

Practice Test for Community Ecology

Keystone species in a community are those that:

- A) Are the most numerous
- B) Have the highest reproductive rate
- C) Play a crucial role in maintaining ecosystem structure**
- D) Compete aggressively with other species

What is the term for the process where two species evolve in response to changes in each other over time?

- A) Commensalism
- B) Symbiosis
- C) Coevolution**
- D) Niche differentiation

Which type of interaction benefits one species and has no effect on the other?

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

The competitive exclusion principle states that:

- A) Two species can coexist if they occupy the same niche
- B) Two species competing for the same resource cannot coexist indefinitely**
- C) Resources are equally distributed among species in a community
- D) Species coexist by avoiding competition for the same resources

What is an ecological niche?

- A) The physical environment a species lives in
- B) The role a species plays in its community**
- C) The genetic diversity within a population
- D) The reproductive strategy of a species

Invasive species are often harmful to ecosystems because they:

- A) Contribute to biodiversity
- B) Compete with native species for resources**
- C) Have coevolved with native species
- D) Promote ecological succession

Which of the following is an example of mutualism?

- A) A lion hunting a zebra
- B) A bee pollinating a flower while collecting nectar**
- C) A barnacle attaching itself to a whale
- D) A parasite living in the intestines of an animal

In a predator-prey relationship, an increase in the prey population is most likely to lead to:

- A) A decrease in the predator population
- B) An increase in the predator population**
- C) A shift in the ecosystem to mutualistic interactions
- D) No change in the predator population

What term describes the process by which one species benefits from a relationship, while the other species is harmed? (+/-)

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

Which term describes when two species share the same habitat but exploit different resources to reduce competition?

- A) Resource partitioning**
- B) Ecological succession
- C) Symbiosis
- D) Commensalism

Which of the following describes a symbiotic relationship where both organisms benefit? (+/+)

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

A tick feeding on the blood of a deer is an example of:

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

Which of the following best describes commensalism?

- A) One organism benefits while the other is harmed

- B) Both organisms benefit from the relationship
- C) One organism benefits while the other is neither helped nor harmed**
- D) Both organisms are harmed by the relationship

An example of mutualism is:

- A) A flea feeding on a dog's blood
- B) A clownfish living among sea anemones, where both species benefit**
- C) Barnacles attaching to a whale for transport without harming it
- D) A lion hunting a zebra for food

Which symbiotic relationship can be described as one organism benefiting at the expense of another?

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

Lichen, a combination of algae and fungi, is an example of:

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

In a commensalistic relationship, which of the following happens?

- A) Both organisms are harmed
- B) One organism is harmed while the other benefits
- C) One organism benefits, and the other is unaffected**
- D) Both organisms benefit equally

A bird building its nest in a tree without affecting the tree is an example of:

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

What type of symbiosis is exhibited by mistletoe extracting nutrients from a host tree?

- A) Mutualism

B) Parasitism

- C) Commensalism
- D) Cooperation

The relationship between termites and the protozoa in their guts, which help digest wood, is an example of:

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

A remora fish attaching to a shark for free transportation, without affecting the shark, is an example of:

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

Which of the following is true for a parasitic relationship?

- A) The parasite benefits while the host is harmed**
- B) Both the parasite and host benefit
- C) Both the parasite and host are unaffected
- D) The host benefits while the parasite is harmed

Which of the following best defines mimicry?

- A) The ability of a species to blend into its environment
- B) One species evolving to resemble another species**
- C) The process by which organisms adapt to seasonal changes
- D) The development of specialized feeding behaviors

In **Batesian mimicry**, a harmless species imitates the appearance of:

- A) A mutualistic partner
- B) A predator
- C) A toxic or dangerous species**
- D) A neutral organism

Which of the following is an example of **Müllerian mimicry**?

- A) A moth resembling a dead leaf to avoid predation
- B) Several species of poisonous frogs that have similar bright warning colors**
- C) A nonvenomous snake mimicking a venomous snake's coloration
- D) An octopus changing colors to blend in with its surroundings

Which type of mimicry involves two or more harmful species resembling each other?

- A) Batesian mimicry
- B) Müllerian mimicry**
- C) Aggressive mimicry
- D) Defensive mimicry

Which of the following is an example of **Batesian mimicry**?

- A) A harmless butterfly resembling a toxic butterfly species**
- B) A viceroy butterfly mimicking the toxic monarch butterfly
- C) A wolf spider mimicking the movements of a leaf
- D) Two species of venomous snakes sharing similar patterns

Which form of mimicry is used by the **robber fly**, which resembles a bumblebee but lacks a sting?

- A) Batesian mimicry**
- B) Müllerian mimicry
- C) Aggressive mimicry
- D) Sexual mimicry

What is the main advantage of **Müllerian mimicry** for species involved?

- A) It enhances their ability to attract mates
- B) It increases the population of predators
- C) It reinforces the warning signal to predators, enhancing survival**
- D) It helps species blend into their environment

Which of the following is **NOT** an example of mimicry?

- A) A stick insect resembling a branch
- B) A venomous coral snake and a nonvenomous king snake sharing similar coloration
- C) A cuttlefish changing color to resemble the ocean floor
- D) A polar bear blending into its environment by being white**

Which of the following is an example of **camouflage** as a defense mechanism?

- A) A moth resembling a leaf to avoid being seen by predators**

- B) A butterfly with bright colors to warn predators of toxicity
- C) A porcupine raising its quills when threatened
- D) A skunk spraying a foul-smelling liquid

Aposematic coloration refers to:

- A) A prey species hiding from predators by blending into its environment
- B) Bright warning colors that signal toxicity or danger to predators**
- C) A species mimicking a predator to avoid being eaten
- D) The use of sharp structures, like spines, for defense

Which of the following is an example of **chemical defense**?

- A) A chameleon changing its skin color to match its surroundings
- B) A skunk spraying a predator with a foul-smelling liquid**
- C) A rabbit running in a zigzag pattern to escape a predator
- D) A snake hissing and displaying its fangs

Armor as a defense mechanism is best exemplified by:

- A) A butterfly's bright warning colors
- B) A turtle's hard shell for protection**
- C) A fish swimming quickly to avoid being caught
- D) A snake camouflaging in leaf litter

What is the primary advantage of **herd behavior** in prey animals?

- A) It increases the chances of spotting a predator early
- B) It allows animals to confuse predators by moving as a group**
- C) It ensures more efficient hunting for prey animals
- D) It allows animals to share resources more effectively

Which of the following is an example of **disruptive coloration**?

- A) Zebras using their striped pattern to break up their outline in a herd**
- B) A moth blending in with tree bark to avoid detection
- C) A frog with bright colors to warn predators of its toxicity
- D) A porcupine raising its quills in defense

The term **thanatosis** refers to:

- A) The use of toxins by prey to deter predators
- B) The mimicry of dangerous species by harmless species
- C) The act of playing dead to avoid predation**
- D) The formation of social groups to confuse predators