

**2009 Environmental Science and Natural Resources CDE Exam  
Idaho FFA**

1. Which of the following is an example of non-renewable resources?
  - a. Wind
  - b. Water
  - c. Vegetation
  - d. Coal
  
2. Which of the following provides the best example of a primary consumer?
  - a. Maggot
  - b. Rabbit
  - c. Coyote
  - d. Grass Plant
  
3. All the populations of plants and animal species that live and interact in a given area at a particular time, as well as the chemical and physical factors that make up the non-living environment are called a[n] \_\_\_\_\_.
  - a. Ecosystem
  - b. Socio-Economic System
  - c. Symbiotic World Order
  - d. Environmental Microcosm
  
4. Which of the following is an example of a biotic component of environment?
  - a. Water
  - b. Wind
  - c. Plants
  - d. Temperature
  
5. There are 5 elements that make up about 95% of living organisms on earth. These elements are called macronutrients and they include:
  - a. Potassium, Phosphorus, Oxygen, Hydrogen, and Sodium
  - b. Carbon, Oxygen, Hydrogen, Nitrogen, and Phosphorus
  - c. Silica, Iron, Hydrogen, Potassium, and Carbon
  - d. Carbon, Hydrogen, Iron, Phosphorous, and Potassium
  
6. Detritus feeders:
  - a. Consume dead plants and animals
  - b. Get their energy by breaking apart phosphorous-based compounds
  - c. Eat animal flesh only
  - d. Are a type of phytoplankton
  
7. Ruminant animals can use high fiber food effectively because:
  - a. They secrete enzymes in the rumen that break down cellulose
  - b. Considerable fermentation and particle breakdown occurs in the cecum
  - c. They have microorganisms in the rumen that break down cellulose
  - d. They digest soluble carbohydrates and pass structural carbohydrates through the digestive system
  
8. What percent of the average soil is organic matter?
  - a. 45
  - b. 5
  - c. 25
  - d. 10

9. Which of the following is a consequence of soil compaction?
- Increased soil salinity
  - Decreased soil fertility
  - Increased weathering of rocks
  - Decreased absorption of water
10. 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
11. Which of the following soil is the best for plant growth?
- Sandy soil
  - Clay
  - Gravel
  - Loamy soil
12. Soil texture refers to:
- The size of soil particles
  - Nutritional status of the soil
  - Amount of soil organic relative to mineral matter
  - Arrangement of soil particles
13. Before the ingredients of soil are broken down and form soil they are known as:
- Felsic mix
  - Parent material
  - Organic minerals
  - Lithographites
14. The primary products of photosynthesis are:
- Proteins
  - Carbohydrates
  - Fats
  - Amino Acids
15. Approximately 78% of the earth's atmosphere is made up of what gas?
- Carbon
  - Nitrogen
  - Oxygen
  - Water Vapor
16. Excessive quantities of carbon dioxide, water vapor, methane, and nitrous oxide in the atmosphere, which reflect heat back onto the earth's surface is called \_\_\_\_\_.
- The Greenhouse Effect
  - Desertification
  - Acid Rain
  - Solar Introspection

17. Which of the following processes converts carbon in fossil fuels to carbon dioxide in the atmosphere?
- Fixation
  - Denitrification
  - Combustion
  - Infiltration
18. The only gas in the atmosphere that can absorb the sun's dangerous ultraviolet radiation is \_\_\_\_\_.
- Ozone
  - Carbon Dioxide
  - Nitrous Oxide
  - Nitrogen
19. The device on an automobile that filters harmful pollutants out of the exhaust before it enters the air is a[n] \_\_\_\_\_.
- Radiator
  - Alternator
  - Catalytic Converter
  - Carburetor
20. Water cycles through the hydrological cycle in this order:
- Condensation → soaking in the ground → condensation → transpiration
  - Transpiration → soaking into the ground → evaporation → soaking into soil
  - Evaporation and transpiration → condensation → precipitation → soaking into the ground → plant absorption and runoff → evaporation and transpiration
  - Plant absorption and run off → soaking into the ground → precipitation
21. The buildup of nutrients in a body of water that leads to excessive algae growth is called:
- Equinoctial
  - Eradication
  - Equatorial
  - Eutrophication
22. Floods can be prevented by:
- Afforestation
  - Harvesting forests for lumber
  - Tilling adjacent lands
  - Trampling soil with livestock
23. About 70 percent of the earth is covered by water. Of this amount, about what percent of it is suitable for human use?
- less than one
  - 10
  - 25
  - 50
24. The largest amount of usable water found on earth is used for:
- Industrial uses
  - Household use
  - Crop irrigation
  - Recreation

25. Which of the following is a leading groundwater contaminant?
- Sewage and wastes
  - Nitrates and pesticides
  - Car exhaust and oil spills
  - Cattle and hog wastes
26. The resources and processes that are supplied to humans by the natural ecosystem are:
- Biosphere balancing
  - Ecological services
  - Biological control
  - The greenhouse effect
27. Which sphere contains all of the plant and animal life on the earth's surface?
- Hydrosphere
  - Atmosphere
  - Biosphere
  - Lithosphere
28. Which of the following is not part of the nitrogen cycle?
- Denitrification
  - Sublimation
  - Nitrogen Fixation
  - Ammonification
29. The gradual transformation of a plowed field into a perennial grassland over the passage of years is an example of:
- Limiting factors
  - A community rather than an ecosystem
  - Ecological succession
  - Ecological transformation
30. Control of pests by disrupting their ecological status, as through the use of organisms that are natural predators, parasites, or pathogens is known as:
- Integrated Pest Management (IPM)
  - Genetically Modified Organisms (GMO's)
  - Organo-Culture
  - Biological Control (or Biocontrol)
31. In a population of organisms, the number of infants or seedlings that reach breeding age is called the \_\_\_\_\_ rate.
- Reproductive
  - Survival
  - Recruitment
  - Fertility
32. 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

33. The dramatic increase in agricultural production that has been made possible by high yield crops and inorganic fertilizers is called the \_\_\_\_\_.
- Green Revolution
  - Bioeconomic Revolution
  - Biotechnical Revolution
  - Greenhouse Effect
34. Which of the following is not a fossil fuel?
- Natural Gas
  - Petrol
  - Coal
  - Uranium
35. Biogas generation is mainly based on the process of \_\_\_\_\_.
- Fermentation
  - Degradation
  - Putrification
  - Succession
36. Which of the following forms of energy is a renewable resource?
- Synthetic natural gas
  - Breeder fission
  - Biomass
  - Oil shale
37. Which of the following is the greatest threat to populations of migratory North American songbirds?
- Predation by raptors
  - Clearing of tropical forest
  - Disease from polluted water
  - International trade in pets
38. A biosphere reserve conserves and preserves \_\_\_\_\_.
- Heirloom varieties of crops and livestock
  - Wild animals and natural vegetation
  - Agricultural lands and agricultural heritage
  - Endangered and exotic plants
39. Arable land is land that:
- Can be used for growing crops
  - Has excessive infiltration rates
  - Is recovering from desertification
  - In late stage of succession
40. The definition of a riparian area is:
- The grassy area at the border of fields
  - Lands and vegetation adjacent to streams, rivers and ponds
  - Land that is at the top of a watershed border
  - Strips of trees planted to reduce wind erosion
41. According to the Endangered Species Act (ESA), a species that is "*likely to become endangered in the foreseeable future throughout a significant portion of its range*" is:
- Endangered
  - Precious
  - Threatened
  - Distressed

42. What is the name of the area in which an individual animal conducts its normal daily activities (i.e., resting, foraging, drinking)?
- Habitat
  - Home Range
  - Territory
  - Potential Range
43. What is the name for a native animal that is not, or never has been, domesticated?
- An exotic species
  - A redomesticated species
  - A feral species
  - A wildlife species
44. A plant or animal that is not native to North America is called:
- Noxious
  - Feral
  - Exotic
  - Naturalized
45. The location and extent of the terrestrial ecosystems of the world are primarily determined by:
- The Phosphorus Cycle
  - Human Activities
  - Albedo and Fixation
  - Temperature and Precipitation
46. Which of the following is not a characteristic of a grass?
- Fibrous roots
  - Dies back to crown after growth every year
  - Narrow, thin leaves
  - Solid stem
47. Which of the following trees are examples of softwoods?
- Pines and Spruces
  - Maple and Hickory
  - Oaks and Mesquite
  - Willows and Rushes
48. Ecosystems dominated by large trees are called forests and they make up about \_\_\_\_% of the earth's land surface:
- 15
  - 30
  - 45
  - 60
49. Wilderness is defined as land that is:
- Dominated by large trees and used as wildlife habitat
  - Rangelands that are not useful for livestock grazing
  - Forest Service land used only for recreation
  - Not strongly affected by humans where humans are "visitors"
50. Human activities that cause changes in an ecosystem are called:
- Retrogressive
  - Biogenic
  - Anthropogenic
  - Eco-services