

POST-TEST

Directions: Carefully read each of the following 60 questions. Choose the best answer to each question, and darken its letter on your answer sheet. The Answer Key and Explanations can be found following this Post-Test.

- Which of the following methods is a way to recycle materials back into different products?
(A) Downcycling
(B) Composting
(C) Closed-loop recycling
(D) Source separation
- Which of the following is an essential practice in maintaining good soil quality for farming?
(A) Keep the ground covered
(B) Keep crops consistent
(C) Frequent tilling of land
(D) Soil compaction
- Which type of pollution can decimate forests and erode buildings?
(A) Acid rain
(B) Ozone
(C) Carbon monoxide
(D) Particulate matter
- One consequence of introducing agricultural technology to a developing country is
(A) an increased carrying capacity.
(B) a decreased carrying capacity.
(C) a steady carrying capacity.
(D) no effect on carrying capacity.
- Degradation of ecosystems and loss of biodiversity in emerging nations is most often due to
(A) overgrowth of vegetation.
(B) industrial development.
(C) flooding.
(D) poor soil quality.
- Which of the following gases is thought to be a major contributor to effect of global warming?
(A) NO₂
(B) SO₂
(C) CO₂
(D) O₃
- Where is secondary succession likely to occur?
(A) On a bare rock surface
(B) Land covered by floods
(C) Islands created by volcanoes
(D) A sandy beach
- The relationship between fungi and plant roots is best described as
(A) mutualism.
(B) commensalism.
(C) parasitism.
(D) competition.
- Which of the following fossil fuels has the least impact on the environment?
(A) Coal
(B) Oil
(C) Natural gas
(D) Geothermal power

post-test

10. Which of the following is generally true about soil erosion?
- (A) The amount of topsoil remains relatively constant over long periods of time.
 - (B) Soil is eroding faster than it forms.
 - (C) There are no effective methods to prevent soil erosion.
 - (D) As soil erodes, new soil replaces it.
11. Which of the following is the correct order in a simple five-step food chain?
- (A) producer, tertiary consumer, secondary consumer, primary consumer, decomposer
 - (B) decomposer, primary consumer, secondary consumer, tertiary consumer, producer
 - (C) producer, primary consumer, secondary consumer, tertiary consumer, decomposer
 - (D) decomposer, tertiary consumer, secondary consumer, primary consumer, producer
12. Which of the following is an example of a point source of water pollution?
- (A) Urban street runoff
 - (B) Storm drain
 - (C) Acid rain
 - (D) Fertilizer
13. Which 1976 act regulated the disposal of hazardous waste in the United States?
- (A) Clean Water Act
 - (B) Brownfields Program
 - (C) Soil and Water Conservation Act
 - (D) Resource Conservation and Recovery Act
14. The living components of an ecosystem are called
- (A) biotic factors.
 - (B) abiotic factors.
 - (C) environmental factors.
 - (D) biosphere factors.
15. The ozone layer is a necessary part of the atmosphere protecting Earth's surface from
- (A) meteors.
 - (B) air pollution.
 - (C) carbon monoxide.
 - (D) ultraviolet light.
16. What percent of the world's energy comes from nonrenewable energy sources and nuclear energy?
- (A) 82 percent
 - (B) 76 percent
 - (C) 18 percent
 - (D) 6 percent
17. Which of the following is NOT a factor that determines the carrying capacity of an aquatic ecosystem?
- (A) The salt concentration of the water
 - (B) The O₂ levels of the water
 - (C) The amount of nutrients in the water
 - (D) The food supply
18. Which phenomenon is necessary to keep Earth warm enough to sustain life?
- (A) Biodiversity
 - (B) Global warming
 - (C) The greenhouse effect
 - (D) Depleting ozone layer
19. A primary goal of the Superfund is to
- (A) clean up hazardous waste sites.
 - (B) apply certain requirements to storm water discharge.
 - (C) prohibit ocean dumping.
 - (D) gain control of point source pollution.

20. The field of science that aims to understand how all of Earth's ecosystems work together in order to predict future problems is
- (A) ecology.
 - (B) biochemistry.
 - (C) environmental science.
 - (D) global ecology.
21. The total fertility rate of a population is the
- (A) number of births and deaths.
 - (B) fertility rate necessary to replace a generation.
 - (C) number of children born to each woman in her lifetime.
 - (D) number of women of childbearing age.
22. Which of the following is an example of a persistent pesticide?
- (A) DDT
 - (B) Diazinon
 - (C) Organophosphates
 - (D) Carbamates
23. What is one environmental issue that is a result of the Green Revolution?
- (A) Overcrowded farmland
 - (B) Increase in labor-intensive agriculture
 - (C) Increase in the number of crops grown on a plot of land through multiple cropping
 - (D) The use of fertilizer and pesticides
24. Which of the following is NOT a feature of evolution?
- (A) Limiting factors
 - (B) Extinction
 - (C) Genetic variation
 - (D) Natural selection
25. Which biome produces the least biomass?
- (A) Tropical rainforest
 - (B) Tundra
 - (C) Wetlands
 - (D) Desert
26. In 1992, the Earth Summit aimed to develop a better integration of each country's environmental and
- (A) ecological goals.
 - (B) biodiversity goals.
 - (C) economic goals.
 - (D) agricultural goals.
27. Which federal agency regulates the use of pesticides?
- (A) Department of Agriculture
 - (B) Environmental Protection Agency
 - (C) National Institute of Health
 - (D) Food and Drug Administration
28. Which of the following is an example of interspecific competition?
- (A) Moss-tree
 - (B) Shark-remora
 - (C) Tapeworm-dog
 - (D) Hawk-owl
29. Which of the following are among the first organisms that may appear in secondary succession?
- (A) Grasses
 - (B) Autotrophs
 - (C) Lichen
 - (D) Shrubs
30. How does thermal pollution affect fish populations?
- (A) Increases amount of fish
 - (B) Decreases amount of fish
 - (C) No effect on fish
 - (D) Causes mutations in fish

31. Which fuel source can be produced from biomass materials that contain cellulose or starch?
- (A) Carbon dioxide
 - (B) Coal
 - (C) Ethanol
 - (D) Oil
32. Improvements to the combustion engine have decreased which type of air pollution?
- (A) Sulfur dioxide
 - (B) Volatile organic compounds
 - (C) Oxides of nitrogen
 - (D) Carbon monoxide
33. Which of the following is a possible disadvantage of recycling plastics?
- (A) It requires fossil fuels.
 - (B) It causes an increase in pollution.
 - (C) All types of plastic cannot be recycled by the same methods.
 - (D) Most municipalities do not recycle plastic.
34. Which of the following is NOT a source of acid deposition?
- (A) Automobiles
 - (B) Trees
 - (C) Farm animals
 - (D) Factories
35. Which of the following statements most accurately describes the role of nitrifying fixing bacteria in the nitrogen cycle?
- (A) Converts ammonia to nitrites and nitrates
 - (B) Converts nitrites to nitrogen gas
 - (C) Incorporates nitrates into amino acid
 - (D) Converts nitrogen gas into ammonia
36. Which of the following is indicative of a high genetic diversity in a given population?
- (A) Varied structures and abilities
 - (B) Uniform structures and abilities
 - (C) Highly evolved individuals
 - (D) Varied ecosystems
37. The spread of disease in wild fish can be the result of
- (A) fish farming.
 - (B) depletion of mangrove swamps.
 - (C) decline in the fishing industry.
 - (D) heavily populated estuaries.
38. Species that feed at all trophic levels are
- (A) producers.
 - (B) carnivores.
 - (C) decomposers.
 - (D) herbivores.
39. The exploitation of minerals in oceans is controlled by the
- (A) United Nations.
 - (B) Clean Water Act.
 - (C) Resource Conservation and Recovery Act.
 - (D) Law of the Sea.
40. Which of the following processes provides usable energy to producers?
- (A) Photosynthesis
 - (B) Cellular respiration
 - (C) Digestion
 - (D) Osmosis
41. Which process of irrigation conserves the most water?
- (A) Gravity flow irrigation
 - (B) Flood irrigation
 - (C) Trickle irrigation
 - (D) Center-pivot irrigation

42. Which biomes absorb the most CO₂ in the environment?
- (A) Desert and tundra
 - (B) Wetlands and forests
 - (C) Savannas and chaparrals
 - (D) Oceans and grasslands
43. Surface mining regulations require that land damaged from the effects of surface mining must be
- (A) filled with topsoil when the mine is shut down.
 - (B) replanted with vegetation.
 - (C) converted to an artificial lake.
 - (D) cleaned and decontaminated.
44. Which layer of the atmosphere varies in depth dependent upon the season and Earth's relative position?
- (A) Mesosphere
 - (B) Stratosphere
 - (C) Troposphere
 - (D) Thermosphere
45. Which of the following is extracted from shale?
- (A) Oil
 - (B) Coal
 - (C) Natural gas
 - (D) Nuclear energy
46. Which three states have enough wind to power the nation?
- (A) Pennsylvania, New York, Ohio
 - (B) Texas, North Dakota, South Dakota
 - (C) California, Washington, Oregon
 - (D) Florida, Georgia, South Carolina
47. Which of the following is a feature of sustainable agriculture?
- (A) Planting multiple crops in the same field
 - (B) Use of fertilizers to increase crop growth
 - (C) Only planting in a field every other year
 - (D) Practicing monoculture
48. Which of the following converts to an acid in the atmosphere?
- (A) NO₂
 - (B) SO₂
 - (C) H₂SO₄
 - (D) CO
49. Which of the following concepts is frequently used in environmental risk assessment?
- (A) Pollution control
 - (B) Damage control
 - (C) Source-pathway-receptor
 - (D) Source-pathway-control
50. Which best explains why brown beetles survive over green beetles?
- (A) Green beetles taste better to birds.
 - (B) Brown beetles are less visible, so birds do not see them.
 - (C) Brown beetles reproduce faster than green beetles.
 - (D) It happens by chance.
51. The stewardship worldview of environmentalism maintains that
- (A) we must consider our neighbors well-being.
 - (B) we must care for all living creatures no matter how small.
 - (C) we have a responsibility to care for Earth so it is preserved for future generations.
 - (D) we are completely dependent on nature for our survival.

52. The first significant increase in atmospheric CO₂ levels is linked to
- (A) the thinning ozone layer above Antarctica.
 - (B) the warming of ocean temperatures.
 - (C) an increase in vegetation on Earth.
 - (D) the Industrial Revolution.
53. Which scientific practice yields plants with desired traits?
- (A) Mutation
 - (B) Genetic crossbreeding
 - (C) Chemical enhancement
 - (D) Sustainable farming
54. Human populations can best be described as
- (A) r-strategists.
 - (B) l-strategists.
 - (C) k-strategists.
 - (D) survivalists.
55. Which of the following describes the method of contour farming?
- (A) Tilling only in a narrow region that is to receive seeds while all other soil is undisturbed
 - (B) Farming at right angles to a slope of land
 - (C) Diversifying crops planted in given area
 - (D) Leaving a ridge the previous year and planting the new crop in the ridge
56. What is one environmental problem that arose from the Agricultural Revolution?
- (A) Soil erosion
 - (B) Air pollution
 - (C) Poor crop yield
 - (D) Increase in pests
57. Which of the following describes limiting factors?
- (A) A factor that determines the fertility rate of an organism
 - (B) Always an intrinsic factor
 - (C) An environmental factor that determines size of a population
 - (D) Independent of the environment
58. The largest proportion of deforestation is caused by
- (A) acid rain.
 - (B) drought.
 - (C) agricultural development.
 - (D) forest fires.
59. Which energy source can be obtained from a landfill?
- (A) Ethane
 - (B) Hydrogen
 - (C) Methane
 - (D) Steam
60. In which area of the world listed below is desertification most prevalent?
- (A) Western United States
 - (B) Northern Africa
 - (C) Eastern Europe
 - (D) Central America