Unit 9 Ecology Review

Name: Answer Key Date: _____ Test #: _____

1. Define the following terms:
   a. Ecology: Study of the interaction of living organisms with each other and with their physical environment
   b. Community: a group of organisms of DIFFERENT SPECIES living together in a particular place
   c. Habitat: Specific physical location in which a given species lives
   d. Density-independent: reduce the population regardless of the population's size
      i. Examples: weather, floods, fires
   e. Density-dependent: population size determines the effect the factor has on the population
      i. Examples: Food or habitat shortages, disease
   f. Competitive Exclusion Principle: NO 2 species can share the same niche, a species will be eliminated by competition
   g. Succession: series of ecological changes that every community undergoes over long periods of time
   h. Primary Succession: colonization of new sites by communities of organisms; takes place on bare rock
      i. Example: volcanic lava cools, glaciers retreat, landslides
   i. Secondary Succession: sequence of changes that take place when a community is disrupted by humans or natural disast
      i. Example: Farmer plowing land, fire levels forest

Soil -> is already established

   j. Limiting Factor: a factor that restrains the growth of a population
   k. Logistic Growth: population growth slows down or stops due to the effect of a limiting factor
   l. Exponential Growth: unlimited growth that occurs when there is no limit to population size
   m. Carrying Capacity: maximum number of individuals of a species that an ecosystem is capable of supporting
   n. Competition: when organisms compete with each other for available resources
   o. Extinction: when a species disappears from Earth
      i. How do humans impact extinction rates? Habitat destruction, introducing invasive species
   p. Producer: an organism that produces its own food through photosynthesis
   q. Herbivore: organism that eats plants
   r. Carnivore: organism that eats animals
   s. Omnivore: organism that eats both plants & animals

   (Be able to identify examples)

2. What are the parts of an ecosystem? organisms, energy, soil, water, weather
3. In a pyramid of energy, how much energy does the next higher feeding level receive? 10% How much energy is used or lost as heat? 90%
4. In a pyramid of energy, how many organisms does the next higher feeding level have? 10%
5. What is a trophic level? Each level in a food chain
    a. Which trophic level are the following organisms found in?
        i. Producers: 1st trophic level only
        ii. Herbivores: 2nd trophic level
        iii. Carnivores/Omnivores: remaining trophic levels
6. What happens to the population size when individuals produce more than one offspring? increase
7. Where is human population growth most rapid in the world? Developing countries
8. What is symbiosis: Between DIFFERENT species where they live in close association with another kind of organism
9. What are the three types of symbiosis? Be able to recognize an example of each.
    a. Mutualism: Both organisms benefit
    b. Commensalism: one organism benefits, while the other is neither harmed nor helped
    c. Parasitism: one organism benefits, other is harmed in some way
10. What type of plant will be found in the early stages of primary succession? Rock lichens
11. How do humans benefit from biodiversity? Food, Timber, Medicines
12. What happens to a food chain when you remove one of the organisms? (How will it affect the organisms it feeds on and the organisms that feed on it?) Organisms above it will become hungry, organisms will over produce and flourish (increase) and decrease

Be able to read and interpret various line graphs.