

This print-out should have 31 questions. Multiple-choice questions may continue on the next column or page – find all choices before answering.

Raven54 16

001 10.0 points

A relationship in which both members benefit from their association is called

1. mutualism. **correct**
2. predation.
3. commensalism.
4. parasitism.
5. sympatric.

Raven54 18

002 10.0 points

Communities evolve to have greater biomass and species richness in a process called

1. sympatric interactions.
2. symbiotic relationships.
3. succession. **correct**
4. competitive exclusion.
5. adaptive modifications.

Raven54 22

003 10.0 points

Competition between individuals of a single species is called

1. interspecific.
2. exploitative.
3. fundamental.
4. intraspecific. **correct**
5. interference.

Raven54 29

004 10.0 points

A herbivore can avoid competition from other species for food by acquiring the ability to

1. be tolerant to some secondary compounds, allowing it to feed on an underutilized resource. **correct**
2. alter its reproductive behavior, allowing it to utilize scarce resources.
3. All of these
4. Three of these
5. Two of these
6. be tolerant to some primary compounds, allowing it to feed on an overutilized resource.
7. become dormant and not require energy during hot, dry summer months.

Com Ecology 01

005 10.0 points

Interactions that occur between populations of different species living together in a community are called

1. None of these
2. interactive.
3. individualistic.
4. conversive.
5. interspecific. **correct**

Com Ecology 18

006 10.0 points

Both predation and parasitism are what kind of behaviors?

- I) +/+
- II) +/-
- III) -/-

IV) +/0

1. II and III only
2. II only **correct**
3. I only
4. IV only
5. III only

**Com Ecology 39
007 10.0 points**

Commensalism can be visually described as

1. +/+
2. -/-
3. -/+
4. +/-
5. +/0 **correct**

**Com Ecology 43
008 10.0 points**

All of the following types of species interaction are correctly paired with its effects on the density of the two interacting populations *except*

1. mutualism – both increase.
2. parasitism – one increases, one decreases.
3. predation – one increases, one decreases.
4. commensalism – both increase. **correct**
5. competition – both decrease.

**GA SB4 33
009 10.0 points**

Which sequence best represents the normal flow of energy?

1. predator to autotroph
2. producer to herbivore **correct**
3. heterotroph to autotroph
4. carnivore to herbivore

**GA SB4 38
010 10.0 points**

Imagine a pond community whose trophic levels proceed from algae at the base up to water fleas, then up to minnows, then up to bass. The energy of the sun is made available to the pond community through the activities of organisms at which level?

1. bass
2. algae **correct**
3. water fleas
4. minnows

**Holt Bio 16 09
011 10.0 points**

Food webs are formed from food chains because

1. herbivores can eat many types of plants.
2. energy flows better in several directions.
3. many individual animals feed at several trophic levels. **correct**
4. all consumers depend on the same producers.

**Holt Bio 17 09
012 10.0 points**

Higher productivity, a more stable ecosystem, and reduced competition are all benefits of

1. a high rate of predation.
2. a high biodiversity. **correct**

3. a low biodiversity.
4. a low rate of predation.

Raven54 42
013 10.0 points

What is an accurate interpretation of the outcome in an ecosystem when a major predator is removed?

1. The diversity of the ecosystem decreases since there is an increase in competition. **correct**
2. The remaining community adjusts and quickly becomes stable.
3. The diversity of the ecosystem decreases because parasites become more of a problem.
4. The diversity of the ecosystem decreases because new herbivores move in.
5. The diversity of the ecosystem actually increases.

Raven54 43
014 10.0 points

Alligators excavate holes in the bottom of bodies of water. During times of severe drought these holes act as refugia for various aquatic organisms that might perish if there were no water available.

What kind of species would you call alligators in this context?

1. sympatric
2. allopatric
3. symbiotic
4. refugistic
5. keystone **correct**

Raven55 46
015 10.0 points

A Viceroy caterpillar feeds on a leaf.

If a day's feeding activities gain the caterpillar a total of 1000 calories and 50% is lost in its feces and 33% of the energy is used to provide energy through cellular respiration, how many calories of the original intake are available for the caterpillar biomass?

1. 830 calories
2. 670 calories
3. 170 calories **correct**
4. 330 calories
5. 500 calories

Raven56 64
016 10.0 points

Biomagnification is a significant problem in aquatic biotic communities. The amounts of chemicals either increase or accumulate at each new link in a food chain.

One small plant can accumulate 1 unit of chemical X; a microscopic animal eats 15 small plants; a minnow consumes 10 microscopic animals; a large-mouth bass consumes 20 minnows.

Calculate the number of units of chemical X in the large-mouth bass based on this information.

1. 300 units
2. 30 units
3. 3,000 units **correct**
4. 15 units
5. 150 units

Raven57 18
017 10.0 points

Sea otters have been used as an example of the "Keystone Species" concept.

This means that sea otters

1. promote the edge effect in the kelp forests off the northern coastline of California.

2. provide the carnivorous component of the food chain in which they live.

3. exert a particular strong influence on the structure and functioning of an ecosystem. **correct**

4. offer an opportunity for scientists to study their long-term effects as they harvest the sea otter populations.

5. interact with the kelp forests and the sea urchins have not really had any consequences that need to be currently studied.

Starr 47 05

018 10.0 points

Recurring cycles of abundance and crashes are characteristic of

1. commensalisms.
2. resource partitioning competitors.
3. obligate mutualisms.
4. predator-prey relationships. **correct**

Starr 47 10

019 10.0 points

Natural selection tends to favor parasites that kill their host over less lethal parasites.

1. False **correct**
2. True

StarrC 40 04

020 10.0 points

Suppose two species of chipmunk live in the same area of the eastern Sierra and occupy similar niches.

What is the most likely interaction between the two species?

1. commensalism

2. mutualism

3. parasitism

4. interspecific competition **correct**

StarrC 40 08

021 10.0 points

The relationship between pollinators and the plant they pollinate is most often which of the following?

1. parasitism
2. mutualism **correct**
3. predation
4. commensalism

Com Ecology 41

022 10.0 points

After you removed a species from a tidal pool, the number of species fell from 18 to 9.

The species you removed was most likely

1. a resource partitioner.
2. a community facilitator.
3. a mutualistic organism.
4. a herbivore.
5. a keystone predator. **correct**

GA SB4 18

023 10.0 points

The series of gradual changes that occurs in a natural community over time is called

1. energy recycling.
2. natural selection.
3. ecological succession. **correct**
4. community growth.

GA SB4 17**024 10.0 points**

In a biomass pyramid, which trophic level has the greatest biomass?

1. producers **correct**
2. herbivores
3. consumers
4. decomposers

GA SB4 39**025 10.0 points**

A sweet potato provides energy for human metabolic processes. The original source of this energy would be the

1. vitamins and minerals absorbed from the soil.
2. sugar molecules produced by the plant during photosynthesis. **correct**
3. starch molecules absorbed by the potato plant.
4. protein molecules stored within the potato.

Raven55 33**026 10.0 points**

In an ecosystem, what amount of organic matter is available for heterotrophs in a given time?

1. net yield
2. gross productivity
3. net primary productivity **correct**
4. daily yield
5. effective vitality

Starr 48 03**027 10.0 points**

All organisms at a given trophic level

1. are consumed by the organisms at the next lowest level.
2. are the same number of transfer steps away from an energy input into the ecosystem. **correct**
3. interact only with other organisms at that same level.
4. interact with both biotic and abiotic factors.
5. are members of the same species.

Raven55 15**028 10.0 points**

What is *not* true about ecosystems?

1. The ultimate source of energy for nearly all known ecosystems is the sun.
2. There is a transfer of energy through the ecosystem that is lost.
3. There is a cycling of nutrients through the ecosystem again and again.
4. Ecosystems represent the lowest level of known biological organizations. **correct**
5. Ecosystems contain both living and non-living components.

Raven55 16**029 10.0 points**

What does *not* undergo biogeochemical cycles?

1. carbon
2. water
3. sulfur
4. nitrogen

5. energy correct

**Com Ecology 10
030 10.0 points**

How does species richness increase?

1. as a community size decreases
2. as rates of evapotranspiration decrease
3. on islands as island distance from the mainland increases
4. traveling north from the South Pole **correct**
5. traveling north from the equator

**StarrC 40 05
031 10.0 points**

Suppose two chipmunk species coexist in an area and are competing.

If one species is experimentally removed from the area, what would you expect the population size of the remaining species to do over time?

1. increase **correct**
2. decline
3. stay the same