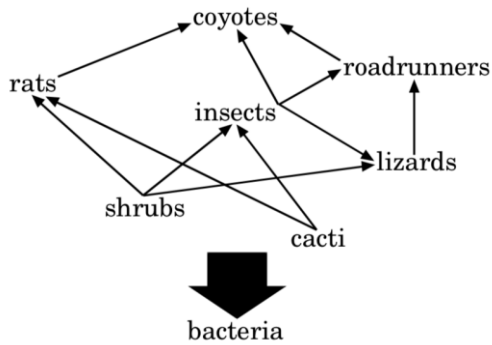


# Environmental and Natural Resources Career Development Event

## General Knowledge Test

### 2018

Use this diagram of a food web to answer the next five questions



- 1) In which biome is this food web most likely to be found?
  - a. Forest
  - b. Desert**
  - c. Grassland
  - d. Urban
- 2) What is the function of bacteria in this food web?
  - a. Decomposers**
  - b. Producers
  - c. Primary consumers
  - d. Secondary consumers
- 3) If these organisms were arranged in a food pyramid, which organism would have the least amount of total energy available?
  - a. Coyote**
  - b. Insect
  - c. Lizard
  - d. Shrub
- 4) Which population would increase most if the insects were eliminated?
  - a. Decomposers
  - b. Producers**
  - c. Primary consumers
  - d. Secondary consumers
- 5) Which of the following populations begins the flow of energy through the food web?
  - a. Coyotes
  - b. Insects
  - c. Lizards
  - d. Shrub**

- 6) 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
  - Town dumps and recycling centers
- 7) Which of the following is a consequence of compaction?
- Increased soil salinity
  - Increased weathering of rocks
  - Decreased absorption of water**
  - Decreased soil fertility
- 8) Air is
- 78 percent argon
  - 21 percent nitrogen
  - 21 percent oxygen**
  - 10 percent carbon dioxide
- 9) The largest soil particle is
- Clay
  - Gravel
  - Sand**
  - Silt
- 10) Brackish water is
- Colored black
  - Located in tidal areas**
  - Collected from small creeks and branches
  - Mostly high in salinity (20-34 ppt)
- 11) This type of erosion can be responsible for up to 95 percent of soil loss.
- Splash Erosion
  - Sheet Erosion**
  - Gully Erosion
  - Wind Erosion
- 12) What role do forests have in the environment?
- Filter groundwater
  - Prevent soil erosion
  - Convert carbon dioxide into oxygen
  - Provide wildlife habitat
  - All of the above**

- 13) The horizon that is most supportive of plant growth is
- Horizon O
  - Horizon A**
  - Horizon B
  - Horizon C
- 14) \_\_\_\_\_ is a species of fish adapted to cold, running water in streams.
- Carp
  - Catfish
  - Trout**
  - Sunfish
- 15) Ecosystems that are characterized by partially enclosed coastal bodies of water where salty seawater mixes with freshwater from streams and rivers are called?
- Euphotic zones
  - Coral reefs
  - Estuaries**
  - Benthic zones
- 16) \_\_\_\_\_ is the sequential replacement of species in an ecosystem which underwent an artificial or natural disturbance.
- Primary succession
  - Secondary succession**
  - Tertiary succession
  - None of the above
- 17) Which of the following is NOT one of the four basic elements of a habitat?
- Macronutrients**
  - Space
  - Shelter
  - Food
  - Water
- 18) What is ecology?
- A complex network of living and nonliving organisms
  - The branch of science dealing with the complex relationships of nonliving organisms
  - The branch of science dealing with the complex relationships of living things and the environment**
  - The branch of science dealing only with natural resources
  - The branch of science dealing with nature's effect of living things

19) Define riparian area.

- a. The grassy areas located along the borders of a field
- b. Land and vegetation adjacent or near the banks of a waterway**
- c. Areas that are covered with water at least part of the year
- d. The ridge or high area from which water drains either toward or away from a watershed

20) A snag tree is most commonly defined as a

- a. Live standing tree that shelters wildlife and is a valuable timber source
- b. Dead tree which is also a shelter for wildlife but is of little to no timber value**
- c. Live tree that is hollow or contains holes large enough to shelter wildlife
- d. None of the above

21) Fish that migrate between freshwater and saltwater are called?

- a. Diadromous**
- b. Desalination
- c. Flocculation
- d. Hygrophyte

22) Transpiration is

- a. The process when a plant absorbs water into its roots and then gives off water vapor through the pores in its leaves**
- b. The process of water filtering down through aerated soil due to gravity
- c. The process of turning from liquid to vapor
- d. The process of precipitating a substance from a solution

23) Which of the following is considered a non-exhaustible resource?

- a. Solar energy
- b. Geothermal sources
- c. Tidal energy
- d. Wind power
- e. All of the above**

24) What percentage of the average soil are minerals?

- a. 25 percent
- b. 45 percent**
- c. 5 percent
- d. 10 percent

25) Which of the following is considered the largest contributor to the problem of acid precipitation?

- a. Sulfur
- b. Sulfur Dioxide**
- c. Sulfur Monoxide
- d. None of the above

- 26) What is the first step in the chemical breakdown by bacteria during the nitrification process?
- Ammonia to nitrates
  - Ammonia to nitrites**
  - Nitrates to nitrites
  - Nitrites to nitrates
- 27) Which of the following is a primary producer?
- cows
  - trees**
  - blue crab
  - striped bass
- 28) Contaminants of food and water include
- Registered pesticides
  - Contact by cockroaches
  - Feces and urine
  - All of the above**
- 29) The product of decaying plant or animal matter is
- Chlorofluorocarbons
  - Methane**
  - Nitrous oxide
  - Ozone
- 30) Decay of organic matter is caused by
- Large animals
  - Microbes**
  - Rodents
  - Water
- 31) The land class with the fewest limitations is
- Class I**
  - Class III
  - Class VI
  - Class VIII
- 32) There are about \_\_\_\_\_ acres of productive forests in the continental United States
- 105 million
  - 235 million
  - 500 million
  - 751 million**

- 33) The most important commercial species of trees in the United States is
- Oak
  - Douglas fir**
  - Redwood
  - Walnut
- 34) A forest that has never been harvested is called
- Virgin**
  - Hardwood
  - Clear cut
  - Seedling
- 35) The seed-tree method of harvesting
- Cuts all trees over a certain diameter
  - Cuts all trees under a certain diameter
  - Cuts about one-third of the trees in a woodlot
  - Cuts all but a few trees left for seed**
- 36) Forest wildlife generally survive best in forest that are
- Of mixed-age trees**
  - Deciduous
  - Evergreen
  - Of even age trees
- 37) Trees going along streams help to
- Regulate water flow
  - Provide food for aquatic wildlife
  - Regulate stream temperatures
  - All of the above**
- 38) When two species of wildlife live together for the benefit of both, the relationship is called
- Mutualism**
  - Predation
  - Commensalism
  - Competition
- 39) Wetlands should be made up of about \_\_\_\_\_ shallow, standing water for optimum wildlife use.
- One fourth
  - One third**
  - One-half
  - Two-thirds

- 40) The highest salinity level is measured in
- Pond water
  - Irrigation water
  - Creeks
  - Ocean water**
- 41) A fish death can occur when a pond “rolls over”
- Because of the temperature shock
  - Because the sages sink to the bottom
  - Because of low levels of dissolved oxygen**
  - Because the fish turn upside down
- 42) The rate at which photosynthesis is carried out depends on
- The amount of fertilizer in the water
  - The amount of oxygen in the atmosphere
  - The amount of respiration carried on during the daylight hours
  - The intensity, temperature and concentration of carbon dioxide**
- 43) Conservation is best defined as...
- An attempt to prevent the use or modification of some natural resource.
  - A natural resource that for all practical purposes will never run out.
  - The “wise use” of our natural resources to provide as much usefulness as possible to people both now and in the future.**
  - A social or political activity intended to benefit a Natural Resource.
- 44) Slope, texture, flood hazard, and drainage are used to describe physical properties of ...
- Soils**
  - Forestry
  - Watersheds
  - None of the Above
- 45) Which of these would be considered a keystone species?
- Grey wolf**
  - White-footed mice
  - White-tailed deer
  - Red fox
- 46) \_\_\_\_\_ is the process by which an organism maintains a fairly constant internal environment when the external environment changes.
- Homeostasis**
  - Periodicity
  - Poikilotherm
  - Homeotherm

- 47) This made it a federal offense to transport illegally acquired wildlife across state boundaries
- Lacey Act, 1900**
  - Migratory Bird Act, 1929
  - Lea Act, 1948
  - Pitman-Robertson Act, 1950
- 48) The ability of a given area to provide food, water, and shelter for the population of a given animal is defined as:
- Maximum daily load
  - Carrying capacity**
  - Resource consumption
  - Minimum viable population
- 49) \_\_\_\_\_ is a special type of wetland that may only last for a few months each year.
- Vernal pool**
  - Excavated pond
  - Embankment pond
  - None of the above
- 50) Chlorophyll is important in plants because it
- Creates an atmosphere where it can determine the osmotic pressure
  - Allows the plant to make good xylem tissue
  - Allows photosynthesis to occur**
  - Is also known as the chloroplasts