

## Ecology, Population Dynamics, and Biodiversity Test Review

1. When reasoning to support a claim, your response must include an explanation of the \_\_\_\_\_ involved.
2. The variable in an experiment that is measured and goes on the Y axis is called the \_\_\_\_\_ variable.
3. List the requirements for a data table to be in correct scientific format.
4. The study of the interactions that take place between organisms and their environment is known as \_\_\_\_\_.
5. Because organisms affect each other and their environment, this makes them \_\_\_\_\_.
6. Living parts of the environment are known as \_\_\_\_\_ factors while non-living parts of the environment are known as \_\_\_\_\_ factors.
7. The \_\_\_\_\_ is a place where an organism lives.
8. An earthworm aerates the soil, decomposes waste, and provides food to birds. These are examples of the earthworm's \_\_\_\_\_.
9. The \_\_\_\_\_ is the thin layer of Earth in which life exists including land, water and air.
10. Place the following in order from smallest to largest: biome, biosphere, community, ecosystem, organism, population.
11. List the 3 types of population dispersion and give an example of each.
12. \_\_\_\_\_ is the number of organisms per unit area at a given time.
13. \_\_\_\_\_ is the amount by which a population size changes over time.
14. List the four main factors that influence population growth rate.
15. Predation occurs when the \_\_\_\_\_ gets eaten by the \_\_\_\_\_.

16. Predator and prey populations \_\_\_\_\_ and \_\_\_\_\_ together.
17. \_\_\_\_\_ is fighting over limited resources, mates, or territory.
18. Why do not populations grow indefinitely?
19. \_\_\_\_\_ is the maximum number of organisms the resources of an area can support.
20. In the presence of unlimited resources and the absence of disease and predation, a rabbit population will show \_\_\_\_\_ growth.
21. A population has grown to its \_\_\_\_\_ if more growth would mean that the population can no longer be supported by its environment's space and resources.
22. \_\_\_\_\_ are any biotic or abiotic factor that restrain the growth of a population.
23. Sketch a graph of logistic growth and label the carrying capacity.
  
24. Sketch a graph of exponential growth. Why can't you label the carrying capacity on this graph?
  
25. Give two examples of a density dependent factor. \_\_\_\_\_
26. Give two examples of a density independent factor. \_\_\_\_\_
27. A density \_\_\_\_\_ factor will reduce the population regardless of the size.
28. With a density \_\_\_\_\_ factor, the chance of survival depends on the size of the population and is based on resources.
29. Demographics are \_\_\_\_\_ characteristics of a given human population.
30. Demographers use mathematical formulas to predict or study \_\_\_\_\_ changes.
31. A model that shows birth and death rates as a country develops is known as the \_\_\_\_\_ model.

32. A population pyramid is a graph that shows the distribution of various age groups by \_\_\_\_\_ in a population.

33. How are population density maps useful?

34. What are the requirements for population sampling to be successful?

35. \_\_\_\_\_ measures the variety of organisms in different ecosystems and is made possible by complex interactions among living things.

36. Humans are the same species but have different traits like skin color; this is an example of \_\_\_\_\_ diversity.

37. \_\_\_\_\_ diversity is the number or variety of species in an ecosystem.

38. \_\_\_\_\_ diversity is the number and variety of ecosystems within a specified area.

39. What are the three components that drive biodiversity?

40. What is another name for Simplified Diversity Index?

\_\_\_\_\_

41. The Simplified Diversity Index measures diversity of species in an area; the closer to \_\_\_\_\_, the more diverse the area is.

42. Choosing not to pick a flower because you believe that all life has value is an example of a (an) \_\_\_\_\_ value.

43. Having a choice amongst a large variety of fruits to eat is an example of the benefits that biodiversity provides humans. This is known as a(an) \_\_\_\_\_ value.

44. Two dissimilar organisms live together in close association is known as \_\_\_\_\_.

45. Read the examples below and name the type of biotic relationship.

- ticks feeding on a dog \_\_\_\_\_
- bees transporting pollen from flowers \_\_\_\_\_
- pilot fish swimming under sharks \_\_\_\_\_
- birds eating the insects from the back of a hippopotamus \_\_\_\_\_

