

1. What is a climatic region?

Answer: A climatic region is an extensive geographical area with similar climate characteristics, such as temperature, precipitation, and humidity, influencing its flora, fauna, and human activities.

2. Name any four major climatic regions of the world.

Answer: Equatorial, Monsoon, Savanna, and Mediterranean climatic regions.

3. What are the key weather elements that define climatic regions?

Answer: Temperature, precipitation, wind, humidity, and atmospheric pressure.

4. Describe the temperature characteristics of the Equatorial climatic region.

Answer: The Equatorial region has high temperatures (25–30°C) year-round due to vertical sun rays, with minimal seasonal variation.

5. Why does the Equatorial climatic region receive daily afternoon rainfall?

Answer: High temperatures cause strong air convection, leading to convective rainfall every afternoon.

6. What is the primary vegetation type in the Monsoon climatic region?

Answer: Tropical deciduous forests (monsoon forests) with a mix of evergreen and deciduous trees.

7. How do monsoon winds influence the climate of the Indian subcontinent?

Answer: Monsoon winds blow from sea to land in summer, bringing heavy rainfall, and reverse from land to sea in winter, causing dry conditions.

8. Why is the diurnal temperature range low in coastal areas of the Monsoon region?

Answer: Proximity to the sea moderates temperature fluctuations, keeping the diurnal range low compared to interior areas.

9. Name two crops grown in the Monsoon climatic region and explain why they are called tropical crops.

Answer: Rice and sugarcane. They are called tropical crops because they thrive in the warm, humid conditions typical of tropical climates.

10. What is shifting cultivation, and where is it practiced in the Monsoon region?

Answer: Shifting cultivation is a primitive farming method where land is cleared, cultivated, and then abandoned for a new plot. It is practiced in parts of the Monsoon region, e.g., "Jhum" in India.

11. What are Savannas, and where are they located?

Answer: Savannas are tropical grasslands with scattered trees, located between 10° and 30° latitudes in both hemispheres, e.g., Africa (Savanna), Brazil (Campos), and Venezuela (Llanos).

12. Why do hot deserts receive very little rainfall?

Answer: Hot deserts, located on western continental margins, receive dry trade winds that lose moisture while crossing continents, resulting in less than 25 cm of annual rainfall.

13. What are oases, and how do they support life in hot deserts?

Answer: Oases are areas in deserts with water sources, supporting denser vegetation and enabling agriculture and settlement in otherwise arid regions.

14. Why is the Mediterranean climatic region economically important?

Answer: It is economically important due to agriculture (citrus fruits, vineyards), producing 70% of global citrus exports, and tourism driven by its mild climate.

15. What is the main crop cultivated in the Temperate Grasslands, and why are they called the "world's granary"?

Answer: Wheat is the main crop. Temperate Grasslands, like the Prairies, are called the "world's granary" due to large-scale commercial wheat production.

16. Why is lumbering a major activity in the Taiga region?

Answer: The Taiga region has abundant coniferous trees (e.g., pine, fir), making lumbering a key industry, especially in Canada, where it is highly industrialized.

17. Why is agriculture limited in the Tundra region?

Answer: The Tundra's harsh climate, with winter temperatures of -25°C to -40°C and a short growing season, makes it unsuitable for most crops.

18. Define climate change according to the UN.

Answer: Climate change is a long-term shift in weather patterns and temperatures caused by human activity or natural variability, affecting ecosystems over years to millions of years.

19. Name two natural and two anthropogenic causes of climate change.

Answer:

- **Natural:** Volcanic eruptions, ocean currents.
 - **Anthropogenic:** Deforestation, industrialization.
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20. What is the greenhouse effect, and how does it contribute to global warming?

Answer: The greenhouse effect occurs when gases like CO₂ trap solar energy, warming the atmosphere. Excess greenhouse gases from human activities intensify this effect, causing global warming.

Application-Level Questions**21. How would the lifestyle of a farmer in the Monsoon region differ from one in the Temperate Grasslands?**

Answer: A farmer in the Monsoon region practices intensive subsistence agriculture (e.g., rice farming) due to high rainfall and fertile soils, while a farmer in the Temperate Grasslands engages in commercial mechanized grain farming (e.g., wheat) due to moderate rainfall and vast, fertile lands.

22. If you were a policymaker in the Maldives, what climate change issue would you prioritize, and why?

Answer: I would prioritize sea level rise, as the Maldives, with an average elevation of 1.5 meters, faces submersion risk with a 2.5-meter rise, threatening the entire nation's existence.

23. How might climate change affect agriculture in the Monsoon region?

Answer: Climate change could shift monsoon patterns, leading to torrential rains instead of prolonged showers, causing floods, crop damage, and reduced agricultural yields.

24. Why might the Taiga region be less affected by human-induced climate change compared to the Equatorial region?

Answer: The Taiga region has less human intervention (e.g., limited agriculture, sparse population) compared to the Equatorial region, where deforestation and logging significantly exacerbate climate change.

25. Suggest one strategy to mitigate climate change in the Mediterranean region and explain its benefit.

Answer: Promote solar energy use. The region's abundant sunlight makes solar power viable, reducing reliance on fossil fuels and lowering greenhouse gas emissions.

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