

2006 Environmental Science and Natural Resources CDE Exam
Demonstration Year

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 only with natural resources

2. 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

3. Omnivores are:
 - a. flesh-eating animals, organisms that feed in non-herbivore trophic guilds
 - b. organisms that feed primarily on plant matter
 - c. consumers of both plant and animals; an organism that feeds in both carnivore and herbivore trophic guilds
 - d. animals that feed primarily on bananas and coconuts

4. What percent of the average soil is organic matter?
 - a. 45%
 - b. 5%
 - c. 25%
 - d. 10%

5. An agronomist is primarily concerned with what use of soil?
 - a. construction
 - b. acting as filter for the hydrological cycle
 - c. supporting crop growth
 - d. natural beauty

6. 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
 - d. one plant community is replaced by another over time

7. Approximately 78% of the earth's atmosphere is made up of what gas?
 - a. carbon
 - b. nitrogen
 - c. oxygen
 - d. water vapor

8. Water cycles through the hydrological cycle in this order:
 - a. condensation – soaking in the ground – condensation – transpiration
 - b. transpiration – soaking into the ground – evaporation – soaking into the ground
 - c. evaporation and transpiration – condensation – precipitation – soaking into the ground – plant absorption and runoff – evaporation and transpiration
 - d. plant absorption and run off – soaking into the ground – precipitation

9. Which sphere contains all of the plant and animal life on the earth's surface?
 - a. hydrosphere
 - b. atmosphere
 - c. biosphere
 - d. lithosphere

10. Which of the following is the best description of Class I land?
 - a. Moderately good land that can be cultivated and farmed regularly but has some important limitations
 - b. Land that may be in a frequent floodplain
 - c. Very productive land that can be cultivated with minimal erosion control measures
 - d. Land that may be severely steep, greater than 30% slope, with several eroded gullies

11. The signal word “danger” on a label indicates
 - a. no toxicity
 - b. low toxicity
 - c. moderate toxicity
 - d. high toxicity

12. The average American uses _____ gallons of water per day
 - a. 50
 - b. 90
 - c. 100
 - d. 200

13. The gradual transformation of a pond into a bottomland forest over the passage of years is an example of:
 - a. limiting factors
 - b. a community rather than an ecosystem
 - c. ecological succession
 - d. ecological transformation

14. Which of the following is NOT an aquaculture crop?
 - a. rice
 - b. fish
 - c. alligators
 - d. all of the above are aquacultural

15. IPM (Integrated Pest Management) does not utilize which of the following practices?
- the use of biological organisms to combat harmful pests
 - the use of chemicals to kill pests as frequently as possible
 - a rotation of crops to kill specific pests
 - scouting of pests to determine the type of pest and extent of damage
16. Renewable resources are:
- any material that provides energy
 - irreplaceable
 - replaceable
 - not natural resources
17. The computation to derive growth rate is:
- birth rate in one year – birth rate in year two = growth rate
 - birth rate in one year divided by five = growth rate
 - death rate + birth rate = growth rate
 - birth rate-death rate = growth rate
18. Which of the following are leading groundwater contaminants?
- sewage and wastes
 - nitrites and pesticides
 - car exhaust and oil spills
 - cattle and hog wastes
19. This type of erosion can be responsible for up to 95% of soil loss due to erosion.
- splash erosion
 - sheet erosion
 - gully erosion
 - wind erosion
20. The main federal agencies that establish guidelines for water quality are:
- Department of Agriculture and the Environmental Preservation Agency
 - Department of Commerce and the Soil Conservation Corp
 - Environmental Protection Agency and the Army Corps of Engineers
 - National Farmer's Organization and the Nature Conservancy
21. Which of the following is **not** an example of point source pollution?
- a downstream fish kill
 - an above ground tank leak
 - accidental manure spill
 - a lagoon overflow

22. Groundwater possesses its own taste, color, and odor, which is created by dissolved:
- acids
 - salts
 - minerals
 - bacteria
23. The largest consumer of water used in agricultural practices is:
- a hulking ingredient
 - irrigation
 - stock tanks
 - food processing
24. What is no-till crop production?
- preparing a good seedbed for crops
 - plowing ground, but not disking
 - the planting of seeds in the previous year's residue
 - disking ground prior to planting
25. Two environmentally sound methods of solid waste disposal are:
- incineration and sanitary landfills
 - ocean dumping and sanitary landfills
 - town dumps and sanitary landfills
 - compaction and town dumps