

ENVIRONMENTAL STUDIES (SC111)
HOMEQUIZ 4

Monday, February 24, 2014
Due: Monday, March 4, 2013

NAME: _____

TRUE OR FALSE: (15 pts)

- _____ Not all deserts are hot and dry.
- _____ One of the key factors that pushes the succession process along toward a climax community in aquatic ecosystems is sedimentation.
- _____ The major difference between primary and secondary succession is that secondary succession generally takes longer to reach a climax community stage than does primary succession.
- _____ Temperature and precipitation are the two major non-biological factors that influence the type of biome that is present in any particular geographic area.
- _____ Biomes are major types of terrestrial climax communities.
- _____ Primary succession begins with a total lack of organisms.
- _____ Deserts have the highest biodiversity of all terrestrial biomes.
- _____ Development of an ecological community on a site previously devoid of life (where there is only a rock outcrop) is called secondary succession?
- _____ A Chaparral is sometimes referred to as a Tundra biome.
- _____ The ecological community that may develop on a site that resists further change is called a climax community.
- _____ Climax communities maintain their mix of species for a short period of time only.
- _____ Some communities are prevented from reaching a true climax stage by periodic disruption by events such as periodical fires.
- _____ The process by which organisms gradually change the soil, degree of shade, available moisture, and other factors producing changes in species membership of a community is called succession.
- _____ There is no vegetation (flora) in the tundra because of a permanent permafrost.
- _____ A taiga is the same biome as a boreal forest.

MULTIPLE CHOICE: (18 pts)

1. The dominant species in a terrestrial pioneer community are
 - a) Grasses
 - b) Beetles
 - c) Lichens
 - d) Conifers
 - e) None of the above

2. Which is not a characteristic of a climax community?
 - a) Tends to have a stable mix of species
 - b) Rapid changes in energy balance
 - c) More organisms than a successional community
 - d) Increasing complexity and energy efficiency
 - e) All of the above are characteristics of a climax community

3. Which of the following is not an example of a biome?
 - a) Taiga
 - b) Temperate Grassland
 - c) Temperate Shrubland Savanna
 - d) Desert
 - e) Tundra

4. Which of the following is not a characteristic of the tropical rainforest biome?
 - a) Soils with low levels of nutrients
 - b) Highest number of species of all biomes
 - c) High rainfall
 - d) Low temperature
 - e) Makes poor farmland if cleared

5. Which of the following is a typical characteristic of a taiga biome?
 - a) Numerous deciduous trees, few conifers
 - b) Large number of species that stay all year
 - c) Few reptiles and amphibians
 - d) Ability to withstand prolonged high temperatures
 - e) All of the above are typical adaptations for a taiga biome

6. Which is an example of a marine ecosystem?
 - a) Estuary
 - b) Pond
 - c) Lake
 - d) Bog
 - e) None of the above

7. In general a climax community has
 - a) Relatively constant biomass
 - b) Variation in biomass
 - c) Nutrient reduction
 - d) All of the above

8. Traditionally, ecologists have recognized two types of succession including
 - a) Primary and secondary
 - b) Secondary and final
 - c) Primary and climax
 - d) None of the above

9. Grassland biomes are also known as
 - a) Taigas
 - b) Tundras
 - c) Prairies
 - d) None of these

10. Biomes are
 - a) Broad types of biological communities
 - b) Areas of roughly the same climate
 - c) Areas of similar soil and topography
 - d) All of the above

11. The most important factor in determining the type of biome to develop in a given area is
 - a) Soil type
 - b) Amount of sunlight
 - c) Precipitation
 - d) Glaciation patterns

12. The desert biome develops in those areas
 - a) With low precipitation and high temperatures
 - b) With low precipitation and, depending on altitude, high or low temperatures
 - c) In the center of large continents
 - d) In association with mountain ranges

13. Grasslands typically lack trees because seedlings have difficulty surviving the
 - a) Low rainfall
 - b) High temperatures
 - c) Frequent occurrence of fire
 - d) More than one of the above

14. Tundra is most closely associated with
 - a) Extreme cold and much precipitation
 - b) Variable temperature and much precipitation
 - c) Extreme cold and very low precipitation
 - d) Variable temperature and very low precipitation

15. The boreal forest is
 - a) Dominated by coniferous trees
 - b) Located where soils are typically dry
 - c) Found in warm but not hot areas
 - d) Characterized by tolerating a wide variety of temperatures and precipitation

16. A biome with an extensive treeless plain whose topsoil is frozen all year except for about 6 weeks in summer. Below this is permafrost soil, which is frozen all year long.
 - a) Taiga
 - b) Tundra
 - c) Deciduous forest
 - d) Chaparral

17. Important ecological services provided by wetlands include
 - a) A reduction in flooding
 - b) Detoxification of substances dissolved in water
 - c) Replenishment of groundwater
 - d) All of the above and more

18. Humans
 - a) Have damaged or disturbed over half the world's terrestrial ecosystems, at least to some extent
 - b) And land disturbance have become the single greatest cause of species loss
 - c) Are estimated to have directly or indirectly, redirected 40 percent of terrestrial net productivity
 - d) Have produced all of the above impacts

ANSWER QUESTION (12 pts)

1. Name the “terrestrial biome” corresponding to each specific slot and indicate the appropriate “abiotic factor” that corresponds to the X-axis and Y-axis respectively.

