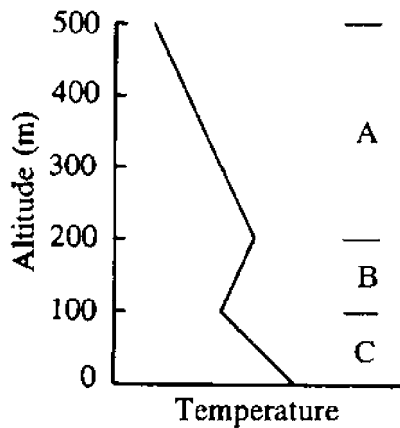


Sample Final Exam

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- _____ 1. Volcanoes are an important natural source of
 - a. chlorofluorocarbons.
 - b. ozone.
 - c. sulfur dioxide.
 - d. carbon monoxide.
- _____ 2. Photochemical smog is also termed
 - a. London-type smog.
 - b. subsidence smog.
 - c. mixing layer smog.
 - d. sea breeze smog.
 - e. Los Angeles-type smog.
- _____ 3. Which of the following gases is an example of a volatile organic compound or hydrocarbon?
 - a. sulfur dioxide
 - b. carbon dioxide
 - c. methane
 - d. ozone
- _____ 4. Polar stratospheric clouds form above Antarctica when _____ in the stratosphere is _____.
 - a. temperature, high
 - b. temperature, low
 - c. pressure, high
 - d. pressure, low
- _____ 5. The term "ozone hole" refers to a _____ decrease in ozone concentration.
 - a. permanent
 - b. yearly
 - c. monthly
 - d. daily

Exhibit 12-1

- _____ 6. In Exhibit 12-1, the greatest concentration of pollutants would be found
- in layer A.
 - in layer B.
 - in layer C.
 - above layer A.
- _____ 7. Which of the following conditions would act to prevent a high concentration buildup of pollutants near the surface?
- light surface winds
 - a strong subsidence inversion
 - a large, slow-moving anticyclone
 - a deep mixing layer
- _____ 8. On clear, cold winter nights, cities tend to cool _____ than rural areas and have _____ minimum temperatures.
- more slowly, higher
 - more quickly, higher
 - more slowly, lower
 - more quickly, lower
- _____ 9. A country breeze would probably be associated with
- a large high-pressure areas that forms over the city.
 - a hot and humid summer day in a large city.
 - a period of heavy rain that falls over a city.
 - a strong heat island.
- _____ 10. Which of the following is a major way in which chlorofluorocarbons can enter the stratosphere?
- from the exhaust of high-altitude aircraft
 - in an inversion
 - in building thunderstorms that penetrate into the lower stratosphere
 - from the rupture of radiosonde balloons
- _____ 11. Which of the following are capable of destroying ozone in the stratosphere?
- oxygen atoms
 - chlorine atoms
 - other ozone molecules
 - all of the above

- _____ 12. Imagine that this piece of paper is illuminated with white light and appears red. You see red light because
- the paper absorbs red and reflects other visible wavelengths.
 - the paper emits red light.
 - the paper reflects red and absorbs other visible wavelengths.
 - the paper disperses white light.
- _____ 13. On the average, as a cloud grows thicker (taller), which below does *not* occur?
- more sunlight is reflected from the cloud
 - less sunlight is transmitted through the cloud
 - less sunlight is absorbed by the cloud
 - more light is scattered by the cloud
- _____ 14. Red sunsets, blue moons, and milky-white skies are *mainly* the result of
- refraction.
 - dispersion.
 - reflection.
 - scattering.
 - diffraction.
- _____ 15. Which of the following would be true if the earth did not have an atmosphere?
- there would be fewer hours of daylight
 - the sky would always be black
 - the stars would be visible in the sky during the day
 - all of the above
- _____ 16. The sky is blue because air molecules selectively _____ blue light.
- scatter
 - absorb
 - diffract
 - disperse
 - emit
- _____ 17. What color would the sky be if air molecules selectively scattered only the longest wavelengths of visible light?
- white
 - blue
 - red
 - black
- _____ 18. Which of the following is capable of producing a red sunrise or sunset?
- small suspended salt particles
 - volcanic ash
 - small suspended dust particles
 - all of the above
- _____ 19. The blue haze often seen in the clean air found in mountainous regions is mainly due to the _____ of light.
- refraction
 - absorption
 - diffraction
 - scattering

- _____ 20. This can only be seen when the sun is to your back and it is raining in front of you.
- a. sundog
 - b. halo
 - c. rainbow
 - d. sun pillar
 - e. corona
- _____ 21. At sunset in the middle latitudes, look for a rainbow toward the
- a. north.
 - b. south.
 - c. east.
 - d. west.
- _____ 22. Refraction of light by the atmosphere is responsible for
- a. scintillation of starlight.
 - b. mirages.
 - c. causing the sun to appear to flatten-out on the horizon.
 - d. increasing the length of daylight.
 - e. all of the above
- _____ 23. Because of atmospheric refraction, a star seen near the earth's horizon is actually
- a. slightly higher than it appears.
 - b. slightly lower than it appears.
 - c. much dimmer than it appears.
 - d. much further away than it appears.
- _____ 24. You would most likely see a halo or sundog with which of the following cloud types?
- a. altostratus
 - b. cirrostratus
 - c. nimbostratus
 - d. cumulus
- _____ 25. Which of the following would you most likely observe over snow covered ground in the winter?
- a. superior mirage
 - b. sun pillars
 - c. crepuscular rays
 - d. shimmering

**Sample Final Exam
Answer Section**

MULTIPLE CHOICE

1. ANS: C
2. ANS: E
3. ANS: C
4. ANS: B
5. ANS: B
6. ANS: D
7. ANS: D
8. ANS: A
9. ANS: D
10. ANS: C
11. ANS: D
12. ANS: C
13. ANS: C
14. ANS: D
15. ANS: D
16. ANS: A
17. ANS: C
18. ANS: D
19. ANS: D
20. ANS: C
21. ANS: C
22. ANS: E
23. ANS: B
24. ANS: B
25. ANS: A