

Quiz: Climate Change

Topic: climate change

Questions: 5

Difficulty: Medium

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Question 1

Which of the following is a significant feedback loop that accelerates climate change in the Arctic?

- A) Increased plant growth absorbing more CO₂
- B) Melting permafrost releasing methane and CO₂
- C) Increased snowfall reflecting more sunlight
- D) Ocean acidification reducing CO₂ absorption

Question 2

Which of the following mitigation strategies focuses on removing carbon dioxide directly from the atmosphere?

- A) Improving energy efficiency in buildings
- B) Transitioning to renewable energy sources
- C) Carbon capture and storage (CCS) from power plants
- D) Afforestation and reforestation projects

Question 3

Sea level rise is primarily caused by which two factors related to climate change?

- A) Increased rainfall and glacial melting
- B) Thermal expansion of water and glacial melting
- C) Ocean acidification and thermal expansion of water
- D) Decreased rainfall and expansion of sea ice

Question 4

Which sector is responsible for the largest share of global greenhouse gas emissions?

- A) Agriculture, Forestry and Land Use
- B) Transportation
- C) Electricity and Heat Production
- D) Industry

Question 5

What is the primary goal of the Paris Agreement?

- A)** To immediately halt all fossil fuel use
- B)** To limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels
- C)** To establish a global carbon tax
- D)** To redistribute wealth from developed to developing nations

Answer Key

1. Answer: B

Explanation: Melting permafrost releases trapped organic matter, which decomposes and releases methane and CO₂, both potent greenhouse gases, into the atmosphere, further warming the planet and causing more permafrost to melt.

2. Answer: D

Explanation: Afforestation (planting new forests) and reforestation (replanting existing forests) directly remove CO₂ from the atmosphere through photosynthesis. While CCS prevents CO₂ from entering the atmosphere, it doesn't remove existing CO₂.

3. Answer: B

Explanation: Thermal expansion occurs as water warms and expands in volume. Glacial melting adds water to the oceans, both contributing to sea level rise.

4. Answer: C

Explanation: Electricity and heat production, primarily from burning fossil fuels, is the largest contributor to global greenhouse gas emissions.

5. Answer: B

Explanation: The Paris Agreement aims to limit global warming to well below 2 degrees Celsius, and ideally to 1.5 degrees Celsius, compared to pre-industrial levels. It does not mandate an immediate halt to fossil fuel use or establish a global carbon tax.