

Choices of Two

- _____ The survival of individuals in a population is most affected by the resource in _____ (smallest / greatest) supply.
- _____ A species' interaction with its environment under ideal conditions is its _____ (fundamental / realized) niche.
- _____ External factors which influence the survival of the organism are called _____ (resources / regulators).

Vocab.

- _____ Materials in the environment that are taken into the body.
- _____ The true niche of an organism.
- _____ No two organisms can occupy the same _____.

Fill-In The Circle To Identify The Correct Answer In The Shrunken Multiple Choice Questions

1. _____ A population that is growing exponentially in the *absence of limiting factors* can be illustrated by a(n) _____.
 A. S-shaped curve B. J-shaped curve C. curve that terminates in a plateau phase D. tolerance curve
2. _____ A one-way relationship where one species benefits at the expense of another is called _____.
 A. commensalism B. competitive exclusion C. parasitism D. an obligatory relationship
3. _____ A symbiotic relationship in which both species benefit is best described as _____.
 A. commensalism B. competitive exclusion C. mutualism D. parasitism
4. _____ In a natural community, the primary consumers are _____.
 A. herbivores B. carnivores C. scavengers D. decomposers
5. _____ Which of the following is a primary consumer?
 A. cow B. dog C. hawk D. bear
6. _____ Under optimal conditions, the fruit fly (*Drosophila*) is capable of producing a new generation every two weeks. This ability is referred to as the _____ of the species.
 A. carrying capacity B. niche C. biotic potential D. optimal yield
7. _____ Bacteria and fungi act as _____ within an ecosystem.
 A. primary producers B. primary consumers C. secondary consumers D. decomposers
8. _____ Which one of the following is an example of *secondary succession*?
 A. appearance of mosses and weeds on an exposed rock fence
 B. an abandoned farm field covered with weeds and shrubs
 C. a former pond now supporting growth of shrubs and trees
 D. establishment of plants on a newly-formed island
9. _____ Which type of succession would probably result after a prescribed burn of mature Jack Pine in northern Michigan?
 A. primary B. secondary
10. _____ An organism's "trophic" level refers to _____.
 A. the rate at which it uses energy B. where it lives C. what it eats
 D. whether it is early or late in ecological succession
11. _____ Which of these ecosystems has the highest primary productivity per square meter?
 A. savanna B. open ocean C. boreal forest D. tropical rain forest
 E. temperate forest
12. _____ The producers in ecosystems include which of the following?
 I. prokaryotes
 II. algae
 III. plants
 A. I only B. II only C. III only D. I and III only E. I, II, and III

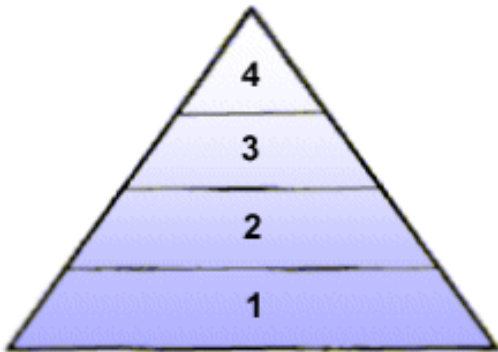
13. _____ Which of these ecosystems accounts for the largest amount of Earth's primary productivity?
 A. tundra B. savanna C. salt marsh D. open ocean E. tropical rain forest
14. _____ The difference between net and gross primary productivity would likely be greatest for:
 A. phytoplankton in the ocean
 B. corn plants in a farmer's field
 C. prairie grasses
 D. an oak tree in a forest
 E. sphagnum moss in a bog
15. _____ Subtraction of which of the following will convert gross primary productivity into net primary productivity?
 A. the energy contained in the standing crop
 B. the energy used by heterotrophs in respiration
 C. the energy used by autotrophs in respiration
 D. the energy fixed by photosynthesis
 E. all solar energy
16. _____ Aquatic primary productivity is often limited by which of the following?
 I. light
 II. nutrients
 III. pressure
 A. II only B. III only C. I and II only D. II and III only E. I, II, and III

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The following questions refer to the organisms in a grassland ecosystem listed below. Each term may be used once, more than once, or not at all.

- A. hawks B. snakes C. shrews D. grasshoppers E. grass

17. _____ an autotroph
 18. _____ an herbivore
 19. _____ smallest biomass
 20. _____ tertiary consumer
 21. _____ probably the highest internal concentration of toxic pollutants



22. _____ Primary consumers would be found at the following levels:
 A. 1 and 2 only
 B. 2 only
 C. 3 only
 D. 2 and 3 only
23. _____ At which level would chemoautotrophs be found?
 A. 1
 B. 2
 C. 3
 D. 4

Stage	A	B	C	D	E
Dominant Flora	None (freshly plowed land)	Annual grasses	Various Shrubs	Birch and cherry trees	Beech-maple forest

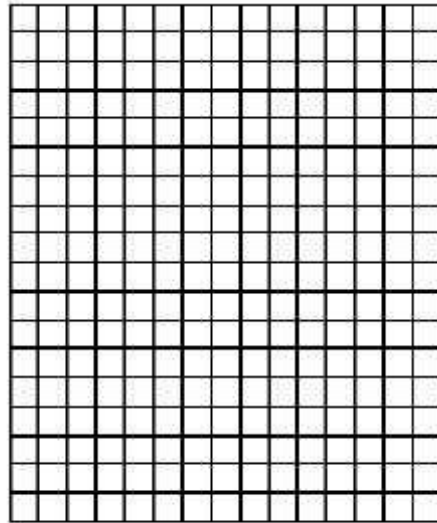
24. _____ Which stage represents a *pioneer community*?
 A. A B. B C. C D. D
25. _____ The replacement of stage B by stage C and the replacement of stage C by stage D in a particular location is known as:
 A. exploitation B. cover cropping C. ecological succession D. punctuated equilibrium
26. _____ In New York State, which *fauna* would be most likely associated with stage E?
 A. caribou B. prairie dogs C. panthers D. gray squirrels

Use the data table below to draw the graph (follow the instructions please) and answer the following questions:

DATA TABLE:

Day	Number of Species A	Number of Species B
1	10	10
2	50	15
3	160	50
4	40	100
5	0	75
6	0	0

Number of Organisms



Time (days)

A student placed 10 protozoans of species A and 10 protozoans of species B together in a culture medium. The student counted the number of each species for several days and recorded the results in the data table below.

27. Using the information in the data table, construct a line graph on the grid, following the directions below.
- Mark an appropriate scale on each labeled axis.
 - Plot the data for species A on the grid. *Surround each point with a small circle* and connect the points.
 - Plot the data for species B on the grid. *Surround each point with a small square* and connect the points.
 - Using one or more complete sentences, state a possible reason for the decrease in the population of species B between days 1 and 6 :
