

Unit 5 Study Guide

The Atmosphere and Climate Change

You should know the following topics thoroughly. Be able to describe, explain, and/or give examples. You MAY NOT use a calculator on the exam.

Chapter 17

- Describe major characteristics of the four layers of the atmosphere.
- Explain why Earth has seasons.
- Explain major weather phenomena (convection, pressure systems, fronts, inversions, heat islands).
- Contrast the six criteria air pollutants.
- Describe how smog forms.
- Explain the causes and effects of stratospheric ozone depletion.
 - What compounds is primarily responsible for the thinning? What was it used for?
 - How does it destroy the ozone? What is the chemical reaction?
 - What are environmental/human effects of ozone depletion?
- How is stratospheric ozone different from tropospheric ozone?
 - What are the environmental/human effects of tropospheric ozone?
- Describe how acid deposition forms and environmental problems it causes.
- Identify and describe major legislation associated with air quality (Clean Air Act, Montreal Protocol).
- Contrast major sources of indoor air pollution and propose remediation and reduction strategies.
- Describe sources, effects, and control measures of noise pollution.

Chapter 18

- Identify major greenhouse gases.
 - Be able to describe human activities that lead to the increase of each gas.
- Describe the greenhouse effect and how it contributes to climate change.
- Explain causes of climate change.
- Explain how ocean and atmosphere interactions cause El Nino and La Nina events in the equatorial Pacific Ocean.
- Describe real-world impacts caused by climate change.
 - Describe effects on ecosystems and society if temperatures continue to increase.
- Propose solutions to climate change.
- Identify and describe major laws and treaties related to global climate change.