

Health: The Basics, 12e (Donatelle)

Chapter 15 Promoting Environmental Health

1) All of the following are consequences of population growth EXCEPT

- A) natural resources being depleted.
- B) animal habitats being destroyed.
- C) decreased availability of clean water.
- D) higher healthcare costs.

Answer: D

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

2) Which of the following is a concern in regard to overpopulation?

- A) increased amount of land used for agricultural purposes
- B) increased levels of prosperity in developed nations
- C) increased use of alternative fuels
- D) increased fish stocks

Answer: A

Diff: 4

Skill: Analyzing

Section: The Threat of Overpopulation

Learning Outcome: 15.1

3) Experts analyze the carrying capacity of the earth to figure out

- A) how to increase available resources.
- B) the earth's population over the next century.
- C) the maximum population the earth can support.
- D) how to ration resources for the existing population.

Answer: C

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

4) Countries with the largest per capita "ecological footprint" include which of the following?

- A) China
- B) India
- C) United States
- D) Australia

Answer: C

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

5) The country projected to have the largest population by 2050 is

- A) China.
- B) India.
- C) Nigeria.
- D) Indonesia.

Answer: B

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

6) Reasons for continued population growth in many developing nations include all of the following circumstances for women EXCEPT

- A) lack of education.
- B) no access to birth control.
- C) rising economic status.
- D) little control over reproductive choices.

Answer: C

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

7) As compared to today, by the year 2050, the world's population is expected to

- A) decline by about 100 million people.
- B) stay about the same.
- C) increase by about 1 billion people.
- D) increase by about 2 billion people.

Answer: D

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

8) Air pollutants regulated by the Clean Air Act include all of the following EXCEPT

- A) sulfur dioxide.
- B) carbon monoxide.
- C) particulates.
- D) carbon dioxide.

Answer: D

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

9) A colorless gas that dissolves in water vapor to form acid and is emitted from coal-fired power plants is

- A) nitrogen dioxide.
- B) carbon monoxide.
- C) carbon dioxide.
- D) sulfur dioxide.

Answer: D

Diff: 1

Skill: Remembering

Section: Air Pollution

Learning Outcome: 15.2

10) All of the following statements about particulates are true EXCEPT

- A) they are tiny particles suspended in the air.
- B) diesel engines emit particulates.
- C) they impair visibility.
- D) they have few health effects.

Answer: D

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

11) Motor vehicle exhaust is a source of which odorless, colorless gas that also contributes to the formation of smog?

- A) carbon monoxide
- B) lead
- C) carbon dioxide
- D) sulfur dioxide

Answer: A

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

12) Smog is sometimes called

- A) carbon monoxide pollution.
- B) ozone pollution.
- C) particulate pollution.
- D) sulfur dioxide pollution.

Answer: B

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

13) Which of the six major outdoor air pollutants is a metallic element that is also a significant concern indoors?

- A) dioxin
- B) formaldehyde
- C) lead
- D) sulfur

Answer: C

Diff: 4

Skill: Analyzing

Section: Air Pollution

Learning Outcome: 15.2

14) Smog tends to form in areas that experience

- A) high rainfall.
- B) dry conditions.
- C) a climate shift.
- D) a temperature inversion.

Answer: D

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

15) In which of the following regions is smog most likely to be a concern?

- A) at the top of Mount Rainier
- B) along the Florida coastline
- C) in the San Fernando Valley
- D) over an industrial farm in Nebraska

Answer: C

Diff: 3

Skill: Applying

Section: Air Pollution

Learning Outcome: 15.2

16) An Air Quality Index of 50 indicates that the air quality is

- A) good.
- B) unhealthy for sensitive people.
- C) unhealthy for everyone.
- D) hazardous.

Answer: A

Diff: 3

Skill: Applying

Section: Air Pollution

Learning Outcome: 15.2

17) Chemicals used to kill insects and rodents are

- A) dioxins.
- B) solvents.
- C) pesticides.
- D) herbicides.

Answer: C

Diff: 2

Skill: Understanding

Section: Water Pollution and Shortages

Learning Outcome: 15.4

18) Chemicals used to kill weeds and vegetation are

- A) PCBs.
- B) solvents.
- C) pesticides.
- D) herbicides.

Answer: D

Diff: 2

Skill: Understanding

Section: Water Pollution and Shortages

Learning Outcome: 15.4

19) Acid deposition mainly consists of airborne deposits of sulfur dioxide and

- A) carbon monoxide.
- B) nitrogen oxides.
- C) ozone.
- D) lead.

Answer: B

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

20) When trying to ensure clean air in your home, sources of pollution to look for include all of the following EXCEPT

- A) radon.
- B) asbestos.
- C) formaldehyde.
- D) nitroglycerine.

Answer: D

Diff: 3

Skill: Applying

Section: Air Pollution

Learning Outcome: 15.2

21) You have been looking at numerous new homes. The nausea and fatigue you are attributing to the stress of buying a new house may actually be due to exposure to

- A) asbestos.
- B) carbon monoxide.
- C) formaldehyde.
- D) radon.

Answer: C

Diff: 3

Skill: Applying

Section: Air Pollution

Learning Outcome: 15.2

22) The greenhouse effect is

- A) the shift in seasonal temperatures and patterns of rainfall that has occurred in the last century.
- B) responsible for increasing the average temperature of the earth by about 8°F over the last century.
- C) a natural phenomenon.
- D) an essential mechanism for keeping the planet cool enough to sustain life.

Answer: C

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

23) Climate change is

- A) synonymous with global warming.
- B) due to a rise in global sea levels and solar output as well as changes in the earth's orbit.
- C) due to sustainable development.
- D) evidenced by patterns of shifts in temperature, precipitation, and frequency of catastrophic climate storms that exceed what might be predicted by natural causes.

Answer: D

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

24) Increases in the planet's temperature over the past few decades can be attributed to

- A) acid rain.
- B) excess carbon monoxide.
- C) the increased use of chlorofluorocarbons.
- D) the enhanced greenhouse effect.

Answer: D

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

25) Seth has a sensitivity to mold. When he visits his grandparents and spends time in their damp basement, he likely experiences all of the following EXCEPT

- A) nasal congestion.
- B) eye and skin irritation.
- C) difficulty breathing.
- D) migraine headaches.

Answer: D

Diff: 3

Skill: Applying

Section: Air Pollution

Learning Outcome: 15.2

26) An important strategy for avoiding mold is to

- A) keep the humidity in your home between 60 and 80 percent.
- B) make sure you keep the doors and windows in your home tightly sealed.
- C) lay down carpeting in bathrooms and basements.
- D) use a dehumidifier in damp rooms.

Answer: D

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

27) The primary greenhouse gas in the atmosphere is

- A) nitrous oxide.
- B) carbon dioxide.
- C) hydrochlorazine.
- D) methane.

Answer: B

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

28) The ozone layer is

- A) close to Earth and poses no serious health threats.
- B) in the stratosphere and protects the planet from UVB radiation.
- C) a harmful chemical that is produced when oxygen interacts with water.
- D) a layer of toxic gas produced by the discharge of aerosols, refrigerants, and solvents high into the earth's stratosphere.

Answer: B

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

29) The chemical originally contained in aerosol propellants that is thought to have contributed to the depletion of the ozone layer is

- A) carbon oxides.
- B) chlorofluorocarbons.
- C) fluorohydrochlorides.
- D) nitrous oxide.

Answer: B

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

30) Earth's average temperature has risen by how much in the past 100 years?

- A) 0.5°F
- B) 1.5°F
- C) 2.5°F
- D) 3.5°F

Answer: B

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

31) Earth's average temperature is expected to rise by a maximum of how much in the next 100 years?

- A) 2.5°F
- B) 5.5°F
- C) 8.5°F
- D) 11.5°F

Answer: D

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

32) Climate change is evidenced by which of the following features?

- A) the warmest winter on record in the Northeastern U.S.
- B) a shift to a pattern of unusual fluctuations in rain or snowfall amounts
- C) the end of seasonal variations
- D) the occurrence of a hurricane

Answer: B

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

33) Cap and trade policies

- A) are financial rewards paid to industrial farms that limit their gallons of water used per day.
- B) are strongly supported by those who oppose "big government."
- C) provide incentives to industrial polluters to limit their carbon emissions.
- D) limit the amount of electricity communities are allowed to purchase from coal-fired power plants before they must begin to purchase electricity from solar or wind sources.

Answer: C

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

34) Most experts agree that a key step in slowing climate change is to

- A) repeal all industrial waste laws.
- B) reduce consumption of fossil fuels.
- C) make cars larger and more efficient.
- D) eliminate mass transportation.

Answer: B

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

35) Economic development that meets the needs of the present without compromising the needs of future generations is called

- A) environmental development.
- B) sustainable development.
- C) progressive development.
- D) ecological development.

Answer: B

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

36) All of the following are examples of resources that reduce carbon emissions EXCEPT

- A) solar.
- B) wind.
- C) bioenergy.
- D) coal.

Answer: D

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

37) The two general types of water pollution are described as

- A) point source and nonpoint source.
- B) toxic and nontoxic.
- C) runoff and nonrunoff.
- D) acid and nonacid.

Answer: A

Diff: 2

Skill: Understanding

Section: Water Pollution and Shortages

Learning Outcome: 15.4

38) An example of a point source water pollutant is

- A) runoff from a construction site.
- B) outflow from a sewage treatment plant.
- C) weed-killer used on lawns.
- D) leakage from a septic tank.

Answer: B

Diff: 2

Skill: Understanding

Section: Water Pollution and Shortages

Learning Outcome: 15.4

39) An example of a nonpoint source water pollutant is

- A) outflow from a sewage treatment plant.
- B) pesticide runoff from a farm.
- C) waste from a mulching operation.
- D) industrial waste from a chemical plant.

Answer: B

Diff: 2

Skill: Understanding

Section: Water Pollution and Shortages

Learning Outcome: 15.4

40) Major sources of water contamination include all of the following EXCEPT

- A) gas and petroleum products.
- B) dioxins.
- C) consumer medications.
- D) PCBs.

Answer: C

Diff: 2

Skill: Understanding

Section: Water Pollution and Shortages

Learning Outcome: 15.4

41) The human body does not excrete polychlorinated biphenyls (PCBs) but instead stores them in the

- A) lungs.
- B) kidneys.
- C) liver.
- D) muscles.

Answer: C

Diff: 1

Skill: Remembering

Section: Water Pollution and Shortages

Learning Outcome: 15.4

42) The average person in the United States generates how many pounds of municipal solid waste each day?

- A) about 1.5
- B) more than 4
- C) more than 6
- D) more than 8

Answer: B

Diff: 1

Skill: Remembering

Section: Land Pollution

Learning Outcome: 15.5

43) According to experts, what percentage of trash is recyclable?

- A) 35 percent
- B) 50 percent
- C) 75 percent
- D) 90 percent

Answer: D

Diff: 1

Skill: Remembering

Section: Land Pollution

Learning Outcome: 15.5

44) Marta collects kitchen scraps and yard clippings in a bin outside of her home to use in her garden. She is

- A) recycling.
- B) composting.
- C) combusting.
- D) source reducing.

Answer: B

Diff: 3

Skill: Applying

Section: Land Pollution

Learning Outcome: 15.5

- 45) All of the following statements regarding cell phones are true EXCEPT
- A) radio frequency energy from cell phones can penetrate your body.
 - B) cell phone use has been proven to pose a clear risk of human tissue damage.
 - C) for the highest level of safety, it is best to use a hands-free device.
 - D) the global burden of e-waste from cell phones has skyrocketed in recent years.

Answer: B

Diff: 2

Skill: Understanding

Section: Radiation

Learning Outcome: 15.6

- 46) The release of particles and electromagnetic rays from atomic nuclei during the normal process of disintegration produces

- A) cell phone radiation.
- B) nonionizing radiation.
- C) ionizing radiation.
- D) microwave radiation.

Answer: C

Diff: 1

Skill: Remembering

Section: Radiation

Learning Outcome: 15.6

- 47) Radiation exposure is measured in which of the following units (also called roentgens)?

- A) radiation ionized units
- B) radiation absorbed doses
- C) radiation exposed doses
- D) radiation frequency units

Answer: B

Diff: 1

Skill: Remembering

Section: Radiation

Learning Outcome: 15.6

- 48) The accident that results when the temperature in the core of a nuclear reactor increases enough to melt the fuel and breach the containment vessel is called a nuclear

- A) fire.
- B) breach.
- C) explosion.
- D) meltdown.

Answer: D

Diff: 2

Skill: Understanding

Section: Radiation

Learning Outcome: 15.6

49) Sound is measured in

- A) amps.
- B) watts.
- C) decibels.
- D) candelas.

Answer: C

Diff: 2

Skill: Understanding

Section: Noise Pollution

Learning Outcome: 15.7

50) The average number of births a female in a given population has during her reproductive years is the

- A) conception rate.
- B) birth rate.
- C) fertility rate.
- D) reproductive rate.

Answer: C

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

51) The term for an environmental contaminant that causes potential harm to living organisms is

- A) pollutant.
- B) hazard.
- C) runoff.
- D) compound.

Answer: A

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

52) Gases that accumulate in the atmosphere and contribute to global warming by trapping heat near Earth's surface are

- A) ionizing gases.
- B) greenhouse gases.
- C) stratospheric gases.
- D) hydrocarbons.

Answer: B

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

53) A measure of the amount of greenhouse gases produced, shown as units of carbon dioxide emissions, is the

- A) smog level.
- B) carbon level.
- C) carbon footprint.
- D) air quality index.

Answer: C

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

54) A measure of how clean or polluted the air in a given region is on a particular day is the

- A) smog level.
- B) carbon level.
- C) carbon footprint.
- D) air quality index.

Answer: D

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

55) Which compound that was formerly used in building materials such as insulation has been found to be the cause of certain cancers and lung diseases?

- A) radon
- B) asbestos
- C) lead
- D) PCBs

Answer: B

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

56) Which naturally occurring odorless, colorless gas seeps into homes and is a leading cause of lung cancer?

- A) radon
- B) asbestos
- C) lead
- D) mold

Answer: A

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

57) Which inexpensive device can be attached to faucets and showerheads to reduce water consumption?

- A) filter
- B) aerator
- C) pump
- D) gasket

Answer: B

Diff: 2

Skill: Understanding

Section: Water Pollution and Shortages

Learning Outcome: 15.4

58) Lydia is listening to her MP3 player at a decibel level of 80. This is about

- A) 10 percent softer than a vacuum cleaner.
- B) 10 percent louder than a vacuum cleaner.
- C) 10 times louder than a vacuum cleaner.
- D) as loud as a chainsaw.

Answer: C

Diff: 4

Skill: Analyzing

Section: Noise Pollution

Learning Outcome: 15.7

59) Mrs. Smith is an only child. She has three daughters. If all three have three daughters, and each daughter has three daughters, then within four generations, Mrs. Smith would have produced 27 female descendants.

Answer: TRUE

Diff: 4

Skill: Analyzing

Section: The Threat of Overpopulation

Learning Outcome: 15.1

60) One in four animals is threatened with extinction because of population growth as a result of human activity.

Answer: TRUE

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

61) Evidence suggests that pollution levels within homes and other buildings can be 2 to 5 times higher than in outdoor air.

Answer: TRUE

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

62) Oil, coal, and natural gas are examples of fossil fuels, which are carbon-based fuels.

Answer: TRUE

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

63) Toxic waste (hazardous waste) in landfills and dump sites can harm the environment but has little impact on human health.

Answer: FALSE

Diff: 2

Skill: Understanding

Section: Land Pollution

Learning Outcome: 15.5

64) Environmental tobacco smoke contains over 40 compounds linked to lung cancer, asthma, heart disease, and sudden infant death syndrome.

Answer: TRUE

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

65) The climate change that has occurred over the last 100 years is primarily due to human activities.

Answer: TRUE

Diff: 2

Skill: Understanding

Section: Climate Change

Learning Outcome: 15.3

66) Runoff from a parking lot is considered nonpoint source pollution.

Answer: TRUE

Diff: 2

Skill: Understanding

Section: Water Pollution and Shortages

Learning Outcome: 15.4

67) Most solid municipal waste is recycled.

Answer: FALSE

Diff: 2

Skill: Understanding

Section: Land Pollution

Learning Outcome: 15.5

68) The federal government established Superfund to provide money for water conservation efforts in certain communities.

Answer: FALSE

Diff: 2

Skill: Understanding

Section: Land Pollution

Learning Outcome: 15.5

69) All forms of radiation pose a threat to human health.

Answer: FALSE

Diff: 2

Skill: Understanding

Section: Radiation

Learning Outcome: 15.6

70) Approximately 45% of the radiation that Americans are exposed to is from medical and dental x-rays.

Answer: TRUE

Diff: 2

Skill: Understanding

Section: Radiation

Learning Outcome: 15.6

71) A decibel level of 110 is 10 times louder than 100 decibels.

Answer: TRUE

Diff: 2

Skill: Understanding

Section: Noise Pollution

Learning Outcome: 15.7

72) Explain why slowing the world's population growth is a critical environmental challenge today.

Answer: Overpopulation is taxing the capacity of the earth and its natural resources to provide adequate food, water, and energy for the human population. Safe disposal of waste is becoming equally difficult, and our supply of fresh water is declining. Land is being lost to overdevelopment and contamination. Many plant and animal species and entire ecosystems are being lost or harmed by the development and overconsumption of resources that occurs with overpopulation.

Diff: 4

Skill: Analyzing

Section: The Threat of Overpopulation

Learning Outcome: 15.1

73) Explain the concept of an ecological footprint and identify the source contributing most greatly to humanity's ecological footprint.

Answer: An ecological footprint is a measure of the biologically productive land and water area an individual, population, or activity occupies and utilizes. More than half of the world's ecological footprint is derived from carbon dioxide emissions, known as our carbon footprint.

Diff: 2

Skill: Understanding

Section: The Threat of Overpopulation

Learning Outcome: 15.1

74) Explain how taking steps to preserve natural resources, including energy, food, water, and land, can save you money.

Answer: Walking, riding a bike, or carpooling will reduce the amount of fuel used (less money spent on gas) and will reduce polluting emissions. Turning off lights when leaving a room and turning off and/or unplugging appliances when not in use will decrease the amount of electricity consumed and lower bills. Planning food purchases so that you buy only what you can eat before the food spoils saves money, as does saving leftovers for another meal, rather than throwing the food away. Properly working toilets and faucets will prevent water waste and decrease your water bills. Using nondisposable cups, dishes, and utensils and recycling as much waste as possible will decrease waste deposited in landfills; reusing water containers will also decrease waste destined for landfills and will save money spent on bottles of water.

Diff: 5

Skill: Evaluating

Section: Air Pollution; Water Pollution and Shortages; Land Pollution

Learning Outcome: 15.2, 15.4, 15.5

75) Discuss the three main areas of focus in preventing indoor air pollution.

Answer:

1. *Source control*—eliminating or reducing individual contaminants, such as tobacco smoke
2. *Ventilation improvements* — increasing the amount of outdoor air coming indoors
3. *Air cleanliness*— removing particulates from the air by using devices that clean and filter the air

Diff: 2

Skill: Understanding

Section: Air Pollution

Learning Outcome: 15.2

76) Discuss three ways you can reduce the waste you generate at home.

Answer: (Any three of the following)

- Source reduction to prevent waste from being generated in the first place
- Recycling as many items as possible
- Composting kitchen and yard trash
- Washing and reusing dishes, cups, utensils, and containers instead of using disposable items
- Reduce by buying food with less packaging

Diff: 3

Skill: Applying

Section: Land Pollution

Learning Outcome: 15.5

77) Identify three strategies for protecting your hearing when listening to an MP3 player.

Answer:

1. Keep the volume down.
2. Limit the amount of time you listen per day.
3. Use headphones that go over, rather than inside, your ears.

Diff: 3

Skill: Applying

Section: Noise Pollution

Learning Outcome: 15.5