

Preparation for the fourth exam:

Be sure you have read Chapters 15 (p. 306 to end of chapter), 16 and 17 of the textbook.

When reviewing the material, focus on the topics we have covered in class.

Go over the chapter summaries and key terms at the end of each chapter.

Go over the review questions and critical thinking problems at the end of each chapter.

Focus on the following review questions:

Chap. 15: 8, 9, 10

Chap. 16: 1, 2, 3, 5, 6, 7, 8, 10, 11

Chap. 17: 1, 2, 4, 5, 6, 7, 9

On exam day, Tuesday, Dec. 18, at 8:00 a.m., bring two pencils, your notes, and your book to ECSC 119 (the regular lecture hall for this course). Here are just a few example questions:

1. (T F): Ozone is the most abundant gas in the stratosphere.
2. Which factors contribute to the depletion of stratospheric ozone over Antarctica in springtime?
 - a. the development of a strong circumpolar vortex during the Antarctic winter
 - b. the development of polar stratospheric clouds which act as a chlorine reservoir
 - c. the stability of CFCs in the troposphere
 - d. all of the above
3. (T F): Both O₂ (diatomic oxygen) and O₃ (ozone) are important in absorbing most of the Sun's biologically harmful ultraviolet (UV) radiation before it reaches Earth's surface.
4. (T F): Chlorofluorocarbons (CFCs) react directly with stratospheric ozone to create the Antarctic "ozone hole".
5. The Montreal Protocol and subsequent agreements have been quite successful in
 - a. eliminating the Antarctic "ozone hole" for the last five years
 - b. reducing the production and use of fossil fuels
 - c. reducing the production of CFCs
 - d. none of the above
6. Which of the following are important "greenhouse" gases in our atmosphere
 - a. carbon dioxide
 - b. methane
 - c. water vapor
 - d. all of the above
7. The rise in global temperature over the last half century might have been greater than it was but for the net cooling effect of increasing amounts of _____ in the atmosphere.
 - a. methane
 - b. oxygen
 - c. CFCs
 - d. aerosols
8. Another serious threat that global warming poses to humans is the possible increase in the geographical range of the vectors of which of the following diseases?
 - a. malaria
 - b. schistosomiasis
 - c. dengue
 - d. all of the above
9. Estimates of the amount of sea-level rise over the next century range from about
 - a. 0.02 to 0.06 meters
 - b. 0.2 to 0.7 meters
 - c. 2 to 7 meters
 - d. 20 to 70 meters
10. The Southern Oscillation refers specifically to a fluctuation in
 - a. air pressure difference across the equatorial Pacific
 - b. temperature difference between North and South America
 - c. rainfall in Brazil
 - d. sea level between Florida and Texas