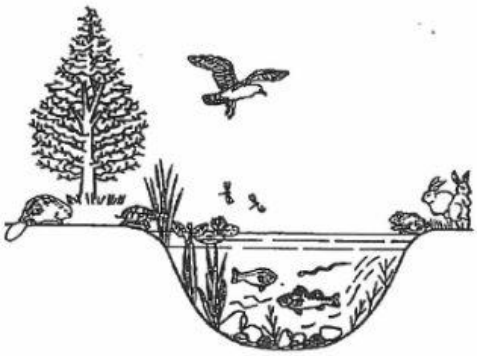
Name_____ Date_____

Living Environment – Topic 6 practice

__ 1) The diagram below represents many species of plants and animals and their surroundings.



The diagram *best* represents

A) an ecosystem
B) a community
C) the biosphere
D) a population

__ 2) The amounts of all the organisms present in four different aquariums are shown below. Which aquarium would be the *most* stable?

A)

Organism	Amount
aquatic plants	0.1 g
fish that eat plants	3 g
fish that eat fish	30 g

B)

Organism	Amount
aquatic plants	300 g
fish that eat plants	30 g
fish that eat fish	3 g
bacteria	0.001 g

C)

Organism	Amount
aquatic plants	300 g
fish that eat plants	30 g
fish that eat fish	3 g

D)

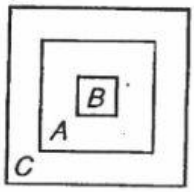
Organism	Amount
aquatic plants	0.1 g
fish that eat plants	3 g
fish that eat fish	30 g
bacteria	300 g

__ 3) The chart below shows three ecological terms used to describe levels of organization on Earth.

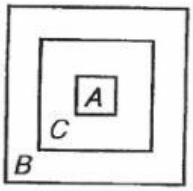
A	ecosystem
B	population
C	biosphere

Which diagram *best* represents the relationship of these ecological terms?

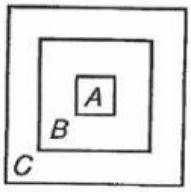
A)



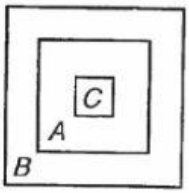
B)



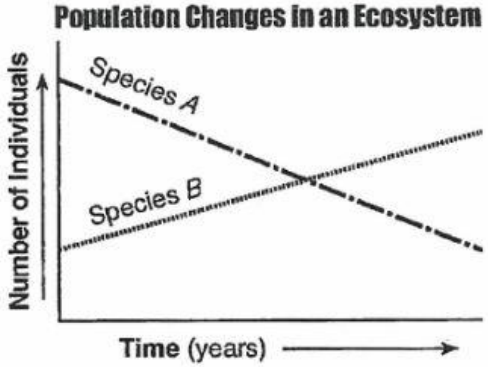
C)



D)



___ 4) The graph below represents the populations of two different species in an ecosystem over a period of several years.



Which one of the following statements is a possible explanation for the changes shown?

A) Species *A* is a predator of species *B*.
B) Species *A* is better adapted to this environment.
C) Species *B* is better adapted to this environment.
D) Species *B* is a parasite that has benefited species *A*.

___ 5) Which pair of organisms would most likely compete for the same ecological niche?

A) deer and wolf
B) tree and fungi
C) bacteria and fungi
D) deer and bacteria

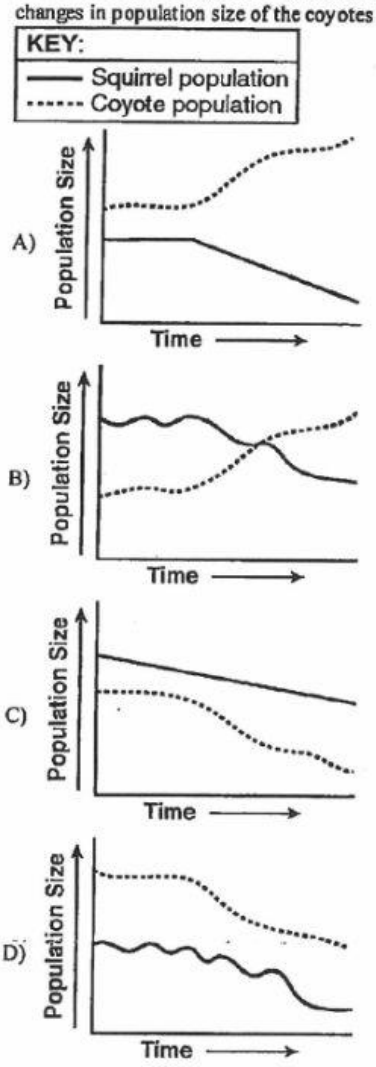
___ 6) A limiting factor unique to a field planted with corn year after year is most likely

A) temperature
B) soil nutrients
C) water
D) sunlight

___ 7) What is the primary source of energy for all the organisms in the ecosystem represented below?

A) minerals from the rocks
B) light energy from the Sun
C) respiration in the heterotrophs
D) photosynthesis in the producers

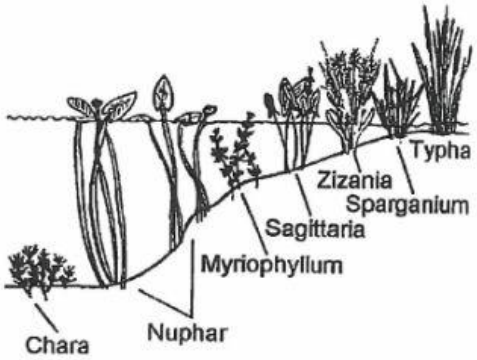
___ 8) In a particular ecosystem, squirrels make up a large portion of the diet of coyotes. A fatal disease in the squirrel population begins to reduce their population over a period of months. Which graph *best* represents the expected changes in population size of the coyotes and the squirrels?



___ 9) Which process initially provides the link between an abiotic factor and the energy needs of an entire ecosystem?

A) predation
B) photosynthesis
C) respiration
D) decomposition

___ 10) Which statement *best* explains why different plant species are found at different water depths as represented in the diagram below?



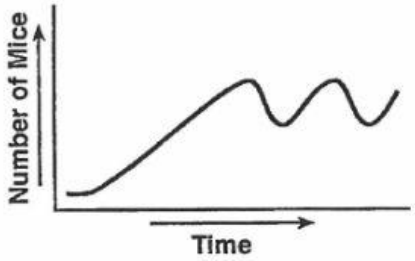
A) In any particular environment, the growth and survival of organisms is affected by physical conditions.
B) Plants on land are higher up the food chain than plants under water.
C) Energy flows through ecosystems in one direction, typically beginning with photosynthetic organisms.
D) Plant cells and some one-celled organisms contain chloroplasts.

___ 11) After the Aswan High Dam was built on the Nile River, the rate of parasitic blood-fluke infection doubled in the human population near the dam. As a result of building the dam, the flow of the Nile changed. This changed the habitat, which resulted in an increase in its population of a certain aquatic snail. The snails, which were infected, released larvae of the fluke. These larvae then infected humans.

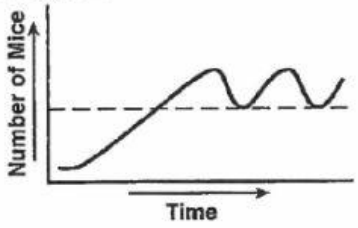
The role of the snail in the reading passage may be described as a

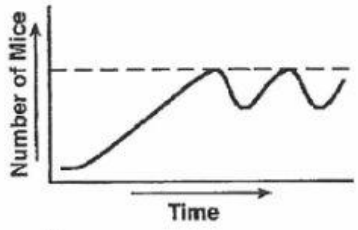
A) host
B) producer
C) decomposer
D) parasite

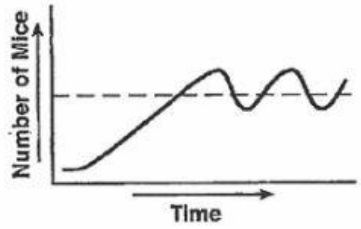
___ 12) The graph below shows the growth of a field mouse population in an ecosystem over time.

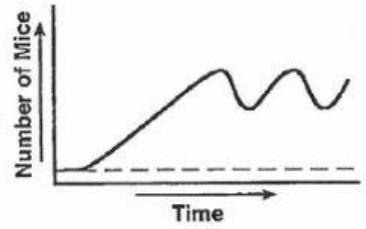


The dashed line indicating the carrying capacity for the mouse population is correctly shown on which of the following graphs?

A)


B)


C)


D)


___ 13) Plants are green because they contain the protein chlorophyll. A bucket was left on the lawn for one week. When the bucket was removed, the grass under the bucket had turned from green to a yellowish white color. This change is due to the interaction between the grass and

A) increased moisture under the bucket, a biotic factor
B) the amount of sunlight, an abiotic factor
C) decomposer organisms in the soil, an abiotic factor
D) the metal composition of the bucket, a biotic factor

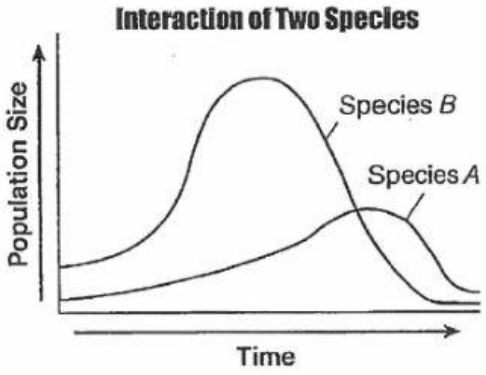
___ 14) The carrying capacity for herbivores in a habitat is most directly affected by the availability of

A) carbon dioxide in the atmosphere
B) photosynthetic organisms
C) heat energy released by carnivores
D) decomposers in the soil

___ 15) An earthworm lives and reproduces in the soil. It aerates the soil and adds organic material to it. The earthworm is a source of food for other organisms. All of these statements together *best* describe

A) a habitat
B) an ecological niche
C) competition
D) autotrophic nutrition

___ 16) The graph below shows changes in the populations of two species that interact only with each other over a period of time.



Which of the following statements *best* describes these two species?

A) Species *A* is a scavenger and species *B* is its decomposer.
B) Species *A* is a producer and species *B* is its consumer.
C) Species *A* is a predator and species *B* is its prey.
D) Species *A* is a host and species *B* is its parasite.

___ 17) Abiotic factors that affect the growth of grass in a lawn include

A) earthworms and nutrients
B) bacteria and soil
C) fertilizer and decomposers
D) moisture and minerals

___ 18) Two interactions between organisms are shown in the table below. *X* and *Y* do not represent the same organisms in the two interactions.

	Organism *X*	Organism *Y*
Interaction 1	predator	prey
Interaction 2	parasite	host

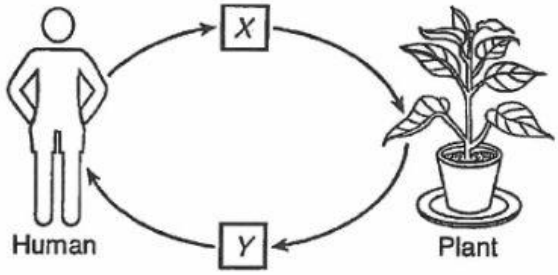
Which of the following statements *best* describes the relationship between organism *X* and organism *Y* in each interaction?

A) Organism *X* is positively affected by the relationship and organism *Y* is negatively affected.
B) Both organisms are positively affected by the relationship.
C) Both organisms are negatively affected by the relationship.
D) Organism *X* is negatively affected by the relationship and organism *Y* is positively affected.

___ 19) Which organisms directly help to reduce overpopulation in a deer herd?

A) decomposers and predators
B) parasites and predators
C) decomposers and consumers
D) parasites and scavengers

___ 20) The diagram below represents a cycling of materials.



Which row in the chart below shows the substances represented by *X* and *Y*?

Row	*X*	*Y*
(1)	oxygen	carbon dioxide
(2)	glucose	oxygen
(3)	carbon dioxide	oxygen
(4)	amino acids	carbon dioxide

A) Row 1 B) Row 2 C) Row 3 D) Row 4

___ 21) Which statement represents a characteristic of an ecosystem that is *not* likely to sustain itself?

A) There are interactions between biotic and abiotic factors.
B) The Sun provides the needed energy.
C) There are more consumers than producers.
D) Energy is transferred from plants to animals.

___ 22) When two different bird species temporarily occupy the same niche, they would most likely

A) interbreed to form a new species
B) not affect one another
C) compete with one another
D) change their nesting behaviors