TD°01 : Introduction to Bioclimatology

1. Weather differs from climate primarily in terms of:
a) Temperature and precipitation
b) Temporal and spatial scale
c) Solar energy received
d) Atmospheric composition

2. Which parameter is not **commonly measured by a meteorological station?**
a) Air temperature
b) Soil temperature
c) Evapotranspiration
d) pH water

3. Define **bioclimatology**.

4. List three **cosmic** and three **geographical** factors influencing climate.

5. Explain why climate is considered an interaction between different Earth systems (atmosphere, hydrosphere, cryosphere, etc.).

6. Why is it important to protect meteorological instruments from direct solar radiation?

7. Differentiate between **weather** and **climate** (include time scale, spatial scale, and variability).

8. Compare the role of **natural factors** (e.g., Earth's orbit, volcanic eruptions) and **anthropogenic factors** (e.g., greenhouse gas emissions) in climate change.

9. Complete the table:

Climate Elements	Climate factors

10. A semi-arid region records the following anomalies:

- Temperature: +2 °C above average for 3 consecutive years
- Precipitation: 30% below normal
- Increased evapotranspiration

Question: What are the likely ecological impacts on vegetation, soil, and water resources?

• A coastal city experiences unusually intense rainfall within 2 weeks, causing flooding. Explain the difference between calling this a **weather anomaly** versus a **climatic shift**