

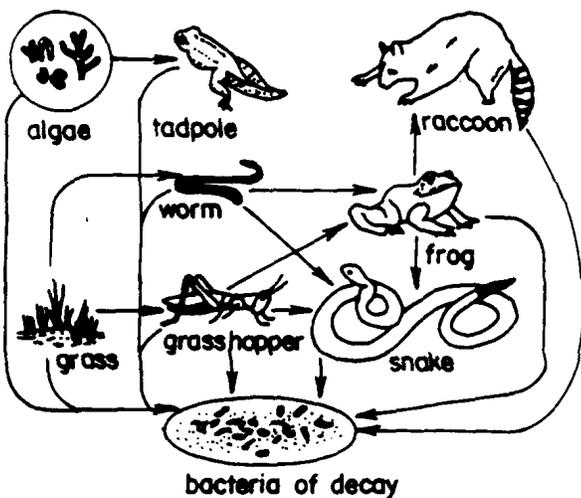
1. In a study made over a period of years in a certain part of the country, the research showed that there was a low amount of rainfall, a wide seasonal variation in temperature, and short periods of daylight. What best describes these environmental factors?

- A) abiotic factors of little importance to biotic factors
- B) abiotic factors that limit the type of organisms present in the area**
- C) biotic factors important to decomposers in the area
- D) biotic factors which are affected by the abiotic factors

2. What are the abiotic factors that characterize a forest ecosystem?

- A) light and biodiversity
- B) temperature and amount of available water**
- C) types of procedures and decomposers
- D) pH and number of heterotrophs

3. Base your answer to the following question on the diagram below and on your knowledge of biology



Decomposers are represented by the

- A) algae
- B) tadpole
- C) bacteria of decay**
- D) snake

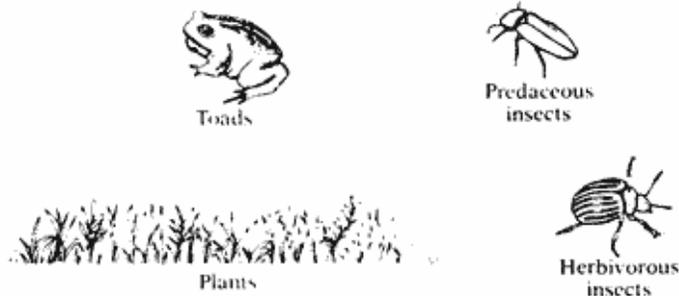
4. The types of herbivorous mammals present in a given terrestrial community depends most directly on the

- A) type of plants present**
- B) amount of nitrogen in the atmosphere
- C) number of decomposers present
- D) amount of oxygen dissolved in ponds and streams

5. A fruit fly is classified as a heterotroph, rather than as an autotroph, because it is unable to

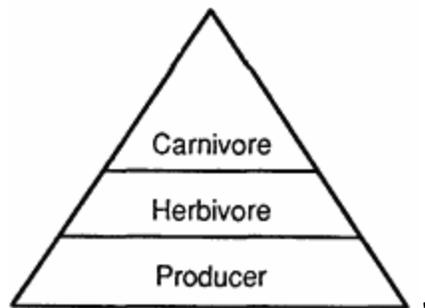
- A) transport needed materials through the body
- B) release energy from organic molecules
- C) manufacture its own food**
- D) divide its cells mitotically

6. The diagrams below represent four members of a food chain.



Which sequence best represents the transfer of energy between these organisms?

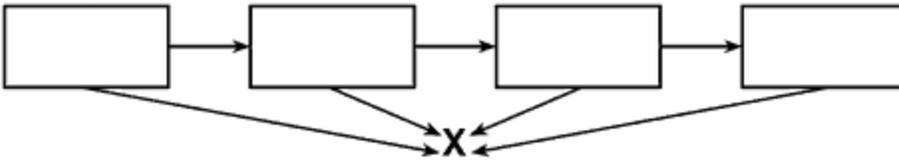
- A) toads → predaceous insects → herbivorous insects → plants
 - B) predaceous insects → herbivorous insects → plants → toads
 - C) plants → herbivorous insects → predaceous insects → toads**
 - D) plants → herbivorous insects → toads → predaceous insects
7. Base your answer to the following question on "the diagram below which represents an energy pyramid and your knowledge of biology.



Which sequence is an example of the producer-herbivore-carnivore relationship shown in the diagram?

- A) lion → shrub → rabbit
 - B) grass → field mouse → owl**
 - C) cricket → frog → grass
 - D) tree → mountain lion → squirrel
8. A certain plant requires moisture, oxygen, carbon dioxide, light, and minerals in order to survive. This statement shows that a living organism depends on
- A) biotic factors
 - B) abiotic factors**
 - C) symbiotic relationships
 - D) carnivore-herbivore relationships

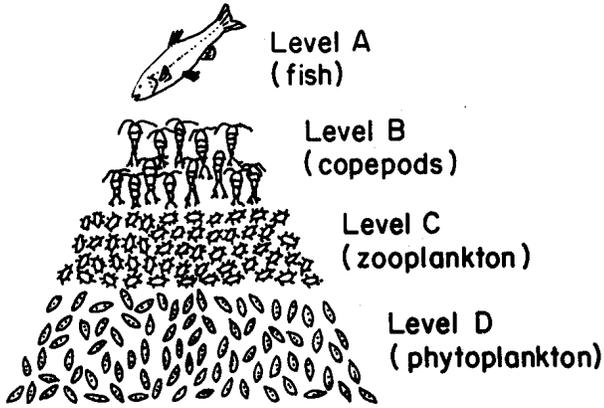
9. The diagram below represents some energy transfers in an ecosystem.



Which type of organism is most likely represented by letter X?

- A) decomposer B) autotroph C) producer D) herbivore

Base your answers to questions 10 through 12 on the aquatic energy pyramid shown below and on your knowledge of biology.



10. Producers are found at level

- A) A B) B C) C D) D

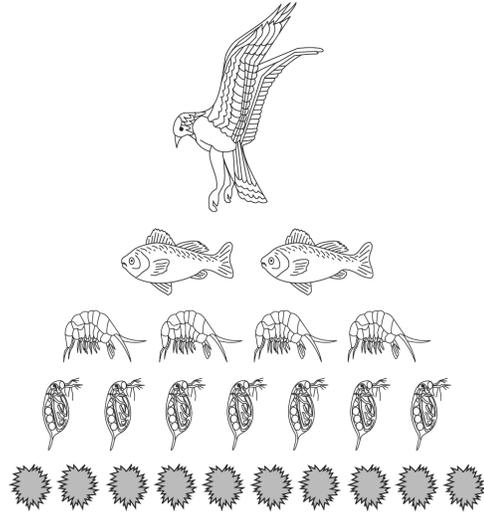
11. The level that contains the least amount of available energy is composed of

- A) phytoplankton B) zooplankton
C) copepods D) fish

12. Primary consumers are found at level

- A) A B) B C) C D) D

13. The diagram below represents different feeding levels in an energy pyramid



The most likely explanation for showing fewer organisms at each feeding level going up the pyramid is that

- A) **some energy is lost to the environment as heat**
B) the larger the organism, the less energy it requires
C) some energy is recycled within each level and remains there
D) decomposers convert most of the energy into inorganic compounds

14. For a producer to maintain itself, which factor must be present in its environment?

- A) carnivores B) herbivores
C) **sunlight** D) parasites

15. The greatest number of relationships between the organisms in an ecosystem is best shown in

- A) a food chain
B) an energy pyramid
C) **a food web**
D) an ecological succession diagram

Answer Key
Quiz 4 (Ecology Intro)

1. **B**
 2. **B**
 3. **C**
 4. **A**
 5. **C**
 6. **C**
 7. **B**
 8. **B**
 9. **A**
 10. **D**
 11. **D**
 12. **C**
 13. **A**
 14. **C**
 15. **C**
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