

CLIMATE CLASSIFICATION – CLASS NOTES

1. Meaning of Climate Classification

Climate classification refers to the systematic categorization of the world's climates based on temperature, precipitation, vegetation, air masses, and other climatic elements. It helps in understanding global climatic patterns and regional variations.

2. Basis of Climate Classification

- Temperature
- Precipitation
- Vegetation
- Air masses and pressure belts
- Water balance (moisture availability)

3. Major Climate Classification Systems

(A) Köppen's Climate Classification

Developed by Wladimir Köppen, based on temperature and precipitation with vegetation correlation.

Main Types:

- A – Tropical (Hot and Wet)
- B – Dry (Arid and Semi-Arid)
- C – Temperate (Mild Mid-Latitude)
- D – Continental (Cold Mid-Latitude)
- E – Polar (Very Cold)

Advantages: Simple and widely used.

Limitation: Ignores air masses and dynamic factors.

(B) Thornthwaite's Classification

Based on water balance and evapotranspiration.

Focuses on moisture index and thermal efficiency.

More scientific but complex.

(C) Trewartha's Modification

Improved version of Köppen system.

Better representation of middle latitude climates.

(D) Air Mass / Genetic Classification

Based on origin and movement of air masses.

Explains dynamic causes of climate.

4. Importance of Climate Classification

- Helps in agricultural planning
- Useful for settlement and economic activities
- Assists in climate change studies
- Important for geographical research and teaching

5. Differences: Empirical vs Genetic Classification

Empirical – Based on observed data (temperature & rainfall).

Genetic – Based on causes like air masses and circulation.

6. Exam-Oriented Points

- Köppen classification is vegetation-based.
- Thornthwaite introduced moisture index.
- Genetic classification explains climatic processes.

7. Important Questions

1. Explain Köppen's climate classification in detail.
2. Distinguish between empirical and genetic classification.
3. Discuss the significance of climate classification in geography.