

Chapter 4 Ecosystems and Communities**Chapter Test B****Multiple Choice**

Write the letter that best answers the question or completes the statement on the line provided.

- _____ 1. The average year-after-year conditions of temperature and precipitation in a particular region is the region's
a. weather. c. ecosystem.
b. latitude. d. climate.
- _____ 2. Temperatures on Earth remain within a suitable range for life because of the
a. unequal heating of Earth's surface.
b. loss of heat to space.
c. radiation of sunlight back into the atmosphere.
d. greenhouse effect.
- _____ 3. Cool air over the poles will
a. rise. c. absorb heat from the equator.
b. sink. d. flow parallel to Earth's surface.
- _____ 4. The tendency for warm air to rise and cool air to sink results in
a. global wind patterns.
b. ocean upwelling.
c. unequal heat distribution.
d. climate zones.
- _____ 5. Each of the following is an abiotic factor in the environment EXCEPT
a. plant life. c. rainfall.
b. soil type. d. temperature.
- _____ 6. An organism's niche is
a. the way the organism uses the range of physical and biological conditions in which it lives.
b. all the physical factors in the organism's environment.
c. the range of temperatures that the organism needs to survive.
d. a full description of the place an organism lives.
- _____ 7. An interaction in which one organism captures and feeds on another organism is called
a. competition. c. mutualism.
b. symbiosis. d. predation.
- _____ 8. Symbiosis in which both species benefit is called
a. commensalism. c. predation.
b. mutualism. d. parasitism.

- ____ 9. The series of predictable changes that occur in a community over time is called
- a. population growth.
 - b. ecological succession.
 - c. climax community.
 - d. climate change.
- ____ 10. Primary succession can begin after
- a. a forest fire.
 - b. a lava flow.
 - c. farmland is abandoned.
 - d. a severe storm.
- ____ 11. Climate conditions in a small area that differ from the climate of the surrounding area are called
- a. natural features.
 - b. microclimates.
 - c. biomes.
 - d. ecosystems.
- ____ 12. Which biome is characterized by very low temperatures, little precipitation, and permafrost?
- a. desert
 - b. temperate forest
 - c. tundra
 - d. tropical dry forest
- ____ 13. Aquatic ecosystems are classified by all of the following EXCEPT
- a. depth and flow of the water.
 - b. organisms that live there.
 - c. temperature of the water.
 - d. chemistry of the water.
- ____ 14. Ponds and lakes are
- a. wetlands.
 - b. estuaries.
 - c. standing-water ecosystems.
 - d. flowing-water ecosystems.
- ____ 15. The photic zone
- a. extends to the bottom of the open ocean.
 - b. extends to a depth of about 200 meters.
 - c. is deep, cold, and permanently dark.
 - d. is where chemosynthetic bacteria are the producers.

Completion

Complete each statement on the line provided.

16. The energy of incoming _____ drives Earth's weather and helps to determine climate.
17. Atmospheric gases that trap heat inside Earth's atmosphere are called _____ gases.
18. Organisms within an ecosystem are _____ factors in that ecosystem.

Name _____ Class _____ Date _____

19. A small city park that is sunnier and windier than the climate of the surrounding areas has its own _____ .
20. Single-celled algae that grow in lakes and ponds are called _____ .

Short Answer

In complete sentences, write the answers to the questions on the lines provided.

21. How are atmospheric gases like the glass in a greenhouse?

22. What are greenhouse gases?

23. Describe a climate you might find in the tropical zone.

24. What is an ecological resource?

25. What abiotic factor determines the amount of light received by an aquatic ecosystem?

Using Science Skills

Use the table on the next page to answer the following questions on the lines provided.

26. **Comparing and Contrasting** In Figure 4-1, compare the average daytime temperature of the tropical rain forest with the average summer temperature of the tundra. How can you account for the difference?

27. **Calculating** What is the highest average temperature shown in Figure 4-1? the lowest average temperature? How many degrees of temperature are there between the highest and the lowest temperatures? What global phenomenon maintains this range of temperatures?

Average Rainfall and Temperature of Earth’s Biomes

Biome	Average Yearly Rainfall	Average Temperature	Climate Zone
Tropical Rain Forest	400 cm	Daytime: 34°C Nighttime: 20°C	Tropical
Tropical Dry Forest	250–300 cm	Dry season: 32°C Wet season: 20°C	Tropical
Temperate Forest	75–125 cm	Summer: 28°C Winter: 6°C	Mostly temperate
Boreal Forest	35–75 cm	Summer: 14°C Winter: –10°C	Mostly temperate
Tropical Savanna	150 cm	Dry season: 34°C Wet season: 16°C	Mostly tropical
Desert	Less than 25 cm	Summer: 38°C Winter: 7°C	Tropical and temperate
Temperate Grassland	25–75 cm	Summer: 30°C Winter: 0°C	Temperate
Temperate Woodland and Scrubland	Less than 50 cm	Summer: 20°C Winter: 10°C	Temperate
Tundra	30–50 cm	Summer: 12°C Winter: –26°C	Temperate and polar

Figure 4-1

28. **Using Tables and Graphs** Which climate zone listed in Figure 4-1 includes the most biomes?

29. **Using Tables and Graphs** Which biomes listed in Figure 4-1 include areas that have an average yearly rainfall of less than 75 cm? Which biomes include areas that have an average yearly rainfall of more than 200 cm?

30. **Analyzing Data** Which two biomes shown in Figure 4-1 have seasons determined by the amount of precipitation they receive at different times of the year?
