Standard: H

Endorsmt: Bio

Bio 317 Final Exam 2010 Name Grant R.

1-4. Explain the difference between density dependent population growth regulation and density independent population growth regulation. Give an example from nature for each.

Density dependent is when the population size controls the organisms regulation ~~interactions~~. A Owl will eat more Hares the greater the density & less the lower the density.

Density independent is when the population size doesn't have an effect on the amount of the population being eaten. A lion still kills the same # of buffalo no matter how many buffalo in the area.

5-8. Draw out and explain what a metapopulation is. State the **TWO** things that metapopulation dynamics are based on.

A metapopulation is ~~small~~ patches of population that are able to save each other from extinction through migration. A metapopulations dynamics are based on the ability to immigrate & distance from the same pools.

9-12. Draw out and/or explain what is meant by the "earth is green" argument for how communities are organized. Explain the reason why some people say the number of trophic levels makes a difference in "earth is green" argument.

When looking at the earth you see green & don't see the herbivores & predators. This shows that plants (producers) are the main trophic level on earth. Plants are more important because they are the ones who start with the energy. The # of trophic levels makes a difference by having more levels the less the # of herbivores & the more the plants will be produced.

13-16. Two theories that attempt to explain why there are more species as you get closer to the equator are the competition theory and predation theory. Explain the **difference** between these two theories.

Competition theory states that the more competition = more plant species which leads to more herbivores (species) → more predators species. Predation theory states that the more predators → fewer herbivores → more plant species. So the competition theory is based on plant (# of plants) competition & the predation theory is based on the # of predators.

17-20. Assume you are a conservation biologist and are responsible for managing the conservation of a large forest area. Explain why it makes a difference in how you would manage the forest depending on whether you hold to the equilibrium view of a community or nonequilibrium view of a community.

The equilibrium view would have me try to keep the forest always the same & not allow things like fires & other disturbances. The nonequilibrium view says the community needs disturbances in order to reach its maximum potential & is a more natural view. I would use non-equilibrium because it is more common in nature.