

Tarleton State University
State 2022
Environmental & Natural Resources CDE

- 1 Why doesn't 100% of the energy in a trophic level transfer to the next trophic level?
- A Some energy is destroyed
 - B The energy is actually conserved in the cells of the lower trophic level
 - C Some energy is lost to the environment as metabolic heat.
 - D The next trophic level creates its own energy and doesn't need the energy from the previous trophic level.
- 2 Which one of the following gasses comprises 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 What atmospheric zone is furthest from the surface of the earth?
- A Stratosphere
 - B Thermosphere
 - C Troposphere
 - D Mesosphere
- 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 All of the following are uses of water in a multiple use water management concept except:
- A water skiing
 - B sewage treatment facilities
 - C public drinking supplies
 - D fishing

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- 8 Which term refers to the process of desalinating water by evaporating the water and leaving the salt behind.
- A Chlorinating
 - B Distillation
 - C Evaporative cooling
 - D Transpiration
- 9 Which of the following factors increases a species' susceptibility to extinction?
- A Herbivory
 - B Anthropomorphism
 - C Nonadaptive behavior
 - D Myrmecophagy
- 10 Which of the following is a means by which reforestation impacts the environment?
- A decreases the property value of the land
 - B increases the rate of wind erosion
 - C provides wildlife habitats
 - D increases the rate of soil erosion
- 11 Which term is defined as the spacing or dispersion of individuals in a population?
- A Density
 - B Distribution
 - C Structure
 - D Juxtaposition
- 12 Which of the following is NOT an exhaustible resource?
- A Soil
 - B Mineral resources
 - C Petroleum
 - D Atmospheric air
- 13 What national park was the first established solely for public enjoyment?
- A Yosemite National Park
 - B Redwood National Park
 - C Yellowstone National Park
 - D The Grand Canyon
- 14 What form of erosion is caused by natural processes?
- A Accelerated erosion
 - B Geologic erosion
 - C Gully erosion
 - D Rill erosion

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- 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 What percentage of the United States was covered by rangeland when Europeans first arrived on the east coast?
- A 25%
 - B 74%
 - C 100%
 - D 47%
- 17 Which term refers to the excessive increase of nutrients into a body of water?
- A Algal bloom
 - B Eutrophication
 - C Sedimentation
 - 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 Involves environmental health, supports policies that protects the rights of farm workers, is economically profitable
 - C Low productivity, involves a high level of hand labor, suited only for small acreage farms
 - D Uses no chemical fertilizers or pesticides, relies on horses for plowing
- 19 Which of the following is the process by which nitrogen gas is converted into plant available nitrogen?
- A Denitrification
 - B Nitrogen fixation
 - C Nitrification
 - D Volatilization
- 20 If a population increases beyond the environments ability to meet its needs, the population will likely...
- A exponentially increase
 - B evolve rapidly to save the population
 - C decrease to a level the environment can support
 - D consume itself

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- 21 Which relationship occurs when one animal eats another animal?
A Commensalism
B Parasitism
C Mutualism
D Predation
- 22 The progressive establishment of an ecological community on a newly emerged volcanic island in the middle of the ocean is called...
A Secondary succession
B Drift succession
C Climate change
D Primary succession
- 23 Which of the following includes all the land that drains into a pond, lake or stream?
A Watershed
B Littoral zone
C Floodplain
D Riparian buffer
- 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

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- 28 Which term encompasses these five categories; minerals and rocks, glacial deposits, loess deposits, alluvial and marine deposits, and organic deposits?
- A. soil humus
 - B. soil layers
 - C. soil parent material
 - D. soil weathering factors
- 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 shrub lands or wastelands
- 30 Which of the following is a primary factor affecting the amount of space needed by an animal?
- A. Size of the animal
 - B. The type of biome
 - C. The lifespan of an animal
 - D. Feeding habits of the animal
- 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 is not a benefit of soil organic matter?
- A. improves water infiltration into soil
 - B. improves the permeability of soil
 - C. kills all microorganisms in the soil
 - D. improves soil tilth
- 33 Which is not an example of a grassland ecosystem found in the United States?
- A. Desert grasslands
 - B. Tundra
 - C. Shortgrass prairie
 - D. Tallgrass prairie

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- 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 Which of the following is measured in the units 'Mcf' and 'BTU'?
- A. Oil
 - B. Coal
 - C. Natural gas
 - D. Water flow
- 37 What type of landfill design allows natural percolation of precipitation to pass through and into the underlying soil and rocks where leachate is neutralized by microorganisms and soil particles?
- A. Natural attenuation landfill
 - B. Canyon-fill landfill
 - C. On-grade landfill
 - D. Trench landfill
- 38 Which of the following chemical elements is not needed to form an organic chemical?
- A. Hydrogen
 - B. Chlorine
 - 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 What type of prescribed fires are set to slowly burn into the wind?
- A. Wildfire
 - B. Headfire
 - C. Flankfire
 - D. Backfire

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- 41 Which of the following is a benefit of crop rotation?
- A. The muddy water is held long enough for the sediment to settle out in the form of mud
 - B. Each row acts like a small dam to stop runoff from moving straight downhill.
 - C. Runoff is conducted across the slope to some protected areas.
 - D. Soil tilth is better maintained
- 42 Which of the following is an example of man-made soil erosion?
- A. Glaciers forming rivers and lakes
 - B. Soil washing off of tilled slopes and overgrazed pastures
 - C. Water moving across rocks very rapidly
 - 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. Tidal zone
 - C. Estuary
 - D. Oceanic zone
- 44 Which of the following is not a component of the Fire Triangle?
- A. Oxygen
 - B. Fuel
 - C. Heat
 - D. Lightning
- 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 Which of the following is NOT a characteristic of a desert biome?
- A. Does not support mammals
 - B. < 10 inches of annual rainfall
 - C. Plants with short growing seasons
 - D. Hot during daytime, cold at night
- 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

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- 48 What happens to energy transfer as acquired energy flows up the trophic levels?
- A. remains constant
 - B. decreases
 - C. increases
 - D. none of the above
- 49 Regarding population dynamics, doubling and halving populations indicate what type of growth?
- A. logistic growth
 - B. no growth
 - C. linear growth
 - D. exponential growth
- 50 Which of the following is the economic theory that individuals sharing communal property will deplete its' resources due to short term planning and self-interest.
- A. Supply and Demand
 - B. Tragedy of the Commons
 - C. Share cropping
 - D. Evolution