

Environmental & Natural Resource CDE

Written Exam

- 1 A Biltmore stick, Abney level, Haga altimeter and a Suunto clinometer are all tools to measure...
- A Tree height
 - B Tree species
 - C Tree diameter
 - D Tree density
- 2 Which one of the following gasses makes up about 78% of the earth's atmosphere?
- A Neon
 - B Oxygen
 - C Argon
 - D Nitrogen
- 3 Which of these is a benefit of prescribed fire?
- A increased soil depth
 - B reduced biodiversity
 - C disease control
 - D increased canopy cover
- 4 The threshold level of an air pollutant is the level at which...
- A Acute ill effects are experienced
 - B Chronic health effects are experienced
 - C No health effects are experienced under this level
 - D None of the above
- 5 Heat buildup from the sun's rays passing through a clear object resulting in heat being trapped inside is known as...
- A The greenhouse effect
 - B The ozone effect
 - C Radiation
 - D Global heating
- 6 Which term is defined as the science of food production, processing and distribution?
- A Botany
 - B Herpetology
 - C Agriscience
 - D Ecology

- 7 What air pollutant, when combined with water vapor, causes acid rain that can physically damage plant and material objects??
- A Carbon monoxide
 - B Ozone
 - C Particulate matter
 - D Sulfur dioxide
- 8 Particulate pollutants may come from the combustion of:
- A Gasoline
 - B Natural gas
 - C Propane
 - D Wood, coal, and diesel
- 9 Which of the following factors increases a species' susceptibility to extinction?
- A Herbivory
 - B Anthropomorphism
 - C Non-adaptive behavior
 - D Autotrophic
- 10 The natural process of plants releasing water into the atmosphere is called _____.
- A Condensation
 - B Evaporation
 - C Respiration
 - D Transpiration
- 11 Which of the following items does not help reduce drift?
- A Hot, dry conditions
 - B Larger droplet size
 - C Reduced pressure rates
 - D Spray shield around nozzles
- 12 Which of the following is NOT an exhaustible resource?
- A Soil
 - B Mineral resources
 - C Petroleum
 - D Atmospheric air

- 13 When measuring the concentration of hydrogen ions in an aqueous solution, a measurement of 5 is considered...
- A alkaline
 - B basic
 - C acidic
 - D neutral
- 14 What form of erosion is caused by natural processes?
- A Accelerated erosion
 - B Rill erosion
 - C Gully erosion
 - D Geologic erosion
- 15 Which of the following is the energy source produced from turbines powered by steam from volcanically active areas?
- A Nuclear
 - B Geothermal
 - C Hydroelectric
 - D Wind energy
- 16 The controllable component of risk associated with chemical pesticides is...
- A Absorption
 - B Exposure
 - C Probability
 - D Tolerance
- 17 Which term refers to the excessive increase of nutrients into a body of water?
- A Algal bloom
 - B Sedimentation
 - C Eutrophication
 - D Nitrification
- 18 Which of the following is a correct list of characteristics of sustainable agriculture?
- A Environmental Stewardship, Social Equity, Short-term profitability
 - B Uses no chemical fertilizers or pesticides, relies on horses for plowing
 - C Low productivity, involves a high level of hand labor, suited only for small acreage farms
 - D Involves environmental health, supports policies that protects the rights of farm workers, is economically profitable

- 19 Which of the following is the process by which nitrogen gas is converted into plant available nitrogen?
- A Denitrification
 - B Volatilization
 - C Nitrification
 - D Nitrogen fixation
- 20 What is Carrying Capacity?
- A The amount of surface water available
 - B The size of the population in an ecosystem
 - C The level of population an ecosystem can support
 - D The length of time an ecosystem can support a population
- 21 Which relationship occurs when one animal eats another animal?
- A Commensalism
 - B Parasitism
 - C Mutualism
 - D Predation
- 22 Which term is defined as the predictable and gradual change, over time, from one community to another?
- A Ecological succession
 - B Ecological drift
 - C Ecosystem change
 - D Community change
- 23 Leachate is...
- A A parasite that preys on other animals.
 - B Another term for total solid waste.
 - C Contaminated liquid created by decomposing solid waste.
 - D Human bodily waste that has been treated.
- 24 Which of these has the following characteristics; Prolonged presence of water, hydric soils and presence of hydrophytic plants?
- A Tundra
 - B Wetland
 - C Grassland
 - D Bottomland hardwood
- 25 What is correct management of our mineral resources important?
- A They are all toxic to touch
 - B They are nonrenewable resources
 - C They are in overabundance in the world
 - D They react with water

- 26 In the water cycle, by what process is water is returned to the atmosphere?
- A. Precipitation
 - B. Condensation
 - C. Transpiration
 - D. Infiltration
- 27 What are Indicator Species?
- A. Organisms that show sensitivity to pollution or environmental changes before other organisms
 - B. Organisms that are representative of other species in a family
 - C. Organisms that represent other organisms in a particular habitat
 - D. Organisms that indicate the energy level on a food pyramid
- 28 Which of the following is not an example of point source pollution?
- A. A downstream fish kill
 - B. Accidental manure spill
 - C. A lagoon over flow
 - D. An above ground tank leak
- 29 Which of the following is NOT a result of fires burning through prairies?
- A. Nutrients are recycled
 - B. Some tree seeds are stimulated to grow and grasses grow back from roots
 - C. The carrying capacity for herbivores often increases
 - D. Grasslands are eliminated and changed to shrublands or wastelands
- 30 The process by which the concentration of toxins in an environment increases in organisms at successively higher tropic levels.
- A. Bioremediation
 - B. Bioluminescence
 - C. Biomagnification
 - D. Biodilution
- 31 What are the three factors that determine the severity of a plant disease?
- A. plant nutrient status, genetic engineering, rainfall
 - B. temperature, the diversity of plants in a field, the number of bacteria in the soil
 - C. plant susceptibility to a disease, the presence of a disease organism, environmental conditions favorable to disease infestation
 - D. the presence of disease organisms, plant nutrient status, plant growth rate

- 32 Which of the following places particle sizes in order from smallest to largest?
- A. Clay, gravel, sand, slit
 - B. Gravel, sand, clay, silt
 - C. Silt, clay, sand, gravel
 - D. Clay, silt, sand, gravel
- 33 What is Ecology?
- A. The branch of science dealing with the complex relationships between nonliving organisms
 - B. The branch of science dealing solely with natural resources
 - C. The branch of science dealing with complex relationships among living things and their environment
 - D. The complex network of living and nonliving organisms
- 34 Which of the following is the process by which plant tissues are broken down to produce heat, water and carbon dioxide.
- A. Transformation
 - B. Energy
 - C. Respiration
 - D. Photosynthesis
- 35 What is the world's largest biome, making up about 71% of the Earth's surface area?
- A. Grasslands
 - B. Arctic
 - C. Marine
 - D. Fresh water
- 36 All of the following are important nutrients of manure except:
- A. Nitrogen
 - B. Methane
 - C. Phosphorous
 - D. Potassium
- 37 Highly degraded soil organic matter is/are known as
- A. Humus
 - B. Microbial soil
 - C. Pedogenesis
 - D. Soil beginnings

- 38 Which of the following chemical elements is not needed to form an organic chemical?
- A. Chlorine
 - B. Hydrogen
 - C. Carbon
 - D. Oxygen
- 39 Which of the following is not an anthropogenic emission?
- A. methane from animal manure
 - B. burning household garbage
 - C. volcanic gas emissions
 - D. smoke from a wildfire
- 40 Before the ingredients of soil are broken down and form soil they are known as...
- A. Felsic mix
 - B. Parent material
 - C. Pre-soil mix
 - D. Organic minerals
- 41 Which of these is not a benefit of prescribed fire?
- A. reduces wildfire hazard by removing excess fuel
 - B. improves quality of grasses
 - C. controls diseases in the environment
 - D. permanently eradicates all invasive brush species
- 42 Which of the following is an example of man-made soil erosion?
- A. glaciers forming rivers and lakes
 - B. water moving across rocks very rapidly
 - C. soil washing off of tilled slopes and overgrazed pastures
 - D. raindrops wearing rock away to form gullies, canyons and valleys
- 43 Which term refers to a shallow, marshy area where freshwater and saltwater mix at the convergence of rivers and oceans and is high in biotic diversity?
- A. Swamp
 - B. Estuary
 - C. Tidal zone
 - D. Oceanic zone
- 44 Which soil particle holds water the tightest and has the least permeability?
- A. Clay
 - B. Gravel
 - C. Sand
 - D. Silt

- 45 A system of interrelated organisms and their environment including, soil microbes, fungi, insects, vegetation, herbivores, omnivores and carnivores?
- A. Population
 - B. Abiotic system
 - C. Ecosystem
 - D. Niche
- 46 It is important for agricultural production soil to be granular in structure for what purpose?
- A. It is better for building structures on
 - B. It is more attractive crop ground
 - C. For root penetration and permeability
 - D. Soil structure is not important for agricultural production
- 47 Which of the following is an example of bioremediation?
- A. insects pollinating flowers
 - B. sustainable agriculture
 - C. bacteria breaking down hydrocarbons in oil spills
 - D. birds using dead trees for nest sites
- 48 Groundwater that is available for plant root absorption is called...
- A. Capillary water
 - B. Free water
 - C. Gravitational water
 - D. Hygroscopic water
- 49 Soil conservation practices in the United States include?
- A. Hauling topsoil out of the Mississippi and putting it on nearby farms.
 - B. Tilling all land whether it has too much slope or not
 - C. Urban development on all land no longer suitable for farming
 - D. Using terraces, strip cropping and no till farming
- 50 Which of the following is not a process of soil degradation?
- A. Nitrogen fixation
 - B. Salinization
 - C. Soil erosion
 - D. Soil pollution