

Climatology Basics: Earth's Climate System

Climatology · Answer Key · 8 Questions

1. What is climatology primarily the study of?

- A) Short-term daily weather forecasts
- B) The long-term average weather patterns of a region**
- C) The movement of tectonic plates
- D) Individual cloud formations

2. Which of the following best describes 'weather'?

- A) The typical rainfall amount in a desert over a century
- B) The average temperature for a city during the summer
- C) The current atmospheric conditions at a specific place and time**
- D) The expected climate changes over the next 50 years

3. What natural process helps to warm the Earth by trapping heat in the atmosphere?

- A) The water cycle
- B) Photosynthesis
- C) The greenhouse effect**
- D) Oceanic convection

4. Which gas is a major contributor to the natural greenhouse effect and is significantly increased by human activities?

- A) Oxygen
- B) Nitrogen
- C) Carbon Dioxide**
- D) Argon

5. What is the primary source of energy that drives Earth's climate system?

- A) Geothermal heat from Earth's core
- B) Gravitational pull from the Moon
- C) Energy from the Sun**
- D) Chemical reactions in the atmosphere

6. What causes the Earth's seasons?

- A) The Earth's varying distance from the Sun throughout its orbit
- B) The Moon's gravitational pull on Earth
- C) The tilt of the Earth's axis as it orbits the Sun**
- D) Changes in the speed of Earth's rotation

7. What term describes the long-term heating of Earth's climate system observed since the pre-industrial period, primarily due to human activities?

A) Ice Age

B) Global Warming

C) El Niño

D) Monsoon

8. A well-known consequence of global warming is:

A) Decreased volcanic activity

B) Rising sea levels

C) Reduced solar flares

D) Faster tectonic plate movement