

Ch- 22. sec.3.climate change

[Environment](#), [Climate Change](#)



Ch- 22. Sec. 3. Climate change 1. Identify four factors that affect climate.

Ans. Movement of continents due to plate tectonics, changes in Earth's orbit and tilt, volcanic activity, human activity. 2. How orbital changes may affect climate? Ans. When Earth's orbit is elliptical, Earth encounters more variation in energy from the Sun. The tilt of the Earth's axis also changes. When the tilt decreases, temperature differences between seasons decreases.

Wobbling of Earth changes the direction of tilt and can reverse the seasons.

3. How changes in CO₂ concentrations affect global temperatures. Ans.

Carbon dioxide is a greenhouse gas that absorbs heat radiated by Earth's surface. Increasing carbon dioxide could increase the greenhouse effect and lead to global warming. 4. Discuss the potential negative impact of global

warming. Ans. One potential negative impact of Global warming would be the flooding of coastal communities cause by rising sea levels as polar

icecaps melt. 5. Identify two ways that countries can work together to reduce

their impact on, and the potential effects of, global warming. Ans. Treaties and laws aimed at reducing pollution can help countries reduce their impacts on global warming. Monitoring of industrial practices can also play a role in

reducing those impacts. 6. Identify four ways that an individual can reduce their own impact on global warming. By turning off lights, reducing heating

and cooling, recycling, and using mass transportation, individuals can reduce their impacts on global warming. 7. How would the melting of small icebergs

affect sea level? Explain your answer. Ans. The melting of small icebergs

would not affect sea level because they are floating in the ocean water. They

displace the same amount of water as their volume. 8. Can short-term

climate changes be explained using the cycles described by the Milankovitch

theory? Explain your answer. Ans. Short term climate changes couldn't be explained by the Milankovitch theory because these orbital changes occur on cycles of 1, 000 to 100, 000 years.

9. Analyze the Milankovitch theory including how it may explain some climate changes? Ans. The Milankovitch theory proposed that cyclic changes in Earth's orbit from circular to elliptical and changes in the tilt and wobble of Earth's axis can lead to climate change by altering the amount of energy Earth receives from the sun. Changes in incoming energy would affect Earth's temperature and thus could cause some climate changes.

10. What are the possible effects of global warming? Ans. 1. Changes in global precipitation patterns 2. Melting of polar icecaps and rising sea levels leading to coastal flooding. 3. Changes in agricultural production.

11. How would global climate be affected if Earth were not tilted on its axis. Ans. If Earth were not tilted on its axis there would no seasons in the Northern and southern hemisphere since seasons result from the tilt of Earth's axis.