Multichoice (some select ones)

-A population-limiting factor whose intensity is unrelated to population density is called a **density independent factor.** Weather and other favorable conditions play into this as well as bad things like flooding, fire etc. Examples:

* aphid population goes up in the summer when more plants are available
* mosquitos generate large populations when standing water is available
* some populations die off completely but leave unhatched eggs to grow a new population with
* -density dependent factors: intensity is related to population density, factors which often control population through an increasing death rate (competition over resources, crowding, lack of avail food etc).

-Aquatic zones:

* **pelagic realm** of the oceans includes all open water
* the seafloor—is known as the **benthic realm**
* The depth of light penetration, a maximum of 200 m (656 feet), marks the **photic zone**
* In shallow areas such as the submerged parts of continents, called **continental shelves**, (photic zone here includes both the pelagic and benthic realms)
* Intertidal zone is the area where the tide rises and falls creating diverse life.

-Terrestrial Biomes : (matching questions)

* Tropical forest- days 11-12 hours long yearround, very humid and has high rainfall (80-160 inches p/year), most diverse biome
* Savanna- grassland with scattered trees, 12-20 inches of water p/year, often have fires but regrow quickly
* Deserts – driest biome, less than 12 inches of rain p/year, can be very hot in the day
* Chaparral – cool ocean currents produce these dense spiny shrubs which covers the hills
* Temperate grasslands – mostly treeless except near water, gets 10-30 inches of rain p/year, grazing animals present.
* Temperate forests – broadleaf trees in these areas (like the Appalachians and much of Europe), 30-60 inches of water, very seasonal year round.
* Coniferous Forest – cone bearing trees mainly. Is the largest terrestrial biome, usually in cold high elevations, rainfall not really a factor
* Tundra, cold always, no trees but has some grasses and shrubs… soil is frozen which prevents roots from penetrating too far
* Polar Ice, all is frozen, these are the caps of the earth… snow and ice. Almost no precipitation and it is extremely cold.

Essay Questions:

4 main factors responsible for the loss of biodiversity:

* Habitat destruction
* Invasive species
* Over exploitation (of harvesting species)
* Pollution

3 reasons biodiversity is threatened by habitat destruction:

* Agriculture, urban development, forestry, mining, and environmental pollution
* Altering of water flow
* Destruction of coral reefs
* (these are not exactly reasons though)

3 things prey do to avoid predation

* Cryptic: Coloration and camouflage (well hidden)
* Warning: often brightly colored, poisonous or tastes bad to the predator
* Mimicry: looks like a different prey or a predator

4 reasons animals need energy:

* Growth
* Maintenance
* Reproduction
* Locomotion (movement)

4 trophic levels of the food chain

Producers – plants (who convert energy chemically from the sun)

Primary consumers – herbivores… those who eat plants solely (insects a lot)

Secondary consumers – carnivores, eats lots of insects, like a mouse etc

Tertiary consumers – near the top of the food chain, eats primary and secondary consumers, snakes, humans, eagles, etc…

Bonus: why do humans have a limitless carrying capacity?

Modern medicine and human ability to live in highly dense populations… at the cost of consuming mass resources and the carrying capacity may one day reach a limit.