

PART 1: Ecology & Ecosystem Basics (Q1–5)

1. What is the best definition of ecology?

- A) Study of stars and planets
- B) Study of cells and tissues
- C) Study of how living things interact with their environment
- D) Study of how organisms evolve

2. What is an ecosystem?

- A) A group of animals living in a zoo
- B) The variety of cells in a plant
- C) A community of organisms and their non-living environment
- D) A collection of the same species in one area

3. Which of the following lists shows the correct order of ecological organization (from smallest to largest)?

- A) Species → Population → Community → Ecosystem
- B) Community → Species → Ecosystem → Population
- C) Ecosystem → Species → Population → Community
- D) Species → Ecosystem → Community → Population

4. Which is a biotic factor in an ecosystem?

- A) Rocks
- B) Sunlight
- C) Temperature
- D) Bacteria

5. Which of the following is not an abiotic factor?

- A) Air
- B) Rain
- C) Grass
- D) Soil

PART 2: Interactions in Ecosystems (Q6–10)

6. What is a habitat?

- A) An animal's behavior
- B) The place where an organism lives
- C) A type of food chain
- D) An organism's job in the environment

7. What is a niche?

- A) The weather in an ecosystem
- B) The total number of predators
- C) The role or job an organism plays in its habitat
- D) The number of individuals in a population

8. What is the main difference between a habitat and a niche?

- A) Habitat is an organism's job; niche is its home
- B) Habitat is where an organism lives; niche is how it lives there
- C) They are exactly the same
- D) Niche includes only predators

9. Which of the following best describes competition in an ecosystem?

- A) When two species eat each other
- B) When species share the same food without problems
- C) When two species fight for the same resources
- D) When organisms form a symbiotic relationship

10. Which of the following is an example of predation?

- A) A butterfly pollinating a flower
 - B) A lion hunting a zebra
 - C) A tapeworm living in a human
 - D) A fungus growing on a tree trunk
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PART 3: Symbiotic Relationships (Q11–13)

11. In mutualism, both species:

- A) Compete with each other
- B) Are harmed
- C) Benefit from the relationship
- D) Live in separate habitats

12. Which of the following is an example of commensalism?

- A) A tick feeding on a dog
- B) Clownfish living in sea anemones without harming them
- C) Birds eating insects off a cow's back
- D) Bacteria helping humans digest food

13. What describes parasitism correctly?

- A) Both organisms benefit
 - B) One benefits while the other is harmed
 - C) Both are harmed
 - D) Neither benefits
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PART 4: Energy Flow & Consumers (Q14–17)

14. What type of organism makes its own food from sunlight?

- A) Heterotroph
- B) Photoautotroph
- C) Herbivore
- D) Carnivore

15. What is the role of chemotrophs in ecosystems like deep-sea vents?

- A) Use light to make food
- B) Use chemical energy to make food
- C) Eat other organisms
- D) Decompose dead matter

16. Which of the following is a tertiary consumer?

- A) Grass
- B) Rabbit
- C) Snake
- D) Hawk

17. What does the 10% Law state?

- A) 10% of species are producers
- B) Only 10% of energy is passed to the next trophic level
- C) 10% of energy is stored in plants
- D) Only 10% of organisms survive in each ecosystem

◆ **PART 5: Food Chains and Food Webs (Q18–20)**

18. What is the correct order in a simple food chain?

- A) Grass → Rabbit → Snake → Hawk
- B) Rabbit → Grass → Hawk → Snake
- C) Hawk → Grass → Snake → Rabbit
- D) Grass → Snake → Rabbit → Hawk

19. What is a food web?

- A) A type of ecosystem
- B) A single line of energy flow
- C) A set of non-living food sources
- D) A group of interconnected food chains

20. Which of these organisms would be at the bottom of a food chain?

- A) Snake
- B) Rabbit
- C) Grass
- D) Hawk