

1. What is the primary product of photosynthesis that stores chemical energy?

- A. Oxygen
- B. Glucose
- C. Water
- D. Chlorophyll

2. Which of the following is NOT a participant in photosynthesis?

- A. Green plants
- B. Algae
- C. Fungi
- D. Some bacteria

3. Where does photosynthesis primarily occur in plant cells?

- A. Mitochondria
- B. Chloroplasts
- C. Vacuoles
- D. Cell nucleus

4. What pigment in chloroplasts absorbs sunlight for photosynthesis?

- A. Carotene
- B. Chlorophyll
- C. Xanthophyll
- D. Phycocyanin

5. Which stage of photosynthesis produces ATP and NADPH?

- A. Calvin cycle
- B. Light-independent reactions
- C. Light-dependent reactions
- D. Respiration

6. What is released as a byproduct when water molecules are split during photosynthesis?

- A. Carbon dioxide
- B. Oxygen
- C. Starch
- D. Glucose

7. During the Calvin cycle, what molecule from the atmosphere is used to synthesize glucose?

- A. Nitrogen
- B. Oxygen
- C. Carbon dioxide
- D. Water

8. What can glucose produced in photosynthesis be used for?

- A. Only immediate energy
- B. Only stored as starch
- C. Immediate energy or stored as starch
- D. Building cell walls only

9. Which of the following is NOT a factor affecting photosynthesis?

- A. Light intensity
- B. Temperature
- C. Humidity
- D. Carbon dioxide concentration

10. Why is photosynthesis essential for life on Earth?

- A. It produces water for all organisms
- B. It provides oxygen and food for other living organisms
- C. It breaks down chlorophyll
- D. It converts chemical energy into light energy

11. What is the primary product of photosynthesis that stores chemical energy?

- A. Oxygen
- B. Glucose
- C. Chlorophyll
- D. ATP

12. Which pigment in chloroplasts is responsible for absorbing sunlight during photosynthesis?

- A. Carotenoid
- B. Chlorophyll
- C. Xanthophyll
- D. Phycobilin

13. Where does photosynthesis primarily occur in plant cells?

- A. Mitochondria
- B. Chloroplasts
- C. Vacuoles
- D. Cell membrane

14. What is the byproduct released during the splitting of water in light-dependent reactions?

- A. Carbon dioxide
- B. Oxygen
- C. Glucose
- D. NADPH

15. Which stage of photosynthesis uses ATP and NADPH to synthesize glucose?

- A. Light-dependent reactions
- B. Calvin cycle
- C. Respiration
- D. Glycolysis

16. What is the main function of the light-dependent reactions in photosynthesis?

- A. Synthesizing glucose
- B. Producing ATP and NADPH
- C. Releasing carbon dioxide
- D. Breaking down starch

17. How can plants store glucose produced during photosynthesis?

- A. As proteins
- B. As starch
- C. As lipids
- D. As nucleic acids

18. Which of the following is NOT a factor affecting photosynthesis?

- A. Light intensity
- B. Temperature
- C. Nutrient availability
- D. Gravity

19. What is the role of carbon dioxide in the Calvin cycle?

- A. To produce ATP
- B. To synthesize glucose
- C. To split water molecules
- D. To absorb sunlight

20. Which of the following organisms does NOT perform photosynthesis?

- A. Green plants
- B. Algae
- C. Fungi
- D. Some bacteria

21. What is the primary function of photosynthesis?

- A. Convert light energy into chemical energy stored in glucose
- B. Break down glucose to release energy
- C. Absorb carbon dioxide to produce oxygen
- D. Decompose organic matter

22. Which of the following organisms perform photosynthesis?

- A. Green plants, algae, and some bacteria
- B. Only green plants
- C. Animals and fungi
- D. All living organisms

23. Where does photosynthesis mainly occur in plant cells?

- A. Chloroplasts
- B. Mitochondria
- C. Cell nucleus
- D. Cell membrane

24. What pigment in chloroplasts absorbs sunlight?

- A. Chlorophyll
- B. Carotenoid
- C. Xanthophyll
- D. Melanin

25. What are the two main stages of photosynthesis?

- A. Light-dependent reactions and Calvin cycle
- B. Glycolysis and Krebs cycle
- C. Respiration and fermentation
- D. Nitrogen fixation and denitrification

26. What is the byproduct of splitting water molecules during the light-dependent reactions?

- A. Oxygen
- B. Carbon dioxide
- C. Glucose
- D. ATP

27. What molecules are produced during the light-dependent reactions?

- A. ATP and NADPH
- B. Glucose and starch
- C. Chlorophyll and carotenoids
- D. Water and carbon dioxide

28. What is the role of carbon dioxide in photosynthesis?

- A. Used in the Calvin cycle to synthesize glucose
- B. Produced as a byproduct of the light-dependent reactions
- C. Absorbed by chlorophyll to power reactions
- D. Stored as starch in plant cells

29. What can glucose produced by photosynthesis be used for?

- A. Immediate energy or stored as starch
- B. Only for immediate energy
- C. Breaking down into water and oxygen
- D. Converting into chlorophyll

30. Which of the following is NOT a factor affecting photosynthesis?

- A. Light intensity
- B. Temperature
- C. Availability of oxygen
- D. Carbon dioxide concentration

31. Fallback Question 1: What is discussed in the document?

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

32. Fallback Question 2: What is discussed in the document?

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

33. Fallback Question 3: What is discussed in the document?

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

34. Fallback Question 4: What is discussed in the document?

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

35. Fallback Question 5: What is discussed in the document?

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

36. Fallback Question 6: What is discussed in the document?

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

37. Fallback Question 7: What is discussed in the document?

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

38. Fallback Question 8: What is discussed in the document?

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

39. Fallback Question 9: What is discussed in the document?

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

40. Fallback Question 10: What is discussed in the document?

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

41. Fallback Question 1: What is discussed in the document?

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

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