Name Date: _____ Period:____

Ecological Succession Worksheet

1. Any change in plant communities over time is called a(n)_____.

2. A common pioneer organism in a succession is the_____.

3. The final stable state of a succession is called the_____community.

4. The first organism in a succession is called the_____.

_____5. Several years after some ground was cleared, grasses began to grow in an area. After 10 years, small bushes replaced the grasses. This pattern of plant growth is known as

A. cover cropping
B. evolution
C. ecological succession
D. biological control

_____6. Which organisms would most likely be the pioneer organisms on a newly formed volcanic island?

A. conifers
B. lichens
C. deciduous trees
D. tall grasses

For questions 7 through 9, use this chart and your knowledge of biology.

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

_____7. Which stage represents a pioneer community? A, B, C, D or E

_____8. The replacement of stage B by stage C and the replacement stage C by stage D in a particular ecosystem is known as

A. exploitation
B. cover cropping
C. ecological succession
D. punctuated equilibrium

_____9. Which stage would best represent a climax community? A, B, C, D or E

_____10. Starting on bare rock, what is the usual ecological succession of organisms?

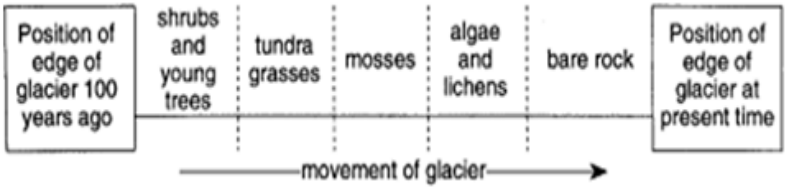
A. lichens → grasses → shrubs → trees
B. grasses → shrubs → lichens → trees
C. lichens → shrubs → grasses → trees
D. shrubs → grasses → lichens → trees

_____11. The stable stage that is established in an area as a result of the process of ecological succession is known as the

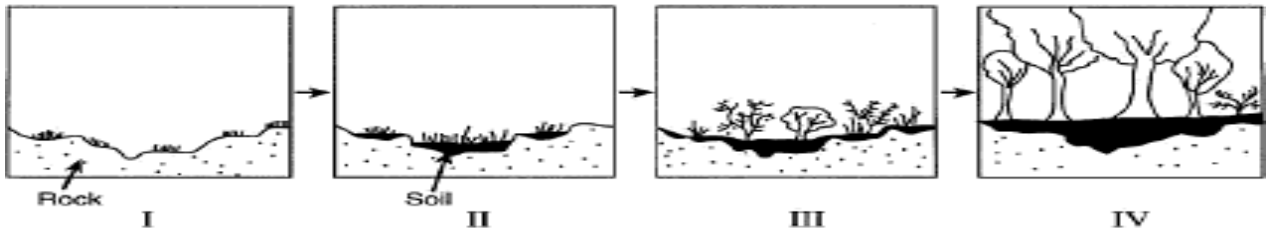
A. pioneer organism
B. climax community
C. biotic stage
D. heterotrophic community

_____12. The diagram represents a map showing different zones in an area once covered by a glacier. This diagram best represents

A. nutritional relationships
B. a pyramid of energy
C. a food chain
D. ecological succession



Use the diagram below and your knowledge of succession to answer questions 13 through 15.



Four Stages of a Biological Process

_____13. What would most likely be the predominant life-form found in stage 1?
A. ferns C. trees
B. pioneer species D. mushrooms

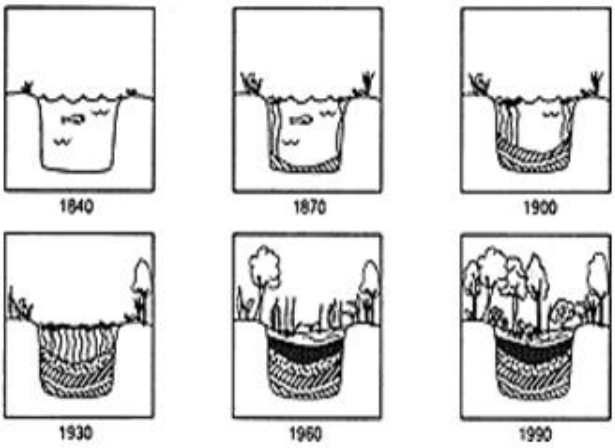
_____14. Stage IV will persist until it is altered by
A. a major change in an abiotic factor
B. seasonal dieback of vegetation
C. the reappearance of lichens and mosses
D. the growth in diameter of the trees

_____15. What is a major limiting biotic factor for animal succession in each stage?
A. plant species C. soil minerals
B. sunlight D. moisture

_____16. In a pond, which change would most likely lead to terrestrial succession?
A. a decrease in the number of suspended particles in the pond water
B. an increase in current velocity of the pond water
C. an increase in sediment, fallen leaves, and tree limbs accumulating on the bottom of the pond
D. a decrease in the number of diverse organisms in the shallow water of the pond

_____17. Which statement concerning the climax stage of an ecological succession is correct?
A. It is the first community to inhabit an area
B. It consists entirely of plants.
C. It persists until the environment changes
D. It changes rapidly.

_____18. This sequence of diagrams best illustrates
A. ecological succession C. the effects of acid rain
B. organic evolution D. a food chain



_____19. If no human intervention or natural disaster occurs, by the year 2050 this area will most likely be a
A. pond C. forest
B. field D. desert

_____20. The natural increase in the amount of vegetation from 1840 to 1930 is related to the
A. use of the pond for fishing
B. increasing amount of sunlight
C. decreasing water depth
D. increase in the number of bottom dwelling organisms