

# SUMMER HOLIDAY ASSIGNMENT

**Class: IX | Subject: Geography**

**Chapter: Atmosphere and Climate (Physical Features of India — Climate, Vegetation & Wildlife)**

□ *Instructions:*

- 1. Read all questions carefully.*
- 2. Write answers neatly in your own words.*
- 3. Activities must be completed with labelled diagrams wherever mentioned*

## **Q.1 Answer the following in one word or one sentence:**

1. Name the two main gases that make up the majority of the Earth's atmosphere.
2. What is the full form of ITCZ?
3. Which layer of the atmosphere is known as the 'weather zone'?
4. Define 'insolation' in one line.
5. What is the altitude of the tropopause approximately above the equator?
6. Name the type of rainfall that occurs due to the meeting of cold and warm air masses.
7. What is the Coriolis effect?
8. Which instrument is used to measure humidity?
9. What is a 'monsoon'? Name its two branches.
10. Give one difference between weather and climate.

## Q.2 Answer the following in 3–4 sentences:

### (i) Layers of the Atmosphere

Write the names of the five layers of the atmosphere and one important feature of each layer.

S.No.	Layer Name	One Important Feature
1.		
2.		
3.		
4.		
5.		

### (ii) Factors Affecting Climate of India

Explain any three factors that affect the climate of India with examples.

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### (iii) Southwest Monsoon

Describe how the Southwest Monsoon enters India. Why does it cause heavy rainfall in the Western Ghats but very little in the Deccan Plateau?

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### (iv) Temperature Distribution

Explain the concept of 'temperature inversion'. Under what conditions does it occur?

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## Q.3 Answer the following in detail (with diagrams wherever needed):

### (i) Composition of the Atmosphere

Describe the composition of the atmosphere. Draw a pie chart (in the box below) showing the percentage of different gases

### (ii) Types of Rainfall

Explain the three types of rainfall — Convective, Orographic, and Cyclonic — with labelled diagrams for each.

Convective Rainfall

Orographic Rainfall

Cyclonic Rainfall

[ Diagram ]	[ Diagram ]	[ Diagram ]
<b>Explanation:</b>	<b>Explanation:</b>	<b>Explanation:</b>

**(iii) Seasons of India**

India experiences four main seasons. Complete the table below:

Season	Months	Main Features	Cities with Extreme Conditions
Cold Weather Season			
Hot Weather Season			
Advancing Monsoon			
Retreating Monsoon			

**Q.4 Map Work**

On the outline map of India (attach a separate printout), mark and label the following:

- The path of the Arabian Sea Branch of the Southwest Monsoon
- The path of the Bay of Bengal Branch of the Southwest Monsoon
- Cherrapunji (highest rainfall area) — put a raincloud symbol
- Jaisalmer (driest area) — put a sun symbol
- Western Ghats — mark as 'Windward Side'
- Leeward side of Western Ghats (Deccan Plateau) — mark as 'Rain Shadow Region'
- Any two cities in the Monsoon Zone

□ *Tip: Use blue arrows for monsoon paths, red dots for cities, and green shading for high-rainfall areas.*

### Activity 1 — Weather Diary (10 Days Observation)

Observe and record the weather for any 10 consecutive days during the vacation. Note:

- Temperature (morning and evening) — ask family or check a weather app
- Rainfall — Yes / No / Light / Heavy
- Wind direction (if visible)
- Sky condition — Sunny / Partly Cloudy / Overcast / Foggy

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	
										Date
										Temp (Morn °C)
										Temp (Eve °C)
										Rainfall
										Sky Cond.

After recording, answer these questions:

11. Did you notice any pattern in temperature changes during the 10 days?

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12. Was there any rainfall? What type do you think it was (convectonal/orographic/frontal)?

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13. How did humidity feel on rainy days vs sunny days?

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