

Chapter 2

Student: _____

1. The damage to an ecosystem caused by a hurricane or flood can be referred to as
 - A.
 - B.
 - C.
 - D.
 - E.
2. The relationship among atoms, elements, and compounds is most like the relationship among which of the following groupings
 - A.
 - B.
 - C.
 - D.
 - E.
3. Which of the following is not a molecule?
 - A.
 - B.
 - C.
 - D.
 - E.
4. Which of the following statements would change this into a true statement: "Most, but not all, living organisms are made up of organic compounds"?
 - A.
 - B.
 - C.
 - D.
 - E.

5.

Energy is the ability to

- A.
- B.
- C.
- D.
- E.

6.

Potential energy is _____ energy.

- A.
- B.
- C.
- D.
- E.

7.

The motion of a rock rolling downhill is known as _____ energy.

- A.
- B.
- C.
- D.
- E.

8.

Metabolism can be seen as the process of converting

- A.
- B.
- C.
- D.
- E.

9.

The law of conservation of matter tells us that matter

- A.
- B.
- C.
- D.
- E.

10. What implication(s) does the law of conservation of matter have for humans?
- A.
 - B.
 - C.
 - D.
 - E.
11. The first law of thermodynamics and the law of conservation of matter are similar in that
- A.
 - B.
 - C.
 - D.
 - E.
12. What implication(s) does the second law of thermodynamics have for biological systems?
- A.
 - B.
 - C.
 - D.
 - E.
13. Photosynthesis is the process of converting _____ into _____ energy.
- A.
 - B.
 - C.
 - D.
 - E.
14. Photosynthesis produces sugars from
- A.
 - B.
 - C.
 - D.
 - E.

15. The process of photosynthesis and cellular respiration are similar in that they both
- A.
 - B.
 - C.
 - D.
 - E.
16. The process of cellular respiration
- A.
 - B.
 - C.
 - D.
 - E.
17. All members of a species that live in the same area at the same time make up a(an)
- A.
 - B.
 - C.
 - D.
 - E.
18. A biological community consists of all
- A.
 - B.
 - C.
 - D.
 - E.
19. An ecosystem consists of
- A.
 - B.
 - C.
 - D.
 - E.

20. The length and complexity of a food web in the Arctic would be _____ when compared to one in the tropical rainforest.
- A.
B.
C.
D.
E.
21. Producers rely on the process of _____ to release chemical energy and consumers rely on the process of _____ to release chemical energy.
- A.
B.
C.
D.
E.
22. Primary consumers are also known as
- A.
B.
C.
D.
E.
23. Energy enters a system as sunlight and a producer is able to produce 10 kilograms of tissue. If eaten, the producer would produce about _____ kilograms of consumer tissue that would provide about _____ kilograms of tissue for a secondary consumer.
- A.
B.
C.
D.
E.

24. Living plants and the ocean are known as "carbon sinks" because
- A.
 - B.
 - C.
 - D.
 - E.
25. _____ are characteristics of an entire system that are greater than the sum of its parts.
- A.
 - B.
 - C.
 - D.
 - E.
26. Which is the best example of a closed system?
- A.
 - B.
 - C.
 - D.
 - E.
27. Which is not a characteristic of acids?
- A.
 - B.
 - C.
 - D.
 - E.
28. How do the organisms living around Yellowstone's hot springs get energy?
- A.
 - B.
 - C.
 - D.
 - E.

29. Nitrogen is an essential component of amino acids and proteins.
- True False
30. Photosynthesis is a step in the global nitrogen cycle.
- True False
31. Water expands when it crystallizes and freezes.
- True False
32. Based on what you know of photosynthesis, what effect would clearcutting of large forests have on the amount of carbon dioxide in the atmosphere?
- A.
B.
C.
D.
33. If you were to remove the top predator in a food web or food chain
- A.
B.
C.
D.
34. Which biogeochemical cycle lacks an atmospheric component?
- A.
B.
C.
D.
35. Water supplies contaminated with algae that produce toxins making the water unfit to drink is a result of the human impact to the
- A.
B.
C.
D.

36. The amount of biomass that is produced in an area during a given time would be referred to as

- A. nutrient load.
- B. production.
- C. chemosynthesis.
- D. productivity.

37. Organisms that live in deep sea ocean vents use chemicals rather than sunlight to drive the energy producing reactions. These organisms undergo what process?

- A. Chemosynthesis
- B. Biosynthesis
- C. Accumulation
- D. Photosynthesis

38. Humans alter the sulfur cycle by

- A.
- B.
- C.
- D.

Chapter 2 Key

1. The damage to an ecosystem caused by a hurricane or flood can be referred to as

A.
B.
C.
D.
E.

*Blooms: 1. Remember
Cunningham - Chapter 02 #1
Section: 02.02
Topic: Science*

2. The relationship among atoms, elements, and compounds is most like the relationship among which of the following groupings

A.
B.
C.
D.
E.

*Blooms Level: 3. Apply
Cunningham - Chapter 02 #2
Section: 2.02
Topic: Chemistry*

3. Which of the following is not a molecule?

A.
B.
C.
D.
E.

*Blooms Level: 2. Understand
Cunningham - Chapter 02 #3
Section: 2.02
Topic: Chemistry*

4. Which of the following statements would change this into a true statement: "Most, but not all, living organisms are made up of organic compounds"?

- A.**
- B.
- C.
- D.
- E.

*Blooms Level: 2. Understand
Cunningham - Chapter 02 #4
Section: 2.02
Topic: Chemistry*

5. Energy is the ability to

- A.
- B.
- C.
- D.
- E.**

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #5
Section: 2.03
Topic: Energy*

6. Potential energy is _____ energy.

- A.
- B.
- C.**
- D.
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #6
Section: 2.03
Topic: Energy*

7. The motion of a rock rolling downhill is known as _____ energy.

- A.**
- B.
- C.
- D.
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #7
Section: 2.03*

8. Metabolism can be seen as the process of converting

- A.
- B.**
- C.
- D.
- E.

Blooms Level: 3. Apply
Cunningham - Chapter 02 #8
Section: 2.03
Topic: Energy

9. The law of conservation of matter tells us that matter

- A.
- B.
- C.
- D.
- E.**

Blooms Level: 2. Understand
Cunningham - Chapter 02 #9
Section: 2.02
Topic: Chemistry

10. What implication(s) does the law of conservation of matter have for humans?

- A.
- B.
- C.
- D.**
- E.

Blooms Level: 2. Understand
Cunningham - Chapter 02 #10
Section: 2.02
Topic: Chemistry

11. The first law of thermodynamics and the law of conservation of matter are similar in that

- A.
- B.
- C.
- D.
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #11
Section: 2.03
Topic: Energy*

12. What implication(s) does the second law of thermodynamics have for biological systems?

- A.
- B.
- C.
- D.
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #12
Section: 2.03
Topic: Energy*

13. Photosynthesis is the process of converting _____ into _____ energy.

- A.
- B.
- C.
- D.
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #13
Section: 2.04
Topic: Photosynthesis*

14. Photosynthesis produces sugars from

- A.
- B.
- C.
- D.
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #14
Section: 2.04*

15. The process of photosynthesis and cellular respiration are similar in that they both

- A.
- B.
- C.**
- D.
- E.

Blooms Level: 2. Understand
Cunningham - Chapter 02 #15
Section: 2.04
Topic: Photosynthesis

16. The process of cellular respiration

- A.
- B.**
- C.
- D.
- E.

Blooms Level: 1. Remember
Cunningham - Chapter 02 #16
Section: 2.04
Topic: Cellular Respiration

17. All members of a species that live in the same area at the same time make up a(an)

- A.
- B.
- C.
- D.**
- E.

Blooms Level: 1. Remember
Cunningham - Chapter 02 #17
Section: 2.05
Topic: Populations

18. A biological community consists of all

- A.**
- B.
- C.
- D.
- E.

Blooms Level: 1. Remember
Cunningham - Chapter 02 #18
Section: 2.05

19. An ecosystem consists of

- A.
- B.
- C.**
- D.
- E.

Blooms Level: 1. Remember
Cunningham - Chapter 02 #19
Section: 2.05
Topic: Ecosystems

20. The length and complexity of a food web in the Arctic would be _____ when compared to one in the tropical rainforest.

- A.**
- B.
- C.
- D.
- E.

Blooms Level: 3. Apply
Cunningham - Chapter 02 #20
Section: 2.05
Topic: Trophic Levels

21. Producers rely on the process of _____ to release chemical energy and consumers rely on the process of _____ to release chemical energy.

- A.
- B.**
- C.
- D.
- E.

Blooms Level: 2. Understand
Cunningham - Chapter 02 #21
Section: 2.05
Topic: Trophic Levels

22. Primary consumers are also known as

- A.
- B.
- C.
- D.**
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #22
Section: 2.05
Topic: Trophic Levels*

23. Energy enters a system as sunlight and a producer is able to produce 10 kilograms of tissue. If eaten, the producer would produce about _____ kilograms of consumer tissue that would provide about _____ kilograms of tissue for a secondary consumer.

- A.
- B.
- C.
- D.**
- E.

*Blooms Level: 3. Apply
Cunningham - Chapter 02 #23
Section: 2.05
Topic: Trophic Levels*

24. Living plants and the ocean are known as "carbon sinks" because

- A.
- B.
- C.
- D.**
- E.

*Blooms Level: 2. Understand
Cunningham - Chapter 02 #24
Section: 2.06
Topic: Biogeochemical Cycles*

25. _____ are characteristics of an entire system that are greater than the sum of its parts.

- A.
- B.
- C.
- D.**
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #25
Section: 2.01
Topic: Ecosystems*

26. Which is the best example of a closed system?

- A.**
- B.
- C.
- D.
- E.

*Blooms Level: 3. Apply
Cunningham - Chapter 02 #26
Section: 2.01
Topic: Ecosystems*

27. Which is not a characteristic of acids?

- A.
- B.
- C.
- D.
- E.**

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #27
Section: 2.02
Topic: Chemistry*

28. How do the organisms living around Yellowstone's hot springs get energy?

- A.
- B.
- C.
- D.**
- E.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #28
Section: 2.04*

29. Nitrogen is an essential component of amino acids and proteins.

TRUE

Blooms Level: 1. Remember
Cunningham - Chapter 02 #29
Section: 2.02
Topic: Chemistry

30. Photosynthesis is a step in the global nitrogen cycle.

FALSE

Blooms Level: 2. Understand
Cunningham - Chapter 02 #30
Section: 2.04
Topic: Photosynthesis

31. Water expands when it crystallizes and freezes.

TRUE

Blooms Level: 1. Remember
Cunningham - Chapter 02 #31
Section: A Water Planet
Topic: Properties of Water

32. Based on what you know of photosynthesis, what effect would clearcutting of large forests have on the amount of carbon dioxide in the atmosphere?

A.

B.

C.

D.

Blooms Level: 5. Evaluate
Cunningham - Chapter 02 #32
Section: 2.04
Topic: Photosynthesis

33. If you were to remove the top predator in a food web or food chain

A.

B.

C.

D.

Blooms Level: 3. Apply
Cunningham - Chapter 02 #33
Section: 2.05
Topic: Trophic Levels

34. Which biogeochemical cycle lacks an atmospheric component?

- A.
- B.
- C.
- D.**

*Blooms Level: 2. Understand
Cunningham - Chapter 02 #34
Section: 2.06
Topic: Biogeochemical Cycles*

35. Water supplies contaminated with algae that produce toxins making the water unfit to drink is a result of the human impact to the

- A.
- B.
- C.**
- D.

*Blooms Level: 3. Apply
Cunningham - Chapter 02 #35
Section: 2.06
Topic: Biogeochemical Cycles*

36. The amount of biomass that is produced in an area during a given time would be referred to as

- A.
- B.
- C.
- D.**

productivity.

*Blooms Level: 1. Remember
Cunningham - Chapter 02 #36
Section: 2.05
Topic: Trophic Levels*

37. Organisms that live in deep sea ocean vents use chemicals rather than sunlight to drive the energy producing reactions. These organisms undergo what process?

- A.**
- B.
- C.
- D.

Chemosynthesis

*Blooms Level: 2. Understand
Cunningham - Chapter 02 #37
Section: 2.04
Topic: Photosynthesis*

38.

Humans alter the sulfur cycle by

A.

B.

C.

D.

*Blooms Level: 2. Understand
Cunningham - Chapter 02 #38
Section: 2.06
Topic: Biogeochemical Cycles*

Chapter 2 Summary