

2011 ENR National Exam **Key**

1. What is ecology?

- a. a complex network of living and nonliving organisms
- b. the branch of science dealing with the complex relationships of nonliving organisms
- c. the branch of science dealing with the complex relationships among living things and their environment**
- d. the branch of science dealing with only natural resources

2. Ecosystems are.....

- a. complex relationships among living things and their environment.
- b. complex relationships among nonliving organisms.
- c. natural resources.
- d. complex networks of living and nonliving organisms in which each organism may be affected by the others.**

3. Natural resources.....

- a. are only important to plants and animals.
- b. are not important to humans.
- c. are important to humans because they rely upon them for everyday life.**
- d. are important to the United States' international trade policy.

4. Which of the following is a renewable natural resource?

- a. minerals
- b. fuel
- c. copper
- d. fish and wildlife**

5. Which of the following is a nonrenewable natural resource?

- a. forest
- b. fish and wildlife
- c. fuel**
- d. soil

6. The three components of the food chain are...

- a. earth, wind and fire.
- b. producers, consumers, and decomposers.**
- c. soil, plants, and animals.
- d. dogs, cats, and horses.

7. The primary source of food energy in a food chain comes from.....

- a. decomposers.
- b. producers.**
- c. consumers.
- d. water

8. Where is the majority of the earth's water?

- a. water vapor in the atmosphere
- b. in plants and animals
- c. precipitating at this moment
- d. in the oceans and polar ice caps**

9. Approximately 78% of the earth's atmosphere is made up of what gas?

- a. carbon
- b. nitrogen**
- c. oxygen
- d. water vapors

10. Nitrates are.....

- a. man-made fertilizers utilized in the production of the food we eat.
- b. common gases found in the atmosphere.
- c. not useful to plants until converted to nitrites.
- d. formed from the decomposing of dead organisms and animal wastes.**

11. The organisms unable to manufacture their own food are called.....

- a. producers.
- b. decomposers.
- c. providers.
- d. consumers.**

12. Photosynthesis is a process by which.....

- a. consumers make their own food.
- b. plants use sunlight to break down food.
- c. plants transform the sun's energy into usable energy (food).**
- d. one plant community is replaced by another over time.

13. A community refers to the parts of an ecosystem including.....

- a. the animals in one place.
- b. all the living organisms and how they interact.
- c. the physical environment.**
- d. the abiotic organisms

14. Plants that undergo the process of nitrogen-fixing by absorbing nitrogen gas (N_2) and converting it to nitrates are called _____.

- a. legumes**
- b. cool season grasses
- c. warm season grasses
- d. nitrators

15. The largest of these soil separates or particles is.....

- a. gravel**
- b. sand
- c. silt
- d. clay

16.. What soil particle holds water the tightest and has the least permeability?

- a. gravel
- b. sand
- c. silt
- d. clay**

17. Foods that should not be placed in a compost heap include.....

- a. potato peels.
- b. meats.**
- c. coffee grounds.
- d. egg shells.

18. Soil formation is affected by which of the following factors?

- a. traffic intensity
- b. color
- c. uses
- d. climate**

19. Which of the following is n o t a soil forming factor?

- a. climate
- b. biotic activity
- c. distance from water**
- d. parent material

20. Which of the following types of information c a n n o t be found in a soil survey?

- a. information on productivity and fertility holding capacity of soils
- b. information on trees and shrubs that are best suited to commercial and industrial sites
- c. information on amount of red soils within a county**
- d. information on the suitability of soils for septic tank disposal systems

21. What are the four textural classes in the textural triangle?

- a. gravel, sand, silt, and clay
- b. sand, silt, clay, and wood
- c. sand, silt, clay, and loam**
- d. sand, silt, clay, and clay

22. Which has the least tendency to form clods, the least moisture holding capacity, and the least fertility?

- a. sand**
- b. silt
- c. clay
- d. loam

23. Which of the following items are n o t considered to be a factor which influences the toxicity of chemicals?

- a. length of exposure
- b. absorbed dose
- c. frequency of exposure
- d. weather conditions**

24. Which of the following chemical elements is n o t needed to form an organic chemical?

- a. **chlorine**
- b. hydrogen
- c. oxygen
- d. carbon

25. Which of the following plants does n o t contain a toxic chemical which is fatal to livestock?

- a. black nightshade
- b. **black cherry tree**
- c. fescue grass
- d. blue grass

26. The botulin toxin is produced by a _____.

- a. fungi
- b. **bacteria**
- c. mold
- d. virus

27. Soap and water can be used to kill insects in the _____ stage.

- a. egg
- b. pupae
- c. **larvae**
- d. adult

28. The soap and water mixture affects which system of the insect?

- a. **respiratory**
- b. nervous
- c. circulatory
- d. reproductive

29. How are contaminant residues generally measured in drinking water?

- a. parts per thousand (ppt)
- b. **parts per million (ppm)**
- c. parts per billion (ppb)
- d. parts per hundred (pph)

30. The largest consumer of water used in agricultural practices is _____.

- a. a bulking ingredient
- b. **irrigation**
- c. stock tanks
- d. food processing

31. The average American uses _____ gallons of water per day.

- a. 50
- b. **90**
- c. 100
- d. 200

32. Which sphere contains all of the plant and animal life on the earth's surface?
- a. hydrosphere
 - b. atmosphere**
 - c. biosphere
 - d. lithosphere
33. The natural process of plants releasing water into the atmosphere is called _____.
- a. evaporation
 - b. transpiration**
 - c. condensation
 - d. respiration
34. The process that changes water from a gas to a liquid is called _____.
- a. condensation
 - b. evaporation**
 - c. transpiration
 - d. respiration
35. The buildup of plant nutrients in a body of water, which leads to excessive algae growth, is called _____.
- a. equinoctial
 - b. eradication
 - c. eutrophication**
 - d. equatorial
36. Air pollutants which adhere to precipitation and falls to the earth is called _____.
- a. leachate
 - b. acid drainage
 - c. leaching
 - d. acid rain**
37. Which method of disposal is the proper way to dispose of hazardous household chemicals?
- a. flush chemicals down the toilet
 - b. pour chemicals down the drain
 - c. put chemicals in landfills
 - d. dispose of chemicals at community hazardous waste retrieval events**
38. Pollution caused by discharging heated water into rivers and streams is created by _____.
- a. organic wastes
 - b. inorganic wastes
 - c. thermal pollution**
 - d. radioactive materials

39. Which discharged form of water pollution can enter the food chain by adhering to body tissue and can

not be cooked out?

- a. organic wastes
- b. inorganic wastes
- c. thermal pollution
- d. radioactive materials**

40. What air pollutant, when combined with water vapor, causes acid rain that can physically damage plants and material objects?

- a. particulate matter
- b. ozone
- c. carbon monoxide
- d. sulfur dioxide**

41. Anaerobic digestion of animal waste produces what gases?

- a. propane, nitrogen dioxide, and sulfur dioxide
- b. butane, carbon monoxide, and sulfur monoxide
- c. methane, carbon dioxide, and hydrogen sulfide**
- d. ethane, nitrogen monoxide, and sulfur trioxide

42. What primary air pollutant is produced when there is insufficient oxygen for complete combustion of a fossil fuel?

- a. Carbon dioxide
- b. Nitrogen dioxide
- c. Carbon monoxide**
- d. Sulfur dioxide

43. Particulate pollutants may come from the combustion of:

- a. wood, coal, and diesel.**
- b. natural gas.
- c. propane.
- d. gasoline

44. Neutral is pH 7 on the pH scale. Acidic rain is considered to be...

- a. pH of 8 up to 14.
- b. pH of 7 and below.
- c. pH of 5.6.
- d. pH of 5.5 or less.**

45. The major source of acid deposition has been attributed to...

- a. transportation.
- b. industrial processes.
- c. coal-burning power plants.**
- d. automobile emissions

46. Which of the following is not a greenhouse gas?

- a. Carbon dioxide
- b. Nitrous oxide
- c. Oxygen
- d. Methane**

47. Anthropogenic gases are emitted from _____ .

- a. human related sources
- b. plant and animal sources
- c. naturally occurring sources**
- d. the sun's rays

48. Whitetail deer are...

- a. Producers
- b. consumers**
- c. decomposers
- d. carnivores

49. A river suffers from both nonpoint and point source pollution. Why would non point-source pollution be harder to fix?

- a. Nonpoint source pollution is more toxic
- b. nonpoint source pollution is longer lasting
- c. nonpoint source pollution is mutagenic
- d. nonpoint source pollution does not come from a single source**

50. What agricultural product is most likely to cause eutrophication?

- a. pesticides
- b. herbicides
- c. fertilizers**
- d. methane from ruminant cattle