

Fundamentals of Ecology

Ecology · Answer Key · 15 Questions

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

- A) Geothermal energy
- B) The Moon's gravitational pull
- C) Photosynthesis from the Sun**
- D) Chemical energy from deep-sea vents

2. Which ecological term describes all the living organisms in a particular area, interacting with each other?

- A) Habitat
- B) Niche
- C) Ecosystem
- D) Community**

3. In a food chain, organisms that produce their own food, usually through photosynthesis, are called:

- A) Consumers
- B) Decomposers
- C) Carnivores
- D) Producers**

4. What is the term for the specific role an organism plays within its ecosystem, including its diet, habitat, and interactions?

- A) Biome
- B) Ecological niche**
- C) Population
- D) Community

5. Which biogeochemical cycle involves the movement of carbon atoms through the atmosphere, oceans, land, and living organisms?

- A) Nitrogen cycle
- B) Water cycle
- C) Phosphorus cycle
- D) Carbon cycle**

6. A relationship where both species benefit is known as:

- A) Parasitism
- B) Commensalism
- C) Mutualism**
- D) Predation

7. Which ecological factor refers to the non-living physical and chemical elements of an environment, such as temperature, sunlight, and water?

- A) Biotic factors
- B) Abiotic factors**
- C) Population density
- D) Biodiversity

8. What is the process by which organisms better adapted to their environment tend to survive and produce more offspring?

- A) Genetic drift
- B) Natural selection**
- C) Mutation
- D) Speciation

9. The Amazon rainforest is an example of a large-scale ecological area characterized by specific climate and dominant plant and animal life. What is this called?

- A) Ecosystem
- B) Habitat
- C) Biome**
- D) Community

10. What are organisms that break down dead organic matter called?

- A) Producers
- B) Consumers
- C) Decomposers**
- D) Herbivores

11. The total number of individuals of a single species living in a specific area at a particular time is referred to as a:

- A) Community
- B) Ecosystem
- C) Population**
- D) Niche

12. Which of these is a common example of an abiotic factor affecting an aquatic ecosystem?

- A) Fish
- B) Algae
- C) Water temperature**
- D) Bacteria

13. What is the term for the variety of life in the world or in a particular habitat or ecosystem?

- A) Evolution
- B) Adaptation
- C) Biodiversity**
- D) Symbiosis

14. In a predator-prey relationship, what is the organism that hunts and kills another organism for food called?

- A) Prey
- B) Producer
- C) Scavenger
- D) Predator**

15. The process by which water moves from the atmosphere to the Earth's surface as rain, snow, sleet, or hail is known as:

- A) Evaporation
- B) Transpiration
- C) Condensation
- D) Precipitation**