

Ecology Test Answer Key

*Each question is worth one point unless otherwise indicated

1. A, B, C, D

2. B

3. D

4. B,D

5. B

6. B

7. A

8. C

9. D

10.E

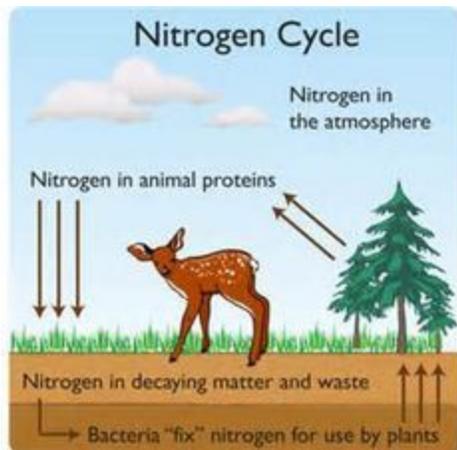
11.B

12.C

13.C

14. It can be defined as the study of the interactions of organisms with their abiotic and biotic factors.

15. Unlike the other cycles, the atmosphere does not play a significant role in the movement of phosphorus.



16. +4

17. 5%

18. Grazing animals stimulates plants to grow by compacting the soil with their hooves and opening new areas for seeds and the generation of plants to take root

19. Mammals are usually smaller, they often sleep during the day and go out at night, light colored bodies, veins near the surface of their skin.

20. Because grasslands are so fertile, they are often converted to farmland, losing biome area. Also, the resulting farms can have fertilizer runoff from rain, leading to acid rain and excessive nitrogen in the soil.

21. The Great Basin Desert
22. Subtropical, coastal deserts, cold winter deserts, polar deserts
23. Coniferous forests
24. Temperate grasslands
25. Grasslands
26. Collective effects of changes in Earth's movements upon its climate caused by variations in eccentricity, axial tilt, and precession.
27. the processes that cause the Earth's surfaces to wear away by moving water, by ice, by wind and by waves
28. Extinct
29. Biodiversity
30. broad, flat-topped teeth and digestive systems especially adapted to feed on grasses, ability to burrow, ability to run fast, hiding eggs in dense vegetation, camouflage matching surroundings
31. Five
32. The greenhouse effect is the mechanism that explains how substances known as greenhouse gases are able to trap the infrared radiation that comes from the sun after the sunlight (shortwave radiation) has bounced against earth's surface. It explains how earth isn't super cold. Global warming is the gradual increase of the earth's climate (not weather) due to increased levels of anthropogenic pollutants.
33. Deforestation removes large carbon sinks in the form of forests and typically replaces them with agricultural or urban areas that store less carbon. Thus, more carbon stays in the atmosphere.
34. Aridisols
35. r-selection is an evolutionary strategy in which species produce many offspring because they live in unstable environments. In reference to the survival curve, these organisms have a type III survivorship pattern.
36. K-selection is an evolutionary strategy in which species produce few offspring because they live in stable environments. In reference to the survival curves, these organisms have a type I or II survivorship pattern.
37. Fish, plants, decomposers
38. Nutrient overload, leading to eutrophication
39. Excess nutrient builds up, often from fertilizers that enter the water via runoff; plants flourish due to excess nutrients; algae blooms and doesn't allow sunlight to help the plants grow; plants die and decomposition causes even more oxygen depletion; ecosystem eventually dies

40. In order for organisms to survive, they need oxygen. With the buildup of algae, they could not get the sunlight they need to survive and they would die off, leading to oxygen depletion and even more death.
41. Manual cleanup of algae would be an initial solution, but a way to remove the nutrient overload would be a permanent solution - stop fertilizers from running off into the water.
42. a potential niche, or functional role of an organism in a community, without competitors or resource limitations
43. the increasing concentration of a substance, such as a toxic chemical, at higher levels of a food chain
44. using waste heat to make electricity
45. a recent theory proposed by Stephen Hubbell in 2001 that assumes similar species are competitively equal
46. the maximum growth rate of a population given unlimited resources, space, and lack of competition and predators
47. compares the total amount of energy available in each trophic level. This energy is usually measured in kilocalories
48. False - range of tolerance
49. False - predation
50. False - habitat destruction
51. True
52. *each correct answer in this question is worth one point

Organism 1	Organism 2	Description of Relationship	Symbiotic Relationship
Dog	Flea	The flea feeds on blood from the dog. +1	Parasitism
Fungus	Algae	The photosynthetic algae provide food for the fungus, which in turn provides a suitable living environment for the algae.	Mutualism+1

Termite	Cellulose-digesting bacteria	The bacteria in the gut of the termite breakdown and feed on some of the cellulose taken in by the termite. The termite would be unable to digest cellulose without these Bacteria. +1	Mutualism
Cattle	Cattle egret	The cattle egret follows herds of cattle and eats the insects that the cattle stir up as they move through the grassland.	Commensalism+1
Shark	Remora	The Remora fish swim alongside the shark and take scraps of the food that the shark drops during the feeding. The shark does not eat the Remora. +1	Commensalism