

## Review Questions - Chapter 20

**Answer the following questions using your OWN WORDS!!!! DO NOT copy right out of the book!!! Please attach this handout with your answers. All answers should be hand-written!!**

1. Distinguish among atmosphere, troposphere, and stratosphere. What key role does the stratosphere play in maintaining life on the earth?
2. Distinguish among air pollution, primary air pollutants, and secondary air pollutants. List eight major classes of pollutants found in outdoor air. Distinguish between stationary and mobile sources of pollution for outdoor air.
3. What is photochemical smog, and how does it form?
4. What is industrial smog, and how does it form?
5. List three factors that can reduce air pollution and four factors that can increase air pollution.
6. What is a temperature inversion, and what are its harmful effects? What types of places are most likely to suffer from prolonged temperature inversions of each type?
7. What is acid deposition, and what are its major components and causes? Distinguish among acid deposition, wet deposition, and dry deposition. What areas tend to be affected by acid deposition?
8. What areas tend to be most affected by acid deposition? What is a buffer, and what types of geologic areas can neutralize or buffer some inputs of acidic chemicals? What two types of areas are most sensitive to acid deposition?
9. What are the major harmful effects of acid deposition on (a) human health, (b) materials, (c) soils, (d) aquatic life, and (e) trees and other plants?
10. List eight ways to prevent acid deposition and two ways to clean it up.
11. How serious is indoor air pollution, and what are some of its sources? What is the sick-building syndrome? According to the EPA, what are the three most dangerous indoor air pollutants in the United States? What is the most dangerous indoor air pollutant in most developing countries?
12. Summarize the problems of indoor pollution from (a) formaldehyde and (b) radioactive radon gas.
13. List four defenses of your body against air pollution. What are the major harmful health effects of (a) carbon monoxide, (b) suspended particulate matter, (c) sulfur dioxide, (d) nitrogen oxides, and (e) ozone (see Table 20-2).
14. What is the Clean Air Act, and how has it helped reduce outdoor air pollution in the United States? Distinguish among national ambient air quality standards, primary standards, and secondary standards.
15. According to environmentalists and some health scientists, what are three weaknesses of the current Clean Air Act in the United States?
16. What is an emissions trading policy, and what are the advantages and disadvantages of using this approach to help reduce air pollution?
17. List the major prevention and cleanup methods for dealing with air pollution from (a) emissions of sulfur oxides, nitrogen oxides, and particulate matter from stationary sources, (b) automobile emissions, (c) indoor air pollution in developed countries, and (d) indoor air pollution in developing countries.