

Lecture Questions: The Atmosphere

1. What are the *criteria air pollutants*? List them.
2. What are the four most abundant components in dry air at sea level? List them.
3. List the current average concentration of carbon dioxide, CO₂, in air in units of (a) % and (b) ppm.
4. List the major regions (layers) of the atmosphere, along with the typical altitudes for each region.
5. (a) What is the mathematical relationship between wavelength, frequency, and the speed of light?
(b) Describe the relationship between photon energy and (i) wavelength and (ii) frequency of light.
6. List the regions of the electromagnetic spectrum between 1 nm and 100 microns. Be sure to list the different types of ultraviolet radiation.
7. What fraction of sunlight is in the UV, visible, and infrared regions of the spectrum?