

Test: 2021 Ecology & Environmental Science NCE (HS)

Question 1 of 75

What is the process of bringing water to a dry plot of land for agricultural purposes?

- A) Inundation
- B) Irrigation
- C) Hydration
- D) Aquation

Question 2 of 75

Which of these is not a problem caused by an increased number of hard surfaces in urban environments?

- A) Urban "heat island" effect
- B) Increase in runoff
- C) Loss of native plant ecosystems
- D) Production of smog

Question 3 of 75

What is the common name given to devices placed on power plants that remove carbon dioxide from the plant's emissions?

- A) Wooders
- B) Boomers
- C) Scrubbers
- D) Spongers

Question 4 of 75

What is the name of the imaginary line which separates rivers that flow into one ocean from rivers that flow into another ocean?

- A) Continental drift
- B) Continental divide
- C) Mountain range
- D) Fault line

Question 5 of 75

What is the purpose of an electrical transformer in a city's power grid?

- A) Transforms fossil fuels into renewable energy
- B) Protects electrical lines from the weather
- C) Creates heat to power steam radiators
- D) Reduces electrical voltage for use in homes and businesses

Question 6 of 75

A fungus such as a mushroom is best classified by which of the following terms?

- A) Producer
- B) Herbivore
- C) Decomposer
- D) Omnivore

Question 7 of 75

While walking through a tropical rainforest, you may need to clear away vines and branches in your path. Of which layer of the rainforest are these objects a part?

- A) Forest floor
- B) Emergent layer
- C) Canopy
- D) Understory

Question 8 of 75

Which of the following terms refers to the layer of soil made of partially-decomposed organic matter such as leaves, sticks, and animal waste?

- A) Clay
- B) Humus
- C) Silt
- D) Sediment

Question 9 of 75

A human-made structure along the banks of a river that is designed to prevent floodwater from damaging land and property is called what name?

- A) Dam
- B) Levee
- C) Weir
- D) Sluice

Question 10 of 75

A famous diagram of carbon dioxide concentrations in the atmosphere over time is nicknamed for its resemblance to which piece of sporting equipment?

- A) Tennis racket
- B) Hockey stick
- C) Baseball bat
- D) Bowling pin

Question 11 of 75

Which term refers to the members of a certain species which live together in a defined area?

- A) Population
- B) Community
- C) Biodiversity
- D) Clade

Question 12 of 75

In the 1990s, a law in the United States was passed protecting which animals from being caught in tuna fishing nets?

- A) Whales
- B) Jellyfish
- C) Dolphins
- D) Manatees

Question 13 of 75

In which part of a house would you likely find a detector for radon, a dangerous naturally-occurring radioactive gas?

- A) Attic
- B) Bathroom
- C) Basement
- D) Kitchen

Question 14 of 75

Increased use of groundwater is likely to result in which of the following?

- A) Rising water table
- B) Plastic pollution
- C) Destruction of bird habitats
- D) Land subsidence

Question 15 of 75

Increased seismic activity has been detected near sites of which controversial activity, often conducted to obtain fossil fuels?

- A) Fracking
- B) Nuclear power plants
- C) Fishing
- D) Building of landfills

Question 16 of 75

In many turtle and crocodile species, the temperature at which eggs are incubated determines what about the resulting offspring?

- A) Gender
- B) Lifespan
- C) Size
- D) Intelligence

Question 17 of 75

Golden rice and the Flavr Savr tomato are foods produced using what technique which introduces new DNA to a species?

- A) Adaptation
- B) Grafting
- C) Genetic modification
- D) Transcription

Question 18 of 75

On the IUCN's Red List, which term refers to the category immediately below "endangered" and contains species at high risk without human intervention?

- A) Vulnerable
- B) Least concern
- C) Critical
- D) Dependent

Question 19 of 75

Which term refers to the situation in which a species consumes another organism of its same species for food?

- A) Entomophagy
- B) Carnivore
- C) Polyvore
- D) Cannibalism

Question 20 of 75

Exacerbated by increasing temperatures, which process is the breaking off of large chunks of ice from glaciers?

- A) Falling
- B) Cracking
- C) Diving
- D) Calving

Question 21 of 75

Rachel Carson, a former biologist, wrote which 1962 book that detailed the destructive effects of DDT on the environment?

- A) Silent Spring
- B) Summer Sunset
- C) First to Fall
- D) Weary Winter

Question 22 of 75

What profession is usually responsible for making decisions about land usage, infrastructure projects, and other aspects of design in cities?

- A) Architect
- B) Mayor
- C) Urban planner
- D) Electrical engineer

Question 23 of 75

In which economic system are most natural resources privately owned with the ensuing profits going to the owner?

- A) Communism
- B) Capitalism
- C) Socialism
- D) Despotism

Question 24 of 75

The immediate environment in which an organism lives is known as its:

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- A) Ecosystem
 - B) Biome
 - C) Habitat
 - D) Niche

Question 25 of 75

Using fewer resources to achieve the same result is known by which term?

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- A) Efficiency
 - B) Conservation
 - C) Reduction
 - D) Advocacy

Question 26 of 75

What is the proposed connection between climate change and the observed increase in the number of hurricanes?

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- A) Increase in average global wind speed
 - B) Slowing down of circulation near the equator
 - C) Increase in surface water temperature
 - D) Reduction in ozone layer

Question 27 of 75

Incidents at Fukushima, Three Mile Island, and Chernobyl have caused some to be wary of which means of producing electricity?

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- A) Hydroelectric power
 - B) Nuclear power
 - C) Coal power
 - D) Natural gas power

Question 28 of 75

Fed by energy from the sun, which region is made up of all life on Earth and its geological and hydrological surroundings?

- A) Thermosphere
- B) Biosphere
- C) Lithosphere
- D) Stratosphere

Question 29 of 75

Which of the following would not typically be a part of the large-scale treatment of water for human consumption?

- A) Filtering of minerals
- B) Stabilization of pH levels
- C) Addition of chlorine
- D) Boiling the water

Question 30 of 75

Along with carbon dioxide, this other potent greenhouse gas is commonly emitted from landfills as organic matter decays inside.

- A) Nitrous oxide
- B) Ammonia
- C) Methane
- D) Sulfuric acid

Question 31 of 75

Surface chemicals are transported deeper into the soil by the movement of water in a process known by what name?

- A) Turbidity
- B) Leaching
- C) Recharge
- D) Fluorescence

Question 32 of 75

Activities such as taking over a whaling ship or donating food to the homeless are considered which kind of activism?

- A) Sit-in
- B) Direct action
- C) Boycott
- D) Ballot box

Question 33 of 75

What form of pollution in the ocean is the main component of a “great patch” in the Pacific?

- A) Oil spills
- B) Nuclear waste
- C) Plastic pollution
- D) Untreated sewage

Question 34 of 75

Which of the following best describes a monoculture?

- A) It only needs to be watered once.
- B) It consists of only a single crop.
- C) It is found in only one location on Earth.
- D) It can only be harvested once before replanting.

Question 35 of 75

What name is given to a species whose presence in an ecosystem is crucial to the balance of the entire system, such as sea otters within kelp forests?

- A) Core species
- B) Essential species
- C) Leader species
- D) Keystone species

Question 36 of 75

Which term refers to an underground collection of water, stored within layers of rock and soil, which may be pumped for human usage?

- A) Bedrock lake
- B) Aquifer
- C) Spring
- D) Cavern

Question 37 of 75

The circulation of ocean water currents is mainly driven by a combination of what two factors which impact the density of the water?

- A) Tides and temperature
- B) Salt content and temperature
- C) Radiation level and salt content
- D) Temperature and pollution

Question 38 of 75

Which animals are known for traveling upstream to their place of birth in order to spawn the next generation of offspring?

- A) Salmon
- B) Grizzly bears
- C) Turkeys
- D) Whales

Question 39 of 75

Which disease was the first to be prevented with a vaccine, derived from cows rather than through exposure to the actual living virus?

- A) AIDS
- B) Malaria
- C) Ebola
- D) Smallpox

Question 40 of 75

In 1997, the sheep Dolly became world famous for what reason?

- A) Dolly was born with two heads
- B) Dolly was a clone
- C) Dolly could speak English
- D) Dolly had her entire genome sequenced

Question 41 of 75

Which of the following bacteria would be evidence of sewage contamination if found in a water supply?

- A) H. influenzae
- B) L. acidophilus
- C) C. botulinum
- D) E. coli

Question 42 of 75

The loss of water through the leaves of plants into the atmosphere is called:

- A) Evapotranspiration
- B) Desiccation
- C) Fixation
- D) Modulation

Question 43 of 75

Which of the following is considered to be an abiotic factor in the environment?

- A) Amount of rainfall
- B) Number of insects
- C) Number of predators
- D) Types of plants

Question 44 of 75

Which principle explains why an ecological niche can only be occupied by one species at a time?

- A) Cooperation
- B) Predation
- C) Competition
- D) Adaptation

Question 45 of 75

How might a population increase over time?

- A) A constant birth rate and increasing mortality rate.
- B) An increasing birth rate and decreasing mortality rate.
- C) A decreasing birth rate and constant mortality rate.
- D) A constant birth rate and constant death rate.

Question 46 of 75

If there are too many wolves and not enough rabbits in an ecosystem, then the number of wolves will likely:

- A) Increase to expand hunting range
- B) Decrease due to lack of food
- C) Increase to fend off invading predators
- D) Stay the same

Question 47 of 75

What is one way in which invasive species can cause problems in an ecosystem?

- A) Invasive species don't have natural consumers to control their growth.
- B) Invasive species use up all the sunlight.
- C) Invasive species can't be used for shelter for animals.
- D) Invasive species die quickly, leaving decomposing matter in the environment.

Question 48 of 75

Which is the definition of a watershed?

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- A) The location at which a water pump is found in a city
 - B) The region that is drained by a particular stream or river
 - C) The source of a river
 - D) The area that may be flooded by a river

Question 49 of 75

If Luis is growing lettuce using a bed of water in which fish swim and release nutrients in their excrement, then what method is Luis practicing?

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- A) Floriculture
 - B) Animal husbandry
 - C) Genetic modification
 - D) Hydroponics

Question 50 of 75

Which of the following is a likely impact of an increase in greenhouse gases in the atmosphere?

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- A) Tropical diseases will be found farther away from the tropics.
 - B) Antarctica will expand until it connects to South America.
 - C) Ocean levels will drop, causing coastal cities to lose beaches.
 - D) The air we breathe will have more oxygen, making it easier to breathe.

Question 51 of 75

What phenomenon, common in the Western U.S., refers to a city's expansion outwards onto more land?

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- A) Urban sprawl
 - B) Urban legend
 - C) Urban planning
 - D) Urban density

Question 52 of 75

Which of these words does not describe a group of trees?

- A) Copse
- B) Stand
- C) Crown
- D) Woodland

Question 53 of 75

In which European country has about 20% of the land area been reclaimed from the water by building dikes?

- A) The Netherlands
- B) Poland
- C) Luxembourg
- D) Sweden

Question 54 of 75

During the El Niño phenomenon, what happens to the waters off the west coast of South America?

- A) They get cooler
- B) They remain the same temperature
- C) They get warmer
- D) The water level goes down

Question 55 of 75

What role does the albedo of Earth play in climate change?

- A) It reduces available nutrients in the soil.
- B) It prevents harmful ultraviolet light from reaching the surface.
- C) It adds carbon dioxide to the ocean.
- D) It reflects radiation away from the surface.

Question 56 of 75

About 75% of public land in the United States, such as national parks, is managed by which federal department?

- A) Department of the Interior
- B) Department of Homeland Security
- C) Department of Natural Resources
- D) Department of Agriculture

Question 57 of 75

A brownfield is most likely to be repurposed for which of the following uses?

- A) Racetrack
- B) School
- C) Dairy farm
- D) Single-family homes

Question 58 of 75

The 2015 Paris Climate Agreement set a goal to keep the rise in global temperature to below how many degrees Celsius?

- A) 1 degree C
- B) 2 degrees C
- C) 5 degrees C
- D) 10 degrees C

Question 59 of 75

The Hardy-Weinberg principle states that from generation to generation, what will remain constant?

- A) Population size
- B) Biodiversity
- C) Frequency of alleles
- D) Reproduction rate

Question 60 of 75

Which country mines more lithium than any other, with production about 2.5 times higher than second-ranked Chile?

- A) Australia
- B) China
- C) Argentina
- D) United States

Question 61 of 75

After a wildfire, the process of ecological succession begins with which type of species, such as lichens and fungi, which restore the environment for larger species?

- A) Adventurous species
- B) Pioneer species
- C) Starter species
- D) Conquering species

Question 62 of 75

A type of plant grown for certain physical characteristics that are maintained in reproduction is known by what term?

- A) Propagator
- B) Cultivar
- C) Hybrid
- D) Domesticator

Question 63 of 75

The “triple bottom line” is a means to account for social and environmental factors in addition to financial positions of a company. Which three words make up a common statement of the triple bottom line?

- A) People, planet, and profit
- B) Culture, citizenship, and cash
- C) Man, machines, and money
- D) Friends, feelings, and finances

Question 64 of 75

A 2020 Oxfam report found that the richest one percent of humans produced about what percent of the planet's carbon emissions from 1990-2015?

- A) 50 percent
- B) 30 percent
- C) 25 percent
- D) 15 percent

Question 65 of 75

In economics, when a negative burden such as pollution is borne by the community instead of the creator of the problem, it is known by this term.

- A) Evidentiality
- B) Equilibrium
- C) Externality
- D) Elasticity

Question 66 of 75

The change in genetic frequencies over time as favorable traits become more common and unfavorable traits die out is known by what name?

- A) Adaptation
- B) Natural selection
- C) Predation
- D) Bottleneck

Question 67 of 75

The use of resources, production of wastes, and balance of all of the costs and benefits associated with a product can be studied in what kind of analysis?

- A) Life cycle analysis
- B) Chemical analysis
- C) Green analysis
- D) Evidentiary analysis

Question 68 of 75

For purposes of insurance and building construction, the likelihood of a destructive flood in an area is usually cited as the likelihood it will occur within what span of time?

- A) 1 year
- B) 10 years
- C) 100 years
- D) 1000 years

Question 69 of 75

Which United Nations body is set to release its Sixth Assessment Report in 2022, detailing the scientific community's understanding of human-driven climate change?

- A) IPCC
- B) IUPAC
- C) IUCN
- D) ISBN

Question 70 of 75

Which of the following is not a benefit of wildfires in the environment?

- A) Increased microbial soil activity
- B) Clearing of thick undergrowth
- C) Growth of non-native plants
- D) Decomposition of older grasses

Question 71 of 75

Which term does not refer to the long-term storage of carbon during the carbon cycle?

- A) Carbon reservoir
- B) Carbon sink
- C) Carbon sequestration
- D) Carbon isotope

Question 72 of 75

Which seafood is likely to contain the most mercury due to bioaccumulation and biomagnification?

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- A) Plankton
 - B) Tuna
 - C) Shark
 - D) Sardine

Question 73 of 75

The plant species *Brassica oleracea* is consumed as many different foods. Which one of the following is not a food obtained from *B. oleracea*?

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- A) Cauliflower
 - B) Brussels sprouts
 - C) Soybeans
 - D) Kale

Question 74 of 75

Which form of transportation is the most efficient when considering energy used per person per mile?

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- A) SUV
 - B) Bus
 - C) Airplane
 - D) Bicycle

Question 75 of 75

The 10% rule of energy transfer in a food web is best described as:

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- A) Only 10% of a population can be safely eaten for food.
 - B) Only 10% of the energy is transferred from one trophic level to the next.
 - C) Only 10% of a predator's energy can come from one food source.
 - D) Only 10% of energy in a food web comes from the sun.