and the Indian Ocean, etc.
- (iii) Latitudinal extent and the role of the Tropic of Cancer
- (iv) Altitude

2. *Explain the role of Himalayas in the origin of climate of India.*
Ans. (i) The Himalayas block chilly cold winds blowing from Arctic Ocean towards India during winter and save us from them.
 (ii) They also block moisture laden winds blowing from India to Central Asia and thus cause more rain in Indian territory.
3. *What's the role of water bodies in determining the climate of India?*
Ans. (i) Arabian Sea, Bay of Bengal and the Indian Ocean change the climate.
 (ii) They provide moisture to the coastal areas and hence Western Coastal areas get more rain than the interior parts.
4. *Explain the role of Jet streams in affecting the climate of India.*
Ans. (i) The westerly jet stream prevails over NW and brings winter rainfall while the easterly jet streams steer tropical depression over India.
 (ii) These depressions play important role in the distribution pattern of monsoon rainfall. The highest rainfall occurs along the track of these depressions.
5. *Name the major seasons of India.*
Ans. The major seasons of India:
 - The cold and dry winter season of NE monsoons (December to February)
 - The hot and dry summer season (March to May)
 - The hot and humid rainy/monsoon season (June to September)
 - The period of retreating monsoon (October and November)
6. *What is 'Western Disturbance'?*
Ans. (i) It is a Mediterranean Depression originating over the Mediterranean Sea and surrounding region.
 (ii) It brings rainfall in winter to Punjab and Haryana and snowfall to Jammu and Kashmir.
7. *What is loo? State its effect.*
Ans. (i) It's a hot, dry and dusty wind blowing over the Great Indian plain during May and June.
 (ii) **Effect:** At this time temperature rises up to 45 to 50 degree which causes sun strokes in Bihar, U.P., Haryana and Punjab.
8. *What are mango showers? Why are they called so?*
Ans. (i) Pre-monsoon showers occur in Maharashtra's coastal region in April and May and they bring useful rain.
 (ii) As they are useful for ripening of mangoes, they are called mango showers in Konkan.
9. *What are cherry /coffee blossom showers? Why are they called so?*
Ans. Pre-monsoon winds occur in coastal region of Karnataka and Kerala in April and May and bring useful rain. As they are useful for coffee cultivation, they are termed as coffee blossom.
10. *State benefits of Kalbaisakhi and coffee blossom respectively.*
Ans. (i) Kalbaisakhi rain is useful for production of rice and jute in West Bengal and tea crop in Assam.
 (ii) Cherry blossom help in cultivation of coffee and tea crop in Karnataka and Kerala.
11. *What is the most important feature of the tropical monsoon type of climate?*
Ans. (i) The most important feature of the tropical monsoon type of climate is alternation of seasons.
 (ii) From June to September these winds blow from SW to NE and in winter they blow from NE to SW.
12. *What are Jet Streams?*
Ans. (i) These are the air currents which develop in the upper layer of the atmosphere (3 to 5 km above the surface).
 (ii) The westerly jet stream prevail over NW and bring winter rainfall while the easterly jet streams steer tropical depression over India.
 (iii) These depressions play an important role in the distribution pattern of monsoon rainfall. The highest rainfall occurs along the track of these depressions.
13. *What do you mean by monsoon?*
Ans. (i) Monsoon is derived from an Arabic word mausim which means season.

(ii) Monsoon is the seasonal reversal in wind direction during a year.

14. What is El nino? State its effect on Indian climate.

Ans. (i) It is a warm ocean current which sometimes appears off the coast of Peru in South America during the month of December.
(ii) It is responsible for decreased quantity of rainfall in India.

15. What is October heat?

Ans. (i) The retreat of the monsoon is marked by clear skies and a rise in temperature.
(ii) The land remains moist, this combination of high temperature and humidity gives rise to sultry and oppressive weather. This is called as October heat.

16. Explain the term 'Burst of Monsoon'.

Ans. A burst of monsoon refers to a sudden and heavy increase in rainfall during the monsoon season. It brings intense downpours over a short period, affecting agriculture and potentially causing floods.
(ii) Which state is the first one to experience it?

Ans. Kerala

17. What are Retreating Monsoon?

Ans. (i) Retreat means to withdraw.
(ii) It is a stage at which monsoon winds withdraw from India due to change in the position of the sun. The withdrawal from north to south occurs during October and November.

18. Which type of climate is experienced in the Northern plains of India? State one main characteristic of this type of climate.

Ans. (i) Continental/Extreme type of climate is experienced in Northern plains of India.
(ii) It's very hot during the summer and very cold during the winter.

19. Western Rajasthan receives very little rainfall. Explain.

Ans. (i) The SW monsoon winds blowing from the Arabian Sea run parallel to the Aravalli and hence do not get blocked and hence give little rain.
(ii) The Bay of Bengal Branch of SW monsoon winds get exhausted by the time they reach Rajasthan. They blow parallel to the Aravalli Hills.

20. (i) Name the seasons during which the north-east trade winds dominate the Indian subcontinent.

Ans. Winter

(ii) In which season do the abovementioned winds get completely reversed? Name the four months covered by this season.

Ans. They get reversed during hot and wet rainy season from June to September.

21. At a place like Bhopal, one can see the midday sun exactly overhead twice a year, while at Vidisha, only a few kilometres north of it, one is not able to do so even once. Give reasons.

Ans. (i) Bhopal lies to the south of the Tropic of Cancer, whereas Vidisha lies to the north of it.
(ii) The mid-day sun can be seen exactly overhead only within the Tropics region and never beyond the Tropics and Vidisha lies outside the Tropics.

22. Mention any two characteristics of winter season in India.

Ans. Some of the features of winter season are

(i) Clear sky (ii) Pleasant weather (iii) Low temperature and humidity (iv) Winter rainfall in some parts
(v) High range of temperature and Slow moving NE monsoon winds

23. Some parts of India receives rainfall even in winter. Explain.

Ans. (i) The NE monsoon winds blow from land towards sea. These winds pick up moisture from the Bay of Bengal and cause about 70 cm rainfall in coastal regions of Tamil Nadu (Coromandal coast).
(ii) During this season, winds blowing from the Mediterranean Sea called Western Depression bring moisture to India and give rainfall in Punjab and Haryana.

24. Why monsoon do begins to retreat monsoon in October?

- Ans. (i) After September, the temperature begin to decrease and thus high pressure area begins to form in Northern part of India in October month but at that time southern India is still warm and has Low Pressure.
(ii) Thus, the SW monsoon winds cannot reach the Northern part due to the presence of high pressure but can reach southern India, thus, they begin to get retreated from northern India. This retreating is not a 180 degree turn.

25. What are the characteristics of retreating monsoon?

- Ans. (i) During this season low monsoon troughs get weak and are replaced by high pressure. So, the monsoon is starting to withdraw. It withdraws completely from the Northern Plains by the beginning of October.
(ii) This stage is the transition time from the hot rainy season to the cold winter season.
(iii) It is characterized by a clear sky, moist soil and high temperatures that give rise to the heat of October.

26. Explain the term 'October Heat'.

- Ans. (i) The months of October-November form a period of transition from hot-rainy season to dry winter conditions.
(ii) The retreat of the monsoon is marked by clear skies and rise in temperature. While day temperatures are high, nights are cool and pleasant.
(iii) The land is still moist. Due to the conditions of high temperature and humidity, the weather becomes oppressive during the day. It is commonly known as 'October Heat'.

27. Write a short note on tropical cyclone.

- Ans. (i) Tropical cyclones are of the thermal origin and develop over the Tropical Seas, like the Bay of Bengal and the Andaman Sea.
(ii) They cause heavy rainfall, strong winds and high waves in the eastern coastal areas. They are of short duration lasting for few minutes to hours but are potentially very destructive.

28. Why does rainfall decrease from South to North?

- Ans. (i) Rainfall decreases from south to north as the moisture laden winds begins to lose moisture as they move from south to north.
(ii) In the south, the SW monsoon reach by June but in North India near Uttar Pradesh they reach by 15th July. Thus the duration is too less.

29. Name two types of cyclonic systems that affect India and two areas that receive rainfall from these systems.

Ans. Two cyclonic systems that affect India are:

- (i) Temperate cyclones affecting north-west of India in winter (Punjab and Haryana).
(ii) Tropical cyclones in October affecting Tamil Nadu and Andhra Pradesh.

II. Give Reasons

1. Kerala receives more rain than Jharkhand/Punjab/ UP/Bihar etc.

- Ans. (i) Kerala is the first state to receive rain from the SW monsoon wind's Arabian Sea branch.
(ii) It receives rain for almost 6 months that is from June to September from SW monsoon winds and then for 2 months from Retreating monsoon winds in October and November.
(iii) Major part of it lies on the windward side and hence get more precipitation.

2. El Nino causes drought conditions in India.

- Ans. (i) Generally, El Nino and the Indian Monsoon rains are inversely related. Trade winds coming from South America normally blow westward towards Asia during south-west monsoon.
(ii) Warming of the Pacific Ocean results in weakening of these winds. Therefore, moisture and heat content gets limited and results in reduction and uneven distribution of rainfall across the Indian sub-continent.

3. Monsoon affects Indian economy.

- Ans. (i) India is agricultural country. India's 64% agriculture depends on monsoon as only 36% land has irrigation facilities.
(ii) Monsoon is erratic, unevenly distributed and variable in nature.
(iii) Hence, fluctuation in monsoon adversely affect our economy.

4. *Climate of North is relatively warmer compared to places on the same latitude elsewhere in the world.*
 Ans. (i) India's north part though lying in the temperate zone, does not experience sudden decrease in temperature as the Himalayas block the cold winds coming from China/Arctic Ocean and thus protecting us from them.
 (ii) This results into sub-tropical conditions.
5. *Winter is severe in north India compared to south India.*
 Ans. (i) North India lies in the temperate zone thus receives less radiation from the sun compared to south India which lies in the Torrid Zone.
 (ii) South India as surrounded by the sea on three sides has moderating effect of sea on its major parts.
6. *Part between Chhota Nagpur Plateau and Thar Desert experience rainfall during summer. Explain.*
 Ans. (i) During this time very low pressure belt develops between the Thar Desert and Chhota Nagpur plateau which draws winds from all direction.
 (ii) The winds from the Arabian Sea and Bay of Bengal are moisture laden and hence give rainfall once they reach that region.
7. *Chennai/Tamil Nadu receives less rain than Thiruvananthapuram/Kochi although it has more rainy days.*
 Ans. (i) Chennai receives rain from north-east Monsoons during October-November which is not very strong, and blows over a small portion of the Bay of Bengal hence gives less rain.
 (ii) Whereas Thiruvananthapuram/Kochi receives very heavy rain from south-west monsoons which are strong and carry more moisture. Moreover, these places are on the windward side.
8. *Mangalore and Chennai lie on the same latitude, yet Mangalore receives its rainfall from June-September, while Chennai receives most of its rain in November-December. What are the reasons for this difference?*
 Ans. (i) Mangalore lies on the western coast of India and receives rain from south-west monsoon, which blow from June-September,
 (ii) Chennai lies on the eastern coast and receives its rain from north-east monsoons that blow from December to February.
9. *Hill stations in the south never experience snowfall in winter. Why?*
 Ans. The hill stations in the south lie in the tropical region closer to the Equator, hence the temperature never reaches to 0 degree there.
10. *Himalayas are called the perfect climatic divide? Explain their two-fold functions in this regard.*
 Ans. (i) The Himalayas are called the perfect climatic divide as they divide both sides into two different climatic zones viz. subtropical and temperate i.e. the twofold functions of the Himalayas.
 (ii) The Himalayas protect the subcontinent from the bitter cold winds of Central Asia and do not allow the rain-bearing winds from leaving our country.
11. *The diurnal range of temperature during summer greater at Bikaner, Delhi, Patna, Nagpur, Kanpur, etc. than at Panjim, Chennai, Vishakhapatnam, Kochi, Mumbai, etc. Why?*
 Ans. (i) Diurnal temperature refers to the difference between maximum and minimum temperature during a day.
 (ii) Land gets heated faster and cools also faster quickly hence the temperature rises and lowers quickly giving rise to higher diurnal range of temperature at Bikaner, Delhi, Patna, Nagpur, Kanpur, etc.
 (iii) Water on the contrary gets heated slowly and cools also slowly quickly hence the temperature does not change much giving rise to higher diurnal range of temperature.
12. *Shillong gets less than 200 cms of rainfall in the year while Cherrapunji receives more than 1250 cms of rainfall.*
 Ans. (i) Shillong is situated on the leeward side of the Khasi Hills, whereas Cherrapunji is on the windward side of the same mountain.
 (ii) Therefore, Cherrapunji gets more precipitation as the Bay of Bengal Branch of SW monsoon winds strike the hills where Cherrapunji is located and Shillong being on the rain shadow side gets less rain.
13. *There are great variations in the climate of India?*
 Ans. There are great variations in the climate due to the following factors:
 (a) The vast latitudinal expanse.
 (b) The varied topographical features.

- (c) The vast size of the Indian landmass.
 (d) Various places are present at various distance from the sea.
14. *Mangalore, Mumbai and Kochi experience more rainfall than Mysore/Pune/Coimbatore, etc.*
 Ans. (i) Mangalore, Mumbai and Kochi receive more rainfall since they lie on the western side of Western Ghats which is the windward side of the Western Ghats.
 (ii) Mysore, Pune and Coimbatore on the eastern side, lie on the leeward side where the moisture content decreases by the time winds reach their and, hence, receive less rainfall.
15. *It is cooler on the mountain slopes than in the plains during summer.*
 Ans. (i) For every 1000 meter ascent, there is a drop of 6 degree C in temperature (lapse rate).
 (ii) The air too becomes thin and the heat is lost as the distance between the ground and the air increases and the quantity of heat received by convection decreases.
16. *Mumbai, Kochi, Chennai, Panaji, etc are warmer than Kanpur/Lucknow, Patna, and Jaipur etc. in December.*
 Ans. (i) Mumbai, Kochi, Chennai and Panaji have coastal location and, hence, they experience the moderating effect of the sea.
 (ii) Kanpur, Lucknow, Patna and Jaipur have continental location and are further away from the equator and hence they have low temperature.
17. *West coastal plains receive more rainfall than the eastern coastal plains.*
 Ans. (i) Western side of the Western Ghats receives direct rain from south-west monsoon which blow over vast Arabian Sea and carry more moisture, whereas Eastern Coastal plain lies in the rain shadow or leeward side of Western Ghats hence receives very little rainfall.
 (ii) It receives little rain from NE monsoon though.
18. *Patna and Kolkata get heavier rainfall than Varanasi or Lucknow.*
 Ans. Patna and Kolkata lie in the lower Ganga valley, Varanasi is further west. Hence, south-west monsoon of the Bay of Bengal Branch shed its moisture as it moves from Kolkata and Patna towards Varanasi and Lucknow.
19. *The coastal areas of India do not experience a significant variation in temperature between summer and winter months.*
 Ans. The coastal areas do not experience much variation in temperature because they are influenced by the moderating effect of the sea.
20. *Mumbai receives rainfall in the summer season, while Chennai receives rainfall from October to December.*
 Ans. (i) Mumbai is situated on the western coast and receives all its rain from the Arabian Sea branch of the South-West Monsoons from June to September.
 (ii) Chennai is situated on the Bay of Bengal and it receives rainfall from the North-East Monsoon winds.
21. *Mahabaleshwar is cooler than Ahmedabad.*
 Ans. (i) Mahabaleshwar is located at higher altitude compared to Ahmedabad.
 (ii) Greater the altitude, lower the temperature that is why Mahabaleshwar is cooler than Ahmedabad.

III. Differentiate between the following

1. Differentiate between equable climate and extreme climate.

Ans.	Equable Climate	Extreme Climate
(i)	In this climate, summers are not very hot and winters are not very cold.	In this climate, summers are very hot and winters are very cold.
(ii)	Here, annual range of temperature is low.	Here, annual range of temperature is high.
(iii)	They are located near the sea shore.	They are located away from the sea shore.

2. Differentiate between Arabian Sea branch of SW monsoon winds and Bay of Bengal branch of SW monsoon winds.

Ans.	Arabian Sea Branch	Bay of Bengal Branch
(i)	This branch is stronger than the Bay of Bengal branch.	This branch is weaker than the Arabian Sea branch.
(ii)	It brings almost 80 per cent rainfall to India.	It brings less than 20 per cent rainfall to India.

3. Differentiate between SW monsoon winds and NE monsoon winds.

Ans.	SW Monsoon Winds	NE Monsoon Winds
(i)	They blow from June to September.	They blow from December to February.
(ii)	They bring more rainfall to India.	They bring very little rainfall to India.
(iii)	They blow from sea to land.	They blow from land to sea except a part that blows over the Bay of Bengal.

4. Differentiate between Temperate Cyclone and Tropical Cyclone.

Ans.	Temperate Cyclone	Tropical Cyclone
(i)	They are of frontal origin and largely develop over the landmasses around the Mediterranean Sea.	They are of the thermal origin and develop over the Tropical Seas like the Bay of Bengal and the Andaman Sea.
(ii)	They bring light showers in NW India for several weeks. Also, it bring snowfall in the higher altitude.	They cause heavy rainfall, strong winds and high waves in the eastern coastal areas. They are of short duration lasting for few minutes to hours but are potentially very destructive.

IV. Answer the following (3 Marks)

1. Mention any three characteristics of the SW monsoon winds.

- Ans. (i) Except for Tamil Nadu, they give rainfall to entire India for the period of 2 to 4 months and this rainfall is unevenly distributed.
- (ii) Monsoon is erratic in nature which is evident from the fact that floods cause damage to life and property in Northern Indian Plains and droughts in NW parts of Rajasthan.
- (iii) The most important aspect of this rainfall is that its nature is OROGRAPHIC caused mainly by the Himalayas and the Sahyadris.
- (iv) Economy of India mainly depends on agriculture which is influenced by the Monsoon. 64% of the agriculture depends on it.
- (v) Monsoon winds are erratic, irregular and uncertain. Variability of monsoon in space and time causes havoc in agriculture of India.

2. What is Kalbaisakhi? State their effects.

Ans. In May, hot and dry winds blow towards Bay of Bengal and warm and moist wind blow from Bay of Bengal towards land. When these winds collide, it results into heavy rain with thunderstorms. These storms are known as Kalbaisakhi in West Bengal and Assam and in Punjab and Uttar Pradesh they are called as Norwesters.

Benefits: This rain is useful for tea crop in Assam and for jute and rice in West Bengal.

Negative effects: They are harmful to the life and property.

3. (i) Name the place in India, which receives the heaviest rainfall.

Ans. (i) The place in India which receives the maximum rainfall is Mawsynram.

(ii) Name the state in India, where this place is located.

Ans. It is located in Meghalaya.

(iii) Name the winds which are responsible for heavy rainfall.

Ans. The Bay of Bengal Branch of south-west monsoon

4. What are the characteristics of summer season in India?

- Ans. (i) As the sun's rays fall vertical over Tropic of Cancer, the temperature begins to rise. The average temperature is above 30°C, the maximum temperature rises to 50°C in Barmer. The daily range of temperature rises in the interior of the country.
- (ii) Intense increase in temperature results in the development of low pressure over north-west India. During this time, south-west monsoons begin to blow from sea to land. 'Norwesters' and 'Loo' blow over northern plains.
- (iii) During this time, western coastal region experience pre-monsoon showers during April and May.

V. Solve the following

1.	Month	J	F	M	A	M	J	J	A	S	O	N	D
	Temp (in °C)	14.7	18.6	22.6	27.5	33.2	33.6	30.8	29.8	29.4	25.5	19	15.2
	Rainfall (in cm)	2.5	2.0	1.5	0.9	1.5	7.5	17.8	18.5	12.5	1.0	0.2	1.5

(a) (i) Calculate the annual range of temperature.

Ans. (i) Max temp – Min temp. = 33.6 – 14.7 = 18.9°C

(ii) What is the total rainfall experienced by the station?

Ans. 67.4 cm

(iii) Which is the driest month?

Ans. November is the driest month.

2.	Month	J	F	M	A	M	J	J	A	S	O	N	D
	Temp (in °C)	24	25.7	26	29	30	32.5	31	30.2	29.8	28	25.9	24.7
	Rainfall (in cm)	4.5	1.3	0	1.8	3.8	4.5	8.7	11.3	11.9	30.6	35	13.9

(i) Calculate the annual rainfall.

(ii) What is the annual range of temperature?

(iii) Name the wettest month.

Ans. (i) Sum of rainfall of all months = 127.3 cm

(ii) Max. temp – Min. temp. = 32.5 – 24 = 8.5 °C

(iii) November

(iv) State the probable location of this place?

Ans. East coast as it receives from NE monsoon winds in winter.

(v) State probable name of the station.

Ans. Chennai (As it is near the Bay of Bengal, it experiences the moderating effect of the sea, and has lower range of temperature).

3.	Month	J	F	M	A	M	J	J	A	S	O	N	D
	Temp (in °C)	13.7	16.6	21.6	25.5	33.2	39.5	30.8	29.8	29.2	25.5	19	15.2
	Rainfall (in cm)	25.3	16.9	1.5	0.9	1.5	7.5	17.8	18.5	12.5	1	0.2	24.19

(i) Calculate the annual range of temperature.

Ans. Max temp – Min. temp = 39.5 – 13.7 = 25.8 °C

(ii) Which winds bring rain to it?

Ans. Western disturbance

(iii) Name the probable name of the place.

Ans. Chandigarh/Amritsar (As it is away from the moderating effect of the sea, it has higher range of temperature)

VI. Name the following (1 Mark)

1. A sea from which western disturbance or westerly depression originates.

Ans. Mediterranean sea

2. Climatic condition experienced at the places near the coast.

Ans. Maritime climate

3. Climatic condition experienced at the places away from the coast.

Ans. Continental climate/extreme climate

4. Rainfall affected due to the influence of the mountains.

Ans. Orographic rainfall

5. An important line of latitude that divides India into two parts.

Ans. Tropic of Cancer

6. The state that experiences the longest monsoon season and another state which has the shortest monsoon season.

Ans. Kerala experiences the longest monsoon season while Jammu and Kashmir experiences the shortest monsoon season.

7. Name two states where pre-monsoon showers are common.

Ans. Maharashtra, Kerala and Karnataka

8. The two states on the eastern coast which are frequently struck by tropical cyclones.

Ans. Andhra Pradesh and Tamil Nadu

9. Three states where dust storms are common during May.

Ans. Punjab, Haryana and eastern Rajasthan

10. Name the type of climate prevailing over India.

Ans. Tropical Monsoon

11. The place in India that receives the highest rainfall.

Ans. Mawsynram in Meghalaya

12. The place that experiences rainfall in south India in winter and winds which bring rain to it.

Ans. Coromandal coast in Tamil Nadu as NE monsoon winds bring rain to it.

13. The place that experiences rainfall in north India in winter and winds which bring rain to it.

Ans. Punjab and Haryana as Western Disturbance brings rain to it.

14. Two characteristics of rainfall in India.

Ans. Erratic, irregular, orographic, etc.

15. Thunderstorms with heavy rainfall in Assam in April and May.

Ans. Bardoli Cheerha.

VII. Multiple Choice Questions

1. What is the type of climate experienced in India?

(a) Tropical cyclonic type

(c) Temperate Monsoon type

(b) Tropical monsoon type

(d) Subtropical monsoon

2. What is meant by Normal Lapse rate of temperature?

(a) It is the fall in temperature by one degree centigrade for every 166 m increase in altitude.

(b) It is the fall of 6.4 degrees centigrade for every 1 km increase in height.

15. Why does the heat intensity increase in the months of May and June?
 - (a) The sea moderates the coastal regions.
 - (b) The sun apparently migrates towards the Tropic of Cancer.
 - (c) The apparent migration of the sun towards the Tropic of Capricorn.
 - (d) There are no thunderstorms.
16. The first and the last state to experience the SW monsoon winds is
 - (a) Maharashtra
 - (b) Karnataka
 - (c) Goa
 - (d) Kerala.
17. Benefit of the mango showers to Kerala
 - (a) Good for the rice crop.
 - (b) Good for jute crop.
 - (c) Good for the tea/coffee crop.
 - (d) None of these
18. The source of winter rainfall in NW India is
 - (a) tropical cyclones from the Bay of Bengal.
 - (b) temperate cyclones from the Mediterranean Sea.
 - (c) temperate cyclones from the Caspian Sea.
 - (d) north-east monsoons from the Bay of Bengal.
19. The range of temperature in Mangalore in October is $31^{\circ}\text{C}/22^{\circ}\text{C}$ while in Jodhpur it is $37^{\circ}\text{C}/22^{\circ}\text{C}$. Give reason.
 - (a) Jodhpur has no cloud cover.
 - (b) Jodhpur is in the interior than Cochin.
 - (c) Jodhpur has loo blowing in October.
 - (d) All of these
20. The hot, dusty and dry winds blowing in the North Indian plains during summer are termed as
 - (a) Norwester
 - (b) Loo
 - (c) Mausim
 - (d) Kalbaisakhi
21. In October, tropical cyclonic depressions build up over
 - (a) Andaman sea
 - (b) Indian Ocean
 - (c) Arabian Sea
 - (d) Gulf of Mannar
22. The direction of the monsoon winds in summer is from
 - (a) north-east to south-west
 - (b) south-west to north-east.
 - (c) north-west to south
 - (d) south-east to north-west.
23. Kodaikanal in Tamil Nadu has much lower temperature than Kochi. Which of the following reason is responsible for this phenomenon?
 - (a) Altitude
 - (b) Distance from the sea
 - (c) Latitudinal extent
 - (d) None of these
24. Which of the following months are known for Retreating monsoon season?
 - (a) December, January and February
 - (b) October and November
 - (c) June, July, August and September
 - (d) March, April and May
25. Which of the following statements related to the climate of India is incorrect?
 - (a) During winter, India gets the influence of Western disturbance.
 - (b) The southern part of India experiences sub-tropical climate.
 - (c) The northern part of India experiences sub-tropical climate
 - (d) Indian rainfall is uneven in nature.
26. Which of the following weather phenomenon is marked by clear skies, high temperature, high humidity and drop in night temperature?
 - (a) Burst of Monsoon
 - (b) Break in Monsoon
 - (c) October Heat
 - (d) None of these
27. Rain shadow region is formed on the leeward side because
 - (a) moisture content get reduced.
 - (b) the distance from the sea increases there.
 - (c) the increase in temperature causes less reduction in relative humidity.
 - (d) all the above

28. Which of the following is not the characteristic of rainfall in India?
 (a) Erratic (b) Irregular (c) Evenly distributed (d) Seasonal
29. Which of the following areas is situated in the rain shadow region?
 (a) Western coastal plain (b) Deccan Plateau
 (c) Southern side of the Garo and Khasi (d) Aravalli
30. The intense cold in Ladakh and Himachal Pradesh is due to which of the following reason?
 (a) Western disturbances.
 (b) They are located on far away from equator and at the high altitude.
 (c) Influence of the south-west monsoon has reduced.
 (d) The north-east monsoon winds are offshore winds.

ANSWERS

1. (b)	2. (a)	3. (b)	4. (a)	5. (c)	6. (d)	7. (b)	8. (d)	9. (c)	10. (a)
11. (c)	12. (b)	13. (b)	14. (b)	15. (b)	16. (d)	17. (c)	18. (b)	19. (b)	20. (b)
21. (a)	22. (b)	23. (a)	24. (b)	25. (b)	26. (c)	27. (d)	28. (c)	29. (b)	30. (b)

Last Page