

# Maine FFA Environmental & Natural Resources CDE

## Practice III - General Knowledge Test

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- 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