Name: _____ Date: _____ Period: _____

Ecology Test Review Sheet

Use this as a guide! Do not rely solely on this Review Sheet

1. List the 6 levels of organization in an ecological system, from most specific to broadest: (biome, community, ecosystem, organism, population)

2. List the following as Biotic or Abiotic:

a. Living parts of an environment. _____ b. Nonliving parts of an environment. _____

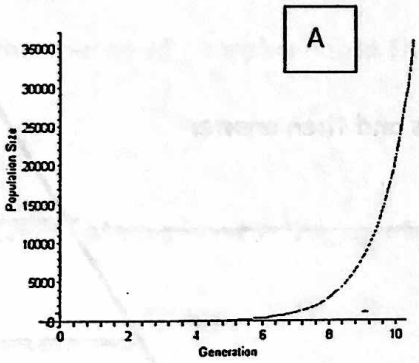
c. Fish. _____ d. Climate. _____ e. Water. _____

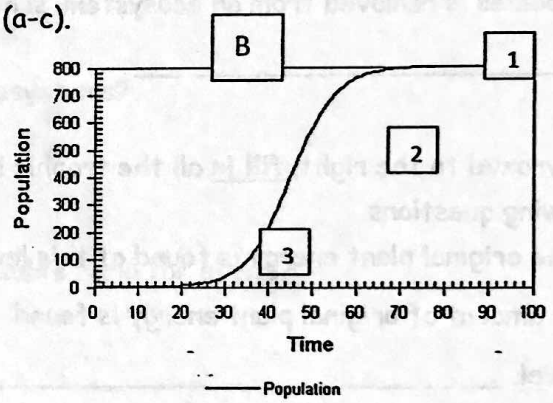
3. Identify the following as: Density Independent Limiting Factor OR Density Dependent Limiting Factor

a. Parasitism _____ b. Disease _____ C. Hurricanes _____

d. Not related to the number of organisms in a certain area _____

4. Use the 2 graphs below to answer questions (a-c).





a. Which graph represents an S-Curve/Logistic Growth? _____

b. Which graph represents our current human population growth? _____

c. On graph B, which number represents carrying capacity? _____

5. Place the following in the correct order from the beginning: (bare soil, forest, pine trees, weeds)

Does this represent primary or secondary succession? Why?

6. Put the vocabulary word with its definition or description (each word used once):

Ecosystem	Immigration	Population Density	Abiotic
Succession	Secondary Succession	Population	Deforestation
Pioneer Species	Pollutant	Global Warming	Keystone species
Limiting Factor	Symbiosis	Biotic	

a. This makes up all of the communities and non-living parts of the environment. _____

b. The natural, gradual changes in the types of species that live in an area. _____

c. The first organisms (lichens and mosses) that grow in an area that lacks soil _____

d. This type of succession would occur after a forest fire. _____

e. The loss of forests that causes erosion to the land. _____

f. The increase in average temperature of the atmosphere. _____

g. Harmful materials that can enter the air, land, and water. _____

h. The number of individuals in a defined area. _____

i. A group of organisms of the same species living in a certain area. _____

j. The movement of a single animal into a herd is an example of _____

k. Living matter within an ecosystem. _____

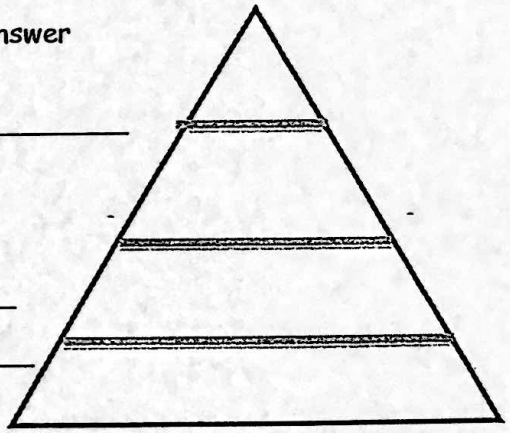
l. Nonliving matter within an ecosystem. _____

m. Interactions among organisms - ex commensalism. _____

n. Something that keeps a population from growing out of control. _____

o. If this species is removed from an ecosystem, some food chains will completely fall apart _____

7. On the pyramid to the right, <u>fill in</u> all the trophic levels and then answer the following questions.



a. 10% of the original plant energy is found at this level. _____

b. The least amount of original plant energy is found at this level. _____

c. Herbivores are found at which level? _____

d. The least amount of biomass is found at this level. _____

DIRECTIONS: Circle the word that best fits the statement:

8. Energy is (cycled / lost), matter is (cycled / lost).
9. Carbon dioxide is used during the process of (cellular respiration / photosynthesis) by producers.
10. Fossil fuels such as oil and coal are made from highly condensed (carbon / oxygen) in the soil.
11. Due to the fact that the natural phosphorous cycle is so (fast / slow), humans often resort to mining phosphorous from the ground for use in agriculture to quickly get larger crops.
12. (Volcanic eruption / Fire / Changing seasons) will most likely cause secondary succession.
13. Humans have been exposed in increasing amounts of Ultra Violet (UV) radiation due to (decrease / increase) in the ozone layer.
14. Deforestation (increases / decreases) the CO_2 in the atmosphere.

15. A (climax community / population) is a mature stable group of plants and animals.

16. Human activities that increase carbon dioxide in the atmosphere are likely to cause which of the following environmental changes?
    a. Higher sea levels
    b. Speciation
    c. An ice age
    d. Decreased plant growth

Directions: Answer the following questions or complete the statement.

17. Runoff of fertilizers containing nitrates can cause an overgrowth of algae blooms in lakes and other water sources. Eventually the lakes will be depleted of their oxygen source and cause destruction of the aquatic ecosystem. This process is called _____

18. What is the plant's role in the carbon cycle?

19. Which of the processes in the water cycle return water vapor to the atmosphere?

20. What is the source of phosphorous in the ecosystems?

21. What converts atmospheric nitrogen into a usable form for plants?

22. Explain the relationship between mutualism, parasitism, and commensalism.

23. What is the difference between parasitism and predator prey relationships.

24. Draw a food chain and explain each organisms role.

25. Describe the niche of an organism.