Student: _____

1. Energy gathering or concentrating mechanisms that allow light to be collected more efficiently during photosynthesis are called
   A. mitochondria.
   B. photosystems.
   C. light-independent reactions.
   D. ribulose.

2. The ATP and NADPH produced in the light-dependent reaction stage
   A. become reactants for cellular respiration.
   B. are waste products that the plant eliminates.
   C. become the raw materials for the light-independent reaction stage.
   D. are the end products of photosynthesis.

3. A correct equation for photosynthesis is
   A. SUN + $6O_2$ + $6CO_2$ → $C_6H_{12}O_6$ + $6H_2O$.
   B. SUN + $C_6H_{12}O_6$ + $6O_2$ → $6CO_2$ + $6H_2O$.
   C. SUN + $6CO_2$ + $6H_2O$ → $C_6H_{12}O_6$ + $6O_2$.
   D. SUN + $6CO_2$ → $6H_2O$ + $C_6H_{12}O_6$ + $6O_2$.

4. The molecule that traps the sun's energy is
   A. ATP.
   B. glyceraldehyde-3-phosphate.
   C. chloroplast.
   D. chlorophyll.

5. O_2 is a product of the
   A. light-dependent reactions.
   B. light-independent reactions.
   C. light-capturing events
   D. All of the choices are correct.

6. Glyceraldehyde-3-phosphate is an end product of
   A. light-dependent reactions.
   B. light-independent reactions.
   C. glycolysis.
   D. the electron transport system.

7. The production of ATP occurs
   A. as hydrogen ions move across membranes.
   B. in chloroplasts.
   C. in mitochondria.
   D. in all of the choices listed.

8. During the light-independent reactions of photosynthesis,
   A. glyceraldehyde-3-phosphate is produced.
   B. ADP is produced.
   C. $NADP^+$ is produced.
   D. All of the choices are correct.

9. In photosynthesis C3, plants differ from C4 plants in
   A. the way they capture light.
   B. the way they capture carbon dioxide.
   C. the kind of chlorophylls they have.
   D. None of the choices is correct.

10. Which of the following kinds of organisms can manufacture the greatest variety of organic compounds?

    A. aerobic bacteria
    B. anaerobic bacteria
    C. animals
    D. plants

11. Crassulacean acid metabolism (CAM) is a form of photosynthesis that
    A. encourages the light-independent reactions to take place at night.
    B. allows photosynthesis to take place without water.
    C. encourages the light-dependent reactions to take place at night.
    D. allows photosynthesis to take place without carbon dioxide.

12. The light-independent reactions of photosynthesis (Calvin cycle) take place in the
    A. thylakoids.
    B. cytoplasm.
    C. grana.
    D. stroma.

13. The light-capturing events of photosynthesis involve
    A. the stroma.
    B. mitochondria
    C. cytoplasm.
    D. chlorophyll.

14. This portion of photosynthesis is a series of oxidation-reduction reactions during which light energy is transferred to electrons so that the electrons move more rapidly.
    A. light-dependent reactions
    B. proton pump
    C. light capturing events
    D. light-independent reactions

15. ATP, NADPH, CO_2, and a five-carbon starter molecule called ribulose are needed for the _____ of photosynthesis to occur.
    A. light-dependent reactions
    B. light-independent reactions
    C. light-capturing events
    D. All of the choices are correct.

16. Almost 80% of this molecule is used to regenerate ribulose so that photosynthesis can continue. The remaining 20% is used by the plant to make other organic molecules.
    A. pyruvic acid
    B. acetyl CoA
    C. glyceraldehyde-3-phosphate
    D. glucose

17. ____ is NOT part of photosynthesis.
    A. Trapping the sun's energy
    B. Converting glyceraldehyde-3-phosphate into usable energy
    C. Splitting water molecules
    D. Bonding carbon dioxide to ribulose

18. Water molecules are a reactant for
    A. the electron transport system.
    B. the light-independent reactions.
    C. the light-dependent reactions.
    D. glycolysis.

19. ____ take(s) place within the grana.
    A. The light-dependent reactions
    B. The light-independent reactions
    C. The entire photosynthesis process
    D. Aerobic cellular respiration

20. Glyceraldehyde-3-phosphate can do all of the following except
    A. be converted to usable energy for the cell.
    B. manufacture lipids.
    C. produce trace elements required for plant growth (nitrogen, magnesium, phosphorus, etc.).
    D. be converted to ribulose.

21. The oxygen produced by a plant comes most directly from
    A. CO_2.
    B. H_2O.
    C. $C_6H_{12}O_6$.
    D. glyceraldehyde-3-phosphate.

22. ____ is NOT needed for the light-dependent reactions.
    A. NADP
    B. ADP + P
    C. H_2O
    D. CO_2

23. Two products of the light-dependent reactions, which become reactants for the light-independent reactions, are
    A. ATP and NADP.
    B. CO_2 and H_2O.
    C. O_2 and ATP.
    D. ATP and $NADPH_2$.

24. The process of photosynthesis requires the raw materials
    A. O_2 and H_2O.
    B. CO_2 and H_2O.
    C. sugar and CO_2.
    D. H_2O and sugar.

25. For the light-independent reactions to continue, glyceraldehyde-3-phosphate must be converted into
    A. ribulose.
    B. carbon dioxide.
    C. ATP.
    D. glucose.

26. Which one of the following is NOT required for photosynthesis to take place?
    A. enzymes
    B. ATP
    C. oxygen
    D. carbon dioxide

27. Photosynthesis takes place in
    A. both plants and animals.
    B. animals but not plants.
    C. plants but not animals.
    D. bacteria only.

28. Which of the following tests would be the best for determining if a cell were carrying on photosynthesis?

    A. Does the cell contain water?
    B. Does the cell produce carbon dioxide?
    C. Does the cell release oxygen?
    D. Does the cell require oxygen to stay alive?

29. Which is a general equation that summarizes the light-dependent reactions?
    A. excited electrons + H_2O + ADP + $NADP^+$ → ATP + NADPH + O_2
    B. ATP + NADPH + ribulose + CO_2 → ADP + $NADP^+$ + complex organic molecule + ribulose
    C. CO_2 + ATP + NADH + 5-ribulose → glyceraldehyde-3-phosphate + $NADP^+$ + ADP + P
    D. SUN + $6CO_2$ → $6H_2O$ + $C_6H_{12}O_6$ + $6O_2$

30. Which does NOT occur in the light-independent reactions?
    A. The 6-carbon molecule immediately divides into two 3-carbon molecules of glyceraldehyde-3-phosphate.
    B. Hydrogens from NADPH are transferred to molecules in the Calvin cycle.
    C. The 5-carbon ribulose is regenerated.
    D. ADP and NAD^+ are returned to the light-dependent reactions.

31. This form of photosynthesis allows photosynthesis to occur in arid environments while reducing the potential for water loss.
    A. Calvin cycle
    B. Crassulacean acid metabolism
    C. photon cycle
    D. hydrologic cycle

32. Foxglove produces this valuable medicine used in the treatment of heart disease. The drug containing this compound is known as
    A. digitalis.
    B. aspirin.
    C. acetaminophen.
    D. morphine.

33. During their life spans, green plants give off more oxygen to the atmosphere than they take in for use in
    A. fat metabolism.
    B. respiration.
    C. the Krebs cycle.
    D. the Calvin cycle.

34. These reactions take place in the stroma in either the light or dark as long as ATP and NADPH are available.
    A. light capturing events
    B. light-dependent reactions
    C. light-independent
    D. Calvin cycle

35. Which is used in photosynthesis but not in cellular respiration?
    A. NAD^+
    B. FAD
    C. cytochromes
    D. $NADP^+$

36. Reaction centers are located in the
    A. grana.
    B. thylakoid.
    C. antenna complex.
    D. All of the choices are correct.

37. The light energy trapped by the antenna complex is used to
    A. split water into H and O.
    B. produce CO_2.
    C. generate ribulose.
    D. All of the choices are correct.

38. Carbon fixation begins with carbon dioxide combining with a 5-carbon molecule,
    A. glucose.
    B. ribulose.
    C. $NADP^+$
    D. glyceraldehyde-3-phosphate.

39. Proton pumps are used in photosynthesis
    A. to pump protons into the thylakoid.
    B. between photosystem II and photosystem I.
    C. during the light-dependent reaction sequence.
    D. All of the choices are correct.

40. Which wavelengths of light are **most likely** to be absorbed by chlorophyll a?
    A. UV
    B. blue
    C. red
    D. infrared

41. Which wavelengths of light are **most likely** to be absorbed by chlorophyll b?
    A. UV
    B. blue
    C. red
    D. infrared

42. Thylakoids are found in
    A. chloroplasts
    B. mitochondria
    C. liver cells
    D. fungal cells

43. It is assumed that the chloroplasts of eukaryotes are evolved from
    A. animal cells.
    B. photosynthetic bacteria.
    C. algal cells.
    D. fungal cells.

44. In this kind of photosynthesis, carbon dioxide does not directly enter the Calvin cycle but is carried out in two steps and two different kinds of cells.
    A. crassulacean acid metabolism
    B. C3
    C. C4
    D. C5

45. Keeping a plant under green light will
    A. result in its death.
    B. increase the rate of photosynthesis.
    C. cause it to lose its accessory pigments.
    D. cause it to set flowers.

46. Protons are pumped in which stage of photosynthesis?
    A. light-capturing
    B. light-dependent reactions
    C. light-independent reactions
    D. glycolysis

47. Ultimately all organisms are dependant on photosynthesis for their food.
    True False

48. Recent scientific data shows that an increase in atmospheric carbon dioxide levels leads to an increase in photosynthesis and therefore an increase in food production.
    True False

49. Being very specific, the actual end product of photosynthesis is RuBisCO.
    True False

7 Key

1. Energy gathering or concentrating mechanisms that allow light to be collected more efficiently during photosynthesis are called
   A. mitochondria.
   B. photosystems.
   C. light-independent reactions.
   D. ribulose.

Blooms Level: Understand
Enger - Chapter 07 #1
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.01
Section: 07.03
Topic: Photosynthesis

2. The ATP and NADPH produced in the light-dependent reaction stage
   A. become reactants for cellular respiration.
   B. are waste products that the plant eliminates.
   C. become the raw materials for the light-independent reaction stage.
   D. are the end products of photosynthesis.

Blooms Level: Understand
Enger - Chapter 07 #2
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

3. A correct equation for photosynthesis is
   A. SUN + $6O_2$ + $6CO_2$ → $C_6H_{12}O_6$ + $6H_2O$.
   B. SUN + $C_6H_{12}O_6$ + $6O_2$ → $6CO_2$ + $6H_2O$.
   C. SUN + $6CO_2$ + $6H_2O$ → $C_6H_{12}O_6$ + $6O_2$.
   D. SUN + $6CO_2$ → $6H_2O$ + $C_6H_{12}O_6$ + $6O_2$.

Blooms Level: Remember
Enger - Chapter 07 #3
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.02
Topic: Photosynthesis

4. The molecule that traps the sun's energy is
   A. ATP.
   B. glyceraldehyde-3-phosphate.
   C. chloroplast.
   D. chlorophyll.

Blooms Level: Remember
Enger - Chapter 07 #4
Learning Outcome: Explain the role of pigments in photosynthesis.
Section: 07.02
Topic: Photosynthesis

5. O_2 is a product of the
   A. light-dependent reactions.
   B. light-independent reactions.
   C. light-capturing events
   D. All of the choices are correct.

Blooms Level: Remember
Enger - Chapter 07 #5
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.02
Section: 07.03
Topic: Photosynthesis

6. Glyceraldehyde-3-phosphate is an end product of
A. light-dependent reactions.
B. light-independent reactions.
C. glycolysis.
D. the electron transport system.

Blooms Level: Remember
Enger - Chapter 07 #6
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

7. The production of ATP occurs
A. as hydrogen ions move across membranes.
B. in chloroplasts.
C. in mitochondria.
D. in all of the choices listed.

Blooms Level: Remember
Enger - Chapter 07 #7
Learning Outcome: Describe other aspects of plant metabolism.
Section: 07.03
Topic: Photosynthesis

8. During the light-independent reactions of photosynthesis,
A. glyceraldehyde-3-phosphate is produced.
B. ADP is produced.
C. $NADP^+$ is produced.
D. All of the choices are correct.

Blooms Level: Understand
Enger - Chapter 07 #8
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

9. In photosynthesis C3, plants differ from C4 plants in
A. the way they capture light.
B. the way they capture carbon dioxide.
C. the kind of chlorophylls they have.
D. None of the choices is correct.

Blooms Level: Analyze
Enger - Chapter 07 #9
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

10. Which of the following kinds of organisms can manufacture the greatest variety of organic compounds?
A. aerobic bacteria
B. anaerobic bacteria
C. animals
D. plants

Blooms Level: Remember
Enger - Chapter 07 #10
Learning Outcome: Describe other aspects of plant metabolism.
Section: 07.04
Topic: Photosynthesis

11. Crassulacean acid metabolism (CAM) is a form of photosynthesis that
A. encourages the light-independent reactions to take place at night.
B. allows photosynthesis to take place without water.
C. encourages the light-dependent reactions to take place at night.
D. allows photosynthesis to take place without carbon dioxide.

Blooms Level: Understand
Enger - Chapter 07 #11
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

12. The light-independent reactions of photosynthesis (Calvin cycle) take place in the
A. thylakoids.
B. cytoplasm.
C. grana.
D. stroma.

Blooms Level: Remember
Enger - Chapter 07 #12
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

13. The light-capturing events of photosynthesis involve
A. the stroma.
B. mitochondria
C. cytoplasm.
D. chlorophyll.

Blooms Level: Understand
Enger - Chapter 07 #13
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

14. This portion of photosynthesis is a series of oxidation-reduction reactions during which light energy is transferred to electrons so that the electrons move more rapidly.
A. light-dependent reactions
B. proton pump
C. light capturing events
D. light-independent reactions

Blooms Level: Evaluate
Enger - Chapter 07 #14
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

15. ATP, NADPH, CO_2, and a five-carbon starter molecule called ribulose are needed for the _____ of photosynthesis to occur.
A. light-dependent reactions
B. light-independent reactions
C. light-capturing events
D. All of the choices are correct.

Blooms Level: Understand
Enger - Chapter 07 #15
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

16. Almost 80% of this molecule is used to regenerate ribulose so that photosynthesis can continue. The remaining 20% is used by the plant to make other organic molecules.
A. pyruvic acid
B. acetyl CoA
C. glyceraldehyde-3-phosphate
D. glucose

Blooms Level: Apply
Enger - Chapter 07 #16
Learning Outcome: Explain the role of glyceraldehyde-3-phosphate in plant metabolism.
Section: 07.03
Topic: Photosynthesis

17. ____ is NOT part of photosynthesis.
A. Trapping the sun's energy
B. Converting glyceraldehyde-3-phosphate into usable energy
C. Splitting water molecules
D. Bonding carbon dioxide to ribulose

Blooms Level: Evaluate
Enger - Chapter 07 #17
Learning Outcome: Explain the role of glyceraldehyde-3-phosphate in plant metabolism.
Section: 07.03
Topic: Photosynthesis

18. Water molecules are a reactant for
A. the electron transport system.
B. the light-independent reactions.
C. the light-dependent reactions.
D. glycolysis.

Blooms Level: Remember
Enger - Chapter 07 #18
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

19. ____ take(s) place within the grana.
A. The light-dependent reactions
B. The light-independent reactions
C. The entire photosynthesis process
D. Aerobic cellular respiration

Blooms Level: Understand
Enger - Chapter 07 #19
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

20. Glyceraldehyde-3-phosphate can do all of the following except
A. be converted to usable energy for the cell.
B. manufacture lipids.
C. produce trace elements required for plant growth (nitrogen, magnesium, phosphorus, etc.).
D. be converted to ribulose.

Blooms Level: Understand
Enger - Chapter 07 #20
Learning Outcome: Explain the role of glyceraldehyde-3-phosphate in plant metabolism.
Section: 07.03
Topic: Photosynthesis

21. The oxygen produced by a plant comes most directly from
A. CO_2.
B. H_2O.
C. $C_6H_{12}O_6$.
D. glyceraldehyde-3-phosphate.

Blooms Level: Understand
Enger - Chapter 07 #21
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

22. ____ is NOT needed for the light-dependent reactions.
A. NADP
B. ADP + P
C. H_2O
D. CO_2

Blooms Level: Remember
Enger - Chapter 07 #22
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

23. Two products of the light-dependent reactions, which become reactants for the light-independent reactions, are
A. ATP and NADP.
B. CO_2 and H_2O.
C. O_2 and ATP.
D. ATP and $NADPH_2$.

Blooms Level: Understand
Enger - Chapter 07 #23
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

24. The process of photosynthesis requires the raw materials
A. O_2 and H_2O.
B. CO_2 and H_2O.
C. sugar and CO_2.
D. H_2O and sugar.

Blooms Level: Understand
Enger - Chapter 07 #24
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.02
Topic: Photosynthesis

25. For the light-independent reactions to continue, glyceraldehyde-3-phosphate must be converted into
A. ribulose.
B. carbon dioxide.
C. ATP.
D. glucose.

Blooms Level: Understand
Enger - Chapter 07 #25
Learning Outcome: Explain the role of glyceraldehyde-3-phosphate in plant metabolism.
Section: 07.03
Topic: Photosynthesis

26. Which one of the following is NOT required for photosynthesis to take place?
A. enzymes
B. ATP
C. oxygen
D. carbon dioxide

Blooms Level: Remember
Enger - Chapter 07 #26
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

27. Photosynthesis takes place in
A. both plants and animals.
B. animals but not plants.
C. plants but not animals.
D. bacteria only.

Blooms Level: Remember
Enger - Chapter 07 #27
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.01
Topic: Photosynthesis

28. Which of the following tests would be the best for determining if a cell were carrying on photosynthesis?
A. Does the cell contain water?
B. Does the cell produce carbon dioxide?
C. Does the cell release oxygen?
D. Does the cell require oxygen to stay alive?

Blooms Level: Evaluate
Enger - Chapter 07 #28
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.02
Section: 07.03
Topic: Photosynthesis

29. Which is a general equation that summarizes the light-dependent reactions?

A. excited electrons + H_2O + ADP + $NADP^+$ → ATP + NADPH + O_2

B. ATP + NADPH + ribulose + CO_2 → ADP + $NADP^+$ + complex organic molecule + ribulose

C. CO_2 + ATP + NADH + 5-ribulose → glyceraldehyde-3-phosphate + $NADP^+$ + ADP + P

D. SUN + $6CO_2$ → $6H_2O$ + $C_6H_{12}O_6$ + $6O_2$

Blooms Level: Evaluate
Enger - Chapter 07 #29
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

30. Which does NOT occur in the light-independent reactions?

A. The 6-carbon molecule immediately divides into two 3-carbon molecules of glyceraldehyde-3-phosphate.

B. Hydrogens from NADPH are transferred to molecules in the Calvin cycle.

C. The 5-carbon ribulose is regenerated.

D. ADP and NAD^+ are returned to the light-dependent reactions.

Blooms Level: Understand
Enger - Chapter 07 #30
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

31. This form of photosynthesis allows photosynthesis to occur in arid environments while reducing the potential for water loss.

A. Calvin cycle

B. Crassulacean acid metabolism

C. photon cycle

D. hydrologic cycle

Blooms Level: Remember
Enger - Chapter 07 #31
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

32. Foxglove produces this valuable medicine used in the treatment of heart disease. The drug containing this compound is known as

A. digitalis.

B. aspirin.

C. acetaminophen.

D. morphine.

Blooms Level: Remember
Enger - Chapter 07 #32
Learning Outcome: Describe other aspects of plant metabolism.
Section: 07.04
Topic: Photosynthesis

33. During their life spans, green plants give off more oxygen to the atmosphere than they take in for use in

A. fat metabolism.

B. respiration.

C. the Krebs cycle.

D. the Calvin cycle.

Blooms Level: Evaluate
Enger - Chapter 07 #33
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

34. These reactions take place in the stroma in either the light or dark as long as ATP and NADPH are available.
A. light capturing events
B. light-dependent reactions
C. light-independent
D. Calvin cycle

Blooms Level: Understand
Enger - Chapter 07 #34
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

35. Which is used in photosynthesis but not in cellular respiration?
A. NAD^+
B. FAD
C. cytochromes
D. $NADP^+$

Blooms Level: Evaluate
Enger - Chapter 07 #35
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

36. Reaction centers are located in the
A. grana.
B. thylakoid.
C. antenna complex.
D. All of the choices are correct.

Blooms Level: Remember
Enger - Chapter 07 #36
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.02
Topic: Photosynthesis

37. The light energy trapped by the antenna complex is used to
A. split water into H and O.
B. produce CO_2.
C. generate ribulose.
D. All of the choices are correct.

Blooms Level: Understand
Enger - Chapter 07 #37
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

38. Carbon fixation begins with carbon dioxide combining with a 5-carbon molecule,
A. glucose.
B. ribulose.
C. $NADP^+$
D. glyceraldehyde-3-phosphate.

Blooms Level: Understand
Enger - Chapter 07 #38
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

39. Proton pumps are used in photosynthesis
A. to pump protons into the thylakoid.
B. between photosystem II and photosystem I.
C. during the light-dependent reaction sequence.
D. All of the choices are correct.

Blooms Level: Understand
Enger - Chapter 07 #39
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

40. Which wavelengths of light are **most likely** to be absorbed by chlorophyll a?
A. UV
B. blue
C. red
D. infrared

Blooms Level: Remember
Enger - Chapter 07 #40
Learning Outcome: Explain the role of pigments in photosynthesis.
Section: 07.03
Topic: Photosynthesis

41. Which wavelengths of light are **most likely** to be absorbed by chlorophyll b?
A. UV
B. blue
C. red
D. infrared

Blooms Level: Remember
Enger - Chapter 07 #41
Learning Outcome: Explain the role of pigments in photosynthesis.
Section: 07.03
Topic: Photosynthesis

42. Thylakoids are found in
A. chloroplasts
B. mitochondria
C. liver cells
D. fungal cells

Blooms Level: Remember
Enger - Chapter 07 #42
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

43. It is assumed that the chloroplasts of eukaryotes are evolved from
A. animal cells.
B. photosynthetic bacteria.
C. algal cells.
D. fungal cells.

Blooms Level: Understand
Enger - Chapter 07 #43
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.05
Topic: Photosynthesis

44. In this kind of photosynthesis, carbon dioxide does not directly enter the Calvin cycle but is carried out in two steps and two different kinds of cells.
A. crassulacean acid metabolism
B. C3
C. C4
D. C5

Blooms Level: Analyze
Enger - Chapter 07 #44
Learning Outcome: Describe other aspects of plant metabolism.
Section: 07.03
Topic: Photosynthesis

45. Keeping a plant under green light will
A. result in its death.
B. increase the rate of photosynthesis.
C. cause it to lose its accessory pigments.
D. cause it to set flowers.

Blooms Level: Evaluate
Enger - Chapter 07 #45
Learning Outcome: Explain the role of pigments in photosynthesis.
Section: 07.03
Topic: Photosynthesis

46. Protons are pumped in which stage of photosynthesis?
A. light-capturing
B. light-dependent reactions
C. light-independent reactions
D. glycolysis

Blooms Level: Understand
Enger - Chapter 07 #46
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

47. Ultimately all organisms are dependant on photosynthesis for their food.
TRUE

Blooms Level: Understand
Enger - Chapter 07 #47
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.01
Topic: Photosynthesis

48. Recent scientific data shows that an increase in atmospheric carbon dioxide levels leads to an increase in photosynthesis and therefore an increase in food production.
FALSE

Blooms Level: Apply
Enger - Chapter 07 #48
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

49. Being very specific, the actual end product of photosynthesis is RuBisCO.
FALSE

Blooms Level: Understand
Enger - Chapter 07 #49
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.
Section: 07.03
Topic: Photosynthesis

7 Summary

Category	*# of Questions*
Blooms Level: Analyze	2
Blooms Level: Apply	2
Blooms Level: Evaluate	7
Blooms Level: Remember	17
Blooms Level: Understand	21
Enger - Chapter 07	49
Learning Outcome: Describe other aspects of plant metabolism.	4
Learning Outcome: Describe the reactants and products of the light-dependent and light-independentreactions of photosynthesis.	37
Learning Outcome: Explain the role of glyceraldehyde-3-phosphate in plant metabolism.	4
Learning Outcome: Explain the role of pigments in photosynthesis.	4
Section: 07.01	3
Section: 07.02	6
Section: 07.03	40
Section: 07.04	2
Section: 07.05	1
Topic: Photosynthesis	49