

Fundamental Concepts of Ecology

Ecology · Practice Test · 10 Questions

1. What is the primary source of energy for almost all ecosystems on Earth?

- A) Geothermal heat
- B) Solar radiation
- C) Chemical bonds in rocks
- D) Tidal energy

2. Which term describes an organism that can produce its own food using sunlight or chemical energy?

- A) Consumer
- B) Decomposer
- C) Autotroph
- D) Heterotroph

3. In a food web, which organisms are responsible for breaking down dead organic matter and recycling nutrients?

- A) Decomposers
- B) Apex predators
- C) Primary consumers
- D) Secondary producers

4. What is the 'carrying capacity' of an environment?

- A) The total amount of oxygen produced
- B) The maximum population size an environment can support
- C) The speed at which a species reproduces
- D) The total number of predators in an area

5. Which gas is removed from the atmosphere by plants during the process of photosynthesis?

- A) Nitrogen
- B) Oxygen
- C) Carbon dioxide
- D) Methane

6. What is a biome?

- A) A specific type of soil composition
- B) A large geographical area characterized by specific climate, flora, and fauna
- C) The population density of a single species
- D) The study of human impact on cities

7. Which level of biological organization consists of all living organisms in a specific area interacting with their physical environment?

- A) Population
- B) Community
- C) Biosphere
- D) Ecosystem

8. What is the relationship called when two species live in close physical contact, and both benefit?

- A) Parasitism
- B) Mutualism
- C) Commensalism
- D) Competition

9. Approximately what percentage of energy is typically transferred from one trophic level to the next in a food chain?

- A) 10%
- B) 25%
- C) 50%
- D) 90%

10. What defines a 'keystone species' in an ecosystem?

- A) A species that has a disproportionately large effect on its environment
- B) The species with the highest population count
- C) A species that only eats plants
- D) A species that is newly introduced to an area